Prototypes and Metaphorical Extensions:
The Japanese Numeral Classifiers *hiki* and *hatsu*

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This is to certify that to the best of my knowledge, the content of this thesis is my own work. This thesis has not been submitted for any degree or other purposes.

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Abstract

This study concerns the meaning of Japanese numeral classifiers (NCs) and, particularly, the elements which guide us to understand the metaphorical meanings they can convey. In the typological literature, as well as in studies of Japanese, the focus is almost entirely on NCs that refer to entities. NCs are generally characterised as being matched with a noun primarily based on semantic criteria such as the animacy, the physical characteristics, or the function of the referent concerned. However, in some languages, including Japanese, nouns allow a number of alternative NCs, so that it is considered that NCs are not automatically matched with a noun but rather with the referent that the noun refers to in the particular context in which it occurs.

This study examines data from the Balanced Corpus of Contemporary Written Japanese, and focuses on two NCs as case studies: *hiki*, an entity NC, typically used to classify small, animate beings, and *hatsu*, an NC that is used to classify both entities and events that are typically explosive in nature. The study employs the framework of Prototype Theory, along with the theory of conceptual metaphor, and the theory of metonymy.

The analysis of the data identified a number of semantic components for each of the target NCs; by drawing on these components, the speaker can subjectively add those meanings to modify the meaning of the referring noun or verb. Furthermore, the study revealed that the choice of NCs can be influenced by two factors. First, the choice of NC sometimes relates to the linguistic context in which the referring noun or verb occurs. For example, if a noun is used metaphorically, the NC is chosen to reinforce that metaphor, rather than to match with the actual referent. Second, the meaning of an NC itself can be used as a vehicle of metaphor to contribute meaning to that of the referring noun or verb concerned.

Through the analysis, is has been identified that the range of referents of a single NC beyond cases in which objectively observable characteristics are evident occurs in two dimensions: (1) in terms of the typicality of referents and (2) across categories of referents (entities and events). Based on the findings, the study claims that, in both cases, non-literal factors account for extension in the range of referents of an NC in Japanese. Specifically, the non-literal devices of metaphor and metonymy appear to play a role in connecting an NC and its referent in the context in which extension of the use of that NC occurs.

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Abbreviations

ACC	Accusative (case)	NC	Numeral Classifier
CL	Classifier	NOM	Nominative (case)
GEN	Genitive (case)	PAST	Past (affix)
INSTR	Instrumental case	SJ	Sino-Japanese
LOC	Locative (case)	TOP	Topic (marker)

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Chapter 1　　　　Introduction

This chapter first provides a background and scope of the study and introduces the target grammatical items to be analysed (1.1). Next, key findings and the thesis statement of this study are given (1.2). In the last section, the structure of the study is delineated (1.3).

1.1.　Background and Scope of the Study

This thesis concerns the meaning of Japanese numeral classifiers (NCs) and their use in terms of the referents they refer to. Two Japanese NCs are taken as the targets for thorough investigation as case studies, with a view to adding to the larger picture of our understanding of the NC system in this language, and to these systems more generally. The first target NC is *hiki* 匹, which is used for comparatively small animate beings other than human beings, such as cats, fish, and insects. The second NC is *hatsu* 発, which is characterised as being used for things with an element of explosiveness, such as bombs and bullets, and is also used to count instances of events involving these entities (e.g., bombing and shooting). In the following, the background to this study and the reasons why these particular NCs are chosen as the targets for analysis in this thesis are explained.

In Japanese, as in many other languages, NCs are used when the number of entities or events is counted or mentioned in any context. NCs in Japanese are bound morphemes which are attached to a numeral to make a numeric phrase. Together the numeral and the NC can modify a noun, as in the sentence below.

(1-1)

あそこ	に	二匹	の	犬	が	いる
asoko	ni	ni-hiki	no	inu	ga	iru
over there	LOC	two-CL	GEN	dog	NOM	be

'There are two dogs over there.'

The NC *hiki* is used here with the numeral two to indicate the number of dogs the speaker is referring to.

From a syntactic perspective, it should be noted that the 'numeral-NC' phrase can appear not only before the noun, as in this example (*ni-hiki no inu*), but in a number of different positions in the sentence, including outside of the noun phrase. These various positions of the phrase play an important role in relation to indicating the referentiality of the noun ('dogs' in this case). In other words, the exact construction the phrase appears in can vary depending on whether the noun *inu* 'dogs' refers to just any (non-specific) dogs or to specific dogs, and on whether they are known either only to the speaker or both to the speaker and the hearer (definite). This is a crucial issue regarding the use of NCs in general as grammatical devices in Japanese. However, it is not the concern of this study, which focuses instead on the meaning of particular NCs and the ways in which that meaning interacts with the referents they refer to.

Whereas some types of noun classifiers, such as grammatical genders, are matched to a noun through a process of grammatical agreement, NCs are matched to a referent. Since there are far fewer NCs than there are referents to be counted, each NC can be used for a range of referents. In NC systems across the world, NCs are generally characterised as matched with referents on the basis of semantic criteria such as the animacy, shape, size, and function of the referent (Aikhenvald, 2000, p. 98;

Allan, 1977; Bisang, 1999; Iida, 1999). These semantic criteria all relate to objectively observable properties or characteristics that are inherent to the referents concerned.

A consequence of recognising that an NC is matched with a referent rather than with a noun is that there is considerable flexibility in the use of NCs: a number of nouns in Japanese have more than one alternative NC, which may appear with them in different contexts. In this respect, again, NCs differ from gender systems, which are strictly based on grammatical agreement between each noun and a single gender. The noun *inu* 'dog', for example, though usually appearing with the NC *hiki* (for comparatively small animals) as in example (1-1) above, can also appear with the NC *too* (for comparatively large animals):

(1-1)'

あそこ	に	二頭	の	犬	が	いる
asoko	ni	ni-too	no	inu	ga	iru
over there	LOC	two-CL	GEN	dog	NOM	be

'There are two dogs over there.'

It is important to acknowledge that some nouns are more consistently paired with a particular NC than others. For example, in the case of the noun 'pencil', it is difficult to imagine any alternative NC than the standard NC *hon* (long and thin objects). Likewise, with the noun 'automobile', the NC *dai* (vehicles, some furniture and machines) seems really the only 'choice'. Nevertheless, speakers with a good knowledge of Japanese would not just mindlessly choose an NC in every instance.

There are two separate consequences of the flexibility in the use of NCs. The first of these has already been discussed widely in the literature on both Japanese (Downing, 1996; Iida, 1999, p. 142; Inoue, 2000, p. 218) and on other languages. This

consequence is that NCs can be used to add objective information to the meaning of the noun that describes the referent. In this case, the NC is chosen from a pool of NCs that are regarded as appropriate or 'correct' NCs for that referent, depending on which NC the speaker regards to be the most appropriate one for the referent in the context. Second, and far less widely discussed, is the consequence that an NC can be matched with a totally 'atypical' noun, one which would be considered 'incorrect' in most contexts, with a view to expressing the more subjective perception of the speaker towards the referent at the time of speech.

In the first of these two cases, the NC works as a conveyer of objective information; it plays a role in giving supplementary information, over and above that given by the noun, about the animacy, shape, size, and function, and so on of the referent concerned. For example, in order to refer to a dog, there is only one word '*inu*' in Japanese, but by attaching different NCs to this word '*inu*', such as '*inu it-too* (dog 1-NC(large, animate))' and '*inu ip-piki* (dog 1-NC(small, animate))', as shown in example (1-1), we can convey an idea of roughly how big the dog is. Moreover, if '*inu ichi-dai* (dog 1-NC(machine))' occurs, we can even indicate that the dog is not a living creature but is probably a dog-like robot (Iida, 2005). Thus, NCs are not simply matched with each noun by a grammatical rule but, in some cases at least, are also able to convey some additional information concerning the referent, although the choice of NCs in these cases still depends on the referent's physical and objective characteristics. This is the first consequence of the fact that one noun can be matched with more than one possible NC.

Regarding the second type of flexibility raised above, it is occasionally observed in actual usage that an NC can be matched with a completely 'atypical' noun. For example, in the data examined for this study, the NC *hiki* 匹, normally reserved for comparatively small animate beings, is sometimes used for completely atypical nouns such those referring to human beings or even inanimate entities such as pastries

(For authentic examples of these types, see 4.4.2.). If NCs were chosen only on the basis of the appearance or nature of the referent, the human beings involved would have been counted by *nin* (a specific NC for human beings) and the pastries would have been matched with *ko* (a general NC for inanimate entities). This is an example illustrating the fact that NCs are not always chosen simply depending on which noun a speaker is counting but, it is claimed in this study, on the basis of the subjective attitude of the speaker towards the referent. Thus it is important to recognise that there are a range of factors that can account for the choice of NC; speakers have considerable flexibility in their choice on the basis of not only purely objective criteria, such as physical characteristics, but also on the basis of subjective criteria.[1]

This thesis first targets the issue raised above, which has been barely discussed in previous literature: that one noun can be matched with more than one NC, not just in 'correct' but also in atypical matchings. It aims to investigate why an NC can be matched with an atypical referent, and what factors enable these atypical usages. Some previous studies, including Komatsu (2013), have observed that *hiki* can be used for atypical referents in a not insignificant number of cases. This may be because *hiki* refers to animate beings. It is most commonly used for comparatively small animate beings as well as sometimes serving as a general NC for all non-human animate beings. As animate beings are more likely than inanimates to attract people's attention, to be more salient referents, and to evoke more subjective reaction compared to emotionless, inanimate entities, it is assumed that *hiki* may allow for more subjective uses than other NCs generally do. Therefore, this study picks up *hiki* as the first target NC to

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[1] The degree of flexibility may vary depending on factors such as the medium of communication or the genre. For instance, there may be less flexibility in written than in spoken language and, as noted in Future Study (6.2), the flexibility may differ from genre to genre. These issues need to be investigated in further research.

investigate as a case study, particularly in relation to how NCs are used flexibly to express the subjective attitude of the speaker towards the referent in Japanese.

A second issue regarding Japanese NCs that has been little discussed in the literature is that, while the overwhelming majority of the referents of NCs are entities, some NCs are used when counting events and actions in Japanese. Though a considerable number of studies have been conducted on Japanese NCs, most of these have focused on NCs that are used for entities, but very few (with the notable exceptions of Lakoff (1987) and Matsumoto (1993)) have considered in any depth at all those that are used for events and actions. When counting the number of events, classifiers which can be used can be divided into two types in Japanese. The first type are those that are used exclusively for events, and the second type are those that can be used both for entities and events (see 2.4.6 for more details).

Concerning the first type, there are only three common Japanese classifiers that are used exclusively for counting events: *kai* 回, *do* 度, and *ken* 件. Among these three, *ken* is regarded as a typical NC as its referents are generally represented by a noun, as shown in example (1-2) below, in which the NC *ken* is used for the noun '*jiko* (accident)'. On the other hand, *kai* 回 and *do* 度 are mostly used for events which are represented by a verb. In example (1-3), the NC *kai* is used to count the number of instances of the action '*it-ta* (said)'.[2]

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[2] Because they are used only for counting events, strictly speaking, the classifiers *kai* and *do* would not be included in a *noun* classification system from a typological perspective. However, they have sometimes been discussed together with other NCs in previous studies (e.g., Iida, 1999). Accordingly, they are treated as a kind of classifier in a broader sense in this thesis. Thus, when referring to previous research in which these classifiers are treated as or called NCs, the term 'NC' is used in this thesis as it is in the original literature. However, when the focus is more on the issue that the referent event concerned can be represented by a verb, they are simply referred to by the more general term 'classifier' to make the distinction from typical NCs clear. Although these classifiers do need further research, this is beyond the scope of this thesis.

(1-2)

昨夜	車	の	事故	が	二件	あった
sakuya	kuruma	no	jiko	ga	ni-ken	at-ta
last.night	car	GEN	accident	NOM	two-CL	be-PAST

'There were two car accidents last night.'

(1-3)

彼	は	同じ	こと	を	二回	言った
kare	wa	onaji	koto	o	ni-kai	it-ta
he	TOP	same	thing	ACC	two-CL	say-PAST

'He said the same thing twice.'

While *kai, do*, and *ken* are used only for counting events, a second type of classifier can be used for both types of referents: entities, on the one hand, and events and actions, on the other. *Hon* 本, for example, is one of these NCs. *Hon* is an NC which is characterised as used for long and thin things, such as pencils and trees. However, it can also be used for certain abstract concepts and events, for instance, telephone calls and homeruns in a baseball game. It has been considered that *hon* is used for entities with the properties 'long and thin' as its central sense, and is used for abstract referents referring to events or actions in extended usages through the processes of metaphor, metonymy, and image-schema transformation (Lakoff, 1987, pp. 104-109). Though not particularly numerous, there are several other Japanese NCs which are used for both entities and events; however, with the exception of *hon* (Hamano, 2006; Hamano & Lee, 2007; Iida, 1996b; Lakoff, 1987; Matsumoto, 1986, 1993), these have not been deeply investigated in previous research.

This thesis examines one such NC, *hatsu*, as its second case study. This NC has been characterised as used for explosive things, such as bombs and bullets, and for instances of events such those involving explosions or the like, such as the firing of a gun. In addition, *hatsu* is frequently used for hitting actions such as physically hitting somebody or hitting the ball in baseball. Even though *hatsu* is used quite often and in many different contexts, its use as an NC has barely been investigated. While the well-studied NC *hon* is fundamentally used for tangible entities, *hatsu* seems to be used for a wide variety of events, and only used for certain entities involved in some of these events (the details are explained in 2.4.6 below).

Regarding the extension of meanings across semantic categories, it is generally considered that reference to concrete things tends to be most basic and that this type of meaning can be extended to include reference to abstract things. This notion is widely accepted, so it may seem natural to apply it to the range of referents of NCs. On this basis, and on the basis of previous research on the NC *hon*, it would be assumed that the range of referents of an NC might well be extended from tangible entities to abstract notions and events, but not the other way around. Thus, investigating *hatsu* is expected to contribute evidence which may either support this notion about the direction of extension of the range of referents of NCs, or provide counterevidence to it.

1.2. The Thesis of this Study

Based on the analysis of the data for this study, presented in detail in chapters 4 and 5, this study has identified three conditions in which NCs are used with atypical referents, that is, completely independent from the referent's observable characteristics. All of these conditions involve metaphor.

(i)　In the first case, the referent is referred to metaphorically by a common phrase or idiom involving both a noun and an NC (e.g., *ip-piki ookami* (one-CL wolf) 'a lone wolf').

(ii)　In the second case, the referent is referred to by a noun that is used metaphorically (e.g., the noun *ujimushi* 'worm' being used for many people gathering in one place / the noun *ari* 'ant' being used to describe people in a long queue in a traffic jam) and the NC supports that metaphor.

(iii)　In the third and final case, the NC itself is used metaphorically (e.g., the NC *hiki* being used to refer to irresponsible adults to criticise their behaviour in a joking way / the same NC *hiki* being used to show the speaker's special attitude towards some freshly baked pastries by 'animating' them).

All three of these conditions are discussed and exemplified in chapter 4 (sections 4.3 and 4.4).

Regarding the factors that account for these atypical matching, they emerge from the understanding of the importance of metaphor, and of the three cases in which it arises. As explained previously, NCs are generally matched to a referent, unlike in some other classification systems such as grammatical genders, which are matched to a noun. However, when metaphor is involved, NCs are in fact chosen not according to the actual referent but according to the metaphor. In some cases, the metaphor is carried jointly by a noun and an NC within a fixed expression (as in (i) above). In others, an NC is used to support the noun, which is the primary vehicle for metaphorical meaning (as in (ii)). Finally, the NC itself can play the role of the vehicle of the metaphor (as in (iii)). In all these cases, metaphor is involved in order to express meanings subjectively emphasised by the speaker in the specific context.

Regarding the direction of extension of meanings across semantic categories, the analysis of the second target NC *hatsu* provides evidence that there is a possibility

that the range of referents of NCs, in Japanese at least, can be extended not only from entities to events but also from events to entities. Of course, without examining historical evidence, it cannot be claimed definitively that *hatsu* is 'originally' used for events rather than entities. However, based on both quantitative and qualitative analysis, it is assumed that events (e.g., explosions and shootings) are more 'basic' referents of this NC, and entities (e.g., bombs and bullets) are extended usages. This extension of usage also fundamentally involves metaphorical processes, as well as other types of non-literal representation of referents such as metonymy (See section 3.2.2 and 3.2.3).

Thesis statement

This study has found that there are two dimensions of extension of the range of referents in Japanese NCs, beyond cases in which the objectively observable characteristics associated with that NC are evident. Extension can occur, firstly, in relation to the typicality of referents and, secondly, across categories of referents (entities and events). Based on the findings of the case studies undertaken, it is claimed in this study that non-literal factors account for the extension in the range of referents of an NC in Japanese in both these dimensions. Specifically, the non-literal devices of metaphor and metonymy appear to play a particuarly important role in the extension of the range of referents of an NC.

1.3. Structure of the Study

The thesis consists of six chapters. Chapter 1, the current chapter first introduced the background to this study and the reason why the two target NCs (*hiki* and *hatsu*) are chosen. Then, key findings and thesis statement of the study were presented.

Chapter 2 reviews literature that is relevant to the study. The chapter starts with overviewing general issues regarding the relation between grammatical classification systems and the human mind from a cognitive standpoint, in order to reveal the significance of an investigation into NC systems from a broad perspective. The following section reviews some major grammatical classification systems from a typological perspective. Then, the focus moves to NCs in general and to NCs in Chinese and Korean more particularly, since these two languages have a number of features in common with the target language of this thesis, Japanese, especially in relation to NCs. The last section of the literature review chapter is devoted to previous studies conducted on Japanese NCs. In particular, the last two subsections highlight problems concerning the target NCs of the present study.

Chapter 3 presents research questions and research design, including theoretical frameworks and their application in this study. This chapter also shows the data and method used in this study. Since *hiki* and *hatsu* have different characteristics, different procedures were taken at various points in the research.

The analysis is presented in two chapters: chapter 4 (for *hiki*) and 5 (for *hatsu*). Both chapters first illustrate the results of quantitative data analysis, and present the semantic components of each NC identified through the analysis. Then, qualitative analysis is shown with selected examples extracted from the data. In the qualitative analysis, chapter 4 (*hiki*) focuses particularly on atypical matchings of *hiki* and a noun. These matchings are examined with examples and are discussed from two perspectives: lexical collocations and metaphorical use. On the other hand, chapter 5 (*hatsu*) focuses more on the nature of referents, in particular events/actions. Since *hatsu* has not been deeply investigated previously, unlike *hiki*, it was considered an important step to first study the basic characteristics of *hatsu*. Examples in which *hatsu* is used purely as an NC are analysed first (5.3). This is followed by a further section which is devoted to adverbial and idiomatic usages (5.4).

Key findings are summarised in the first section of chapter 6, and conclusions are drawn in relation to the research questions. In closing, the thesis recognises limitations of the study undertaken, and suggests possible avenues of future research which may help in addressing these limitations and effectively carrying this study forward (6.2).

Chapter 2   Review of Relevant Literature

This chapter presents a review of previous research that is relevant to this study. The chapter constitutes a background for further exploring numeral classifiers (NCs) in Japanese. This literature review provides not only the context for this study, but will also serve to reveal the study's significance and the way in which it fills a gap in our understanding in the field of research on NCs in general, and on Japanese NCs in particular.

The review will start with broader issues and narrow down to the specific issues that this thesis addresses. The first section considers the question of how closely language may be related to thought, and discusses the potential significance of research into these classification systems in this regard (2.1). Then, features of three major classification systems, mass/count systems, noun classes (particularly grammatical gender systems), and noun classifiers, are introduced (2.2). As NC systems are the main focus of the present study, they are discussed more deeply in the next section (2.3). Finally, the last section (4.2) focuses particularly on the Japanese NC system.

2.1. Classification and Thought

It has been claimed that language and thought closely interact. A number of studies have been conducted to investigate whether the language we speak shapes our thought, or whether the habitual ways of thinking of particular communities shape the language they speak. A number of studies have been conducted on this interaction between human experience and language, such as our experience and expression of time and space (Boroditsky & Gaby, 2010; Munnich, Landau, & Dosher, 2001; Slobin, 1996;

Talmy, 1983). Boroditsky (2011), among others, finds that the influence goes both ways.

One way in which such interaction may occur relates to how speakers of a particular language categorise entities in the world, and how their perception of the world may be relevant to this categorisation. Senft (2000, p. 11) claims that the ability to classify entities is essential to survival for all creatures from a biological point of view. In the case of human beings, language is a window on the world and languages categorise and organise entities in this world (Imai, 2010, p. 2).

Concerning classification systems in language, all human languages have one or more grammatical classification systems to categorise nouns and the way in which those systems categorise is primarily in terms of semantic and syntactic properties (Aikhenvald, 2000, p. 13). For example, a mass/count system divides nouns into two semantically based categories, countable nouns and uncountable nouns, while noun classes are generally matched with a noun on the basis of semantic criteria first, followed by morphological and phonological criteria (Aikhenvald, 2000, p. 22; Corbett, 1991, p. 8). Numeral classifiers (NCs) are also chosen predominantly by semantic characteristics such as animacy, shape, and size (Aikhenvald, 2000, p. 117). Thus, these characteristics of noun classification systems in languages could imply that many grammatical classification systems can show how people understand entities, or even how the world is presented through their language (Aikhenvald, 2000, p. 5). From a typological perspective, investigating grammatical classification systems is expected to contribute to the debate how these classification systems are related to human cognition. In order to better understand this relationship, a number of experiments have been conducted.

S. Zhang and Schmitt (1998), for instance, conducted a study with speakers of Chinese (an NC language) and English (a non-NC language). In the study, they asked participants to rate the degree of similarity of pairs of words which share the

same NC in Chinese, and also examined how many of the words which share the same NC the participants could remember. The results clearly showed, as expected, that Chinese speakers rated similarities higher than English speakers. In addition, Chinese speakers not only tended to put the same NC words together, but also remembered more words in total than English speakers did. S. Zhang and Schmitt suggest that this might be because classifier-related memory helped speakers to recall the words. They concluded that cognition of speakers of NC languages is considerably influenced by the categorisation of NCs. The results from S. Zhang and Schmitt (1998) indicate that language differences can affect cognitive organisation and ability.

On the other hand, there is another view that NCs do not strongly affect speakers' cognitive organisation of entities, but rather provide subsidiary ideas in perceiving and categorising entities (Saalbach & Imai, 2007). Saalbach and Imai claim that S. Zhang and Schmitt's (1998) conclusion is disputable because they demonstrated only the rating of perceived similarities and the result is not further applicable. In their study, Saalbach and Imai identified four possible types of relations between a target object (e.g., comb) and another object: (1) a taxonomically related object (e.g., hair dryer), (2) a thematically related object (e.g., hair), (3) something which shares the same NC with the target object in Chinese (e.g., key), and (4) a control target which has none of these relations with the target object (e.g., ticket). From the results of their study, they found that Chinese speakers were more likely than German speakers to choose (3) something which shares the same NC. However, the occurrence of this choice (3) was still much lower for Chinese speakers than that of choosing another relation type, such as a taxonomic or thematic relation. Therefore, although NCs may mildly influence speakers to categorise objects, it can be assumed that they are not the main factor, and are less important than the other conceptual relations mentioned above (Saalbach & Imai, 2007). S. Huang and Chen (2011) conducted a related study to examine the results obtained from previous experimental

studies with Chinese speaking participants. Their results indicate that NCs do affect a speaker's mind when they recall nouns. However, they also found that the effect of NCs is not as strong as that of taxonomic categorization; therefore they also observed a weaker effect of NCs than had Saalbach and Imai (2007).

In 2012, Saalbach and Imai conducted another study, because they also considered that the degree of the influence of NCs on Chinese speakers was not sufficiently clear from their previous study, undertaken in 2007. In this study, speakers of Japanese, which also employs NCs, participated with German and Chinese speakers. Even though Chinese uses approximately four times the number of NCs than those used by Japanese speakers, and there are certainly several differences between them, Japanese and Chinese NCs are still considered to be similar at the global level (Saalbach & Imai, 2012). Saalbach and Imai established four types of pairs of objects: nouns belonging to the same NC only in Chinese, only in Japanese, in both Chinese and Japanese, and nouns belonging to the same NC in both languages as well as to the same taxonomic category. The results were quite consistent with their previous research in 2007. All participants rated the taxonomically related pairs higher than other pairs in terms of similarity. In addition, however, while Chinese speakers still tended to be somewhat affected by NC categorisation, Japanese speakers did not show this tendency. Saalbach and Imai (2012) therefore conclude that NCs affect a speakers' categorisation to some extent, but that this is weaker than the effect of taxonomic features. Saalbach and Imai's study (2012) seems to suggest that Japanese NCs barely influence speakers to classify objects into categories. However, to date, there is too little evidence to draw a firm conclusion.

2.2. Classification Systems

There are a number of different classification systems in the languages of the world. In order to address the questions concerning Japanese NCs raised in this study, it will be useful to first overview and understand general features of other classification systems since some issues in other classification systems are closely related to issues arising in regard to Japanese NCs. For example, how nouns are matched with classifiers or how nouns are classified through grammatical classification systems are highly relevant to the Japanese NC system. Among other classification systems, this section takes up three major types: mass/count nouns, noun classes, and noun classifiers. Basic features of these classification systems are described and in particular, noun classes are discussed, as some noun class systems have some similar characteristics to Japanese NCs. That is to say, in these systems, nouns can be paired with not only one but more than one classifier. Due to this flexibility, the speaker can select one class or classifier from a number of choices, allowing the speaker to add context-based, personal meaning to the referent. Since NC systems are the main classifier systems to focus on in this thesis, they are discussed in the following section (2.3) separately.

2.2.1. Mass/Count System

Mass/Count systems are among the most common and well known grammatical classification systems. In a mass/count system, generally nouns are classified into two categories: count nouns and mass nouns.[3] Count nouns can be directly modified by numeral expressions (e.g., *three* books) while mass nouns need a quantifier or mass

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[3] These are also frequently referred to as countable nouns and uncountable nouns (Wisniewski, Imai, & Casey, 1996).

expressions to be counted (e.g., a *sheet* of paper) (Rothstein, 2010). Concerning grammatical features in mass/count system languages, plural morphemes are usually employed for count nouns (Li, 1999). In English, for example, when multiple countable objects are referred to, the suffix '-s' is added to the noun as a regular rule. In addition to the suffix '-s', English employs a variety of allomorphs such as bush*es*, m*i*ce, and two sheep (zero morph) (Allan, Bradshaw, Finch, Burridge, & Heydon, 2010, p. 50; Li, 1999; Rothstein, 2009). As a very basic feature, count nouns are generally characterised as describing entities which have a clear boundary and have spatial properties that persist over time. On the other hand, mass nouns are substances which can take their spatial properties by being encased in containers or divided up in some other way.[4]

As a system, however, plural markers are not always required even if a mass/count system is employed in the language. In Yucatec Maya (one of Mayan languages spoken in some parts in Mexico), for example, plural markers are optionally used in some cases. For example, when more than two pigs are counted, it is essential to use a plural marker. On the other hand, when brooms are counted, a plural marker is not required. In brief, Yucatec Maya uses a plural marker only when referents are countable and animate, whereas it is obligatory for all count nouns in English (Allan, 1977; Lucy, 1992, pp. 56, 87). From these characteristics, Lucy (1992) hypothesised that there may be a difference of sensitivity to numbers between speakers of those two languages: English and Yucatec (Lucy, 1992, p. 87). In order to examine this hypothesis, Lucy conducted several experiments by asking both English and Yucatec speakers to detect the change in the number of different types of nouns (animate beings and inanimate entities) in pictures. The results illustrate two tendencies. Firstly, nouns which indicate animate beings are more salient for speakers of both languages.

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[4] There are some exceptions, such as superordinate nouns in English (e.g., furniture and luggage) (Rothstein, 2010).

Secondly, concerning the sensitivity to numbers, Yucatec speakers showed less sensitivity about inanimate entities while English speakers regarded changes in the numbers of both animate beings and inanimate entities as significant (Lucy, 1992, p. 87). Although these findings cannot be considered to be due to the different plural systems alone, this result could still be seen as evidence implying that different classification systems could influence speakers' perception of entities differently.

In the Japanese NC system, NCs are used for any referent whose number is concerned. However, the boundary between animate and inanimate is considered to be quite distinct (Iida, 1999; Iwasaki, 2013, p. 75). In addition, while Japanese has a couple of general NCs that can substitute for any more specific NC for inanimate entities, it does not have a general NC to cover both animate and inanimate entities, but uses specific NCs for animate beings.[5] From these kinds of linguistic features in Japanese, English, Yucatec, and many other languages, it can be assumed that in general, human beings identify and recognise animate beings more saliently than inanimate entities.

Regarding grammatical classification systems and human perception, it should also be noted that the mass/count distinction is not the same in each language that makes this distinction grammatically. For example, jewellery is a mass noun in English but is a count noun in Hebrew (*taxsˇit/taxsˇitim*) (Rothstein, 2010). Likewise, spaghetti is a mass noun in English whereas it is a count noun in Italian (*spaghetto/spaghetti*) (Shapiro, Zurif, Carey, & Grossman, 1989). This kind of example can indicate the possibility that mass/count distinctions are not necessarily an embodiment of human conception nor inherent features of entities (Chierchia, 1998, p. 57; Rothstein, 2010). However, while mass/count distinctions have been generally considered to be somewhat arbitrary, Wierzbicka (1985) claims that they are actually

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[5] For instance, *ko* and *tsu* can each be used as a general NC for inanimate entities.

semantically motivated in each particular language. A couple of nouns Wierzbicka examined, which denote some kinds of food in English, are introduced. According to Wierzbicka, size and eating habits can be factors used to differentiate mass nouns and count nouns. For example, a single grain of rice is too small to get our attention in a dish. On the contrary, whole pumpkins or heads of cabbage are too big to be placed on a plate. Due to these characteristics, both these types of nouns are treated as mass nouns (Wierzbicka, 1985). As for eating habits, how food is eaten can be a relevant factor. For example, a whole head of garlic (mass noun) is generally not eaten as is, unlike olives or radishes (count nouns). Wierzbicka examined nouns not only for food but also water, crockery and a great many other types of words, and illustrates why some of them are count nouns whereas others are mass nouns in English (1985).

Wierzbicka's study (1985) has explored mass/count distinctions and found some sense from a semantic point of view. These justifications for classifying nouns through grammatical classification systems can contribute to a discussion of the notion that a grammatical classification system can embody human perception within a cultural context. In other words, grammatical classification systems are not automatically or arbitrarily utilised, but are in fact closely related to our human perception and cultural life.

2.2.2. Noun Class

In this section, features of a second classification system are introduced: noun class systems. General features of noun classes are briefly introduced (2.2.2.1), and the ways nouns are matched with noun classes are illustrated by showing examples from several languages (2.2.2.2). The third subsection deals with certain types of noun classes which are particularly known as 'genders' in Indo-European languages (2.2.2.3). In the last subsection, previous studies particularly concerning the relationship between

grammatical genders and biological sex are reviewed (2.2.2.4). It will be explained that nouns are normally assigned into classes on semantic, morphological, and phonological criteria in noun class systems and that the semantic criteria precede the other factors. This is quite consistent with NC systems, which also classify nouns based on semantic criteria. More significantly, noun classes in certain languages which have similar features to the main aspects of Japanese NCs in this thesis, are introduced. These languages demonstrate that classification systems enable speakers to express their perception towards the referent at the time of speech.

2.2.2.1. General Features of Noun Classes

In the system of noun classes, the classification can be on the basis of a variety of criteria such as semantic, morphological, and phonological characteristics, or even a combination of these (Aikhenvald, 2000, p. 22; Corbett, 1991, p. 8). Compared to the term 'noun classes', the term 'grammatical gender (or simply 'genders')' has been more commonly used for a long time. The origin of the analysis of grammatical genders goes back to the fifth century BC. The Greek philosopher Protagoras divided Greek nouns into three classes: feminine, masculine, and inanimate (which is commonly referred to as 'neuter') (Aikhenvald, 2000, p. 19; Ibrahim, 1973, p. 14). These gender systems are observed in a number of Indo-European languages (Aikhenvald, 2000, p. 35; Neri & Schuhmann, 2014). However, it was later found that some African languages also employ gender-like systems, sometimes classifying nouns into many more groups rather than simply basing them on feminine, masculine, and neuter. The term 'noun class' thus came about to replace 'genders' (Aikhenvald, 2000, p. 19).

Noun classes are employed in a wide variety of languages. Corbett (2013) examined 256 languages from various parts in the world and reports that 112 of them,

which is about 44% of the total, employ noun classes (Corbett, 2013). Among those 112 languages, 50 of them employ two classes and 26 languages employ three classes. Only 12 languages have four classes and the remaining 24 languages have five or more. From a geographical point of view, noun classes are employed in a varied range of locations around the world, as is the case with other classification systems. In particular, a large proportion is accounted for in the Niger-Congo and Indo-European language families (Corbett, 2013).[6]

2.2.2.2. Noun Assignment in Noun Class Systems

In this subsection, how nouns are actually matched with noun classes is described. Nouns are assigned into noun classes based on a number of different criteria. In the following, semantic, morphological, and phonological criteria will be introduced in this order, as well as how these criteria actually work in some languages.

The assignment of nouns to classes is done on a semantic basis in a number of languages. In this case, the class is determined by the meaning of the noun. As an example of the semantic systems of noun classes, Corbett (1991) takes up Dravidian languages, which are spoken primarily in southeast India and northern Sri Lanka (Corbett, 1991, p. 8). Tamil, one of the Dravidian languages, has three classes: (1) god or male human (male rational), (2) goddess or female human (female rational), and (3) other (non-rational) (Corbett, 1991, p. 9). Though there are some exceptions, nouns are basically assigned into these three classes highly consistently.[7] Not only in Tamil but also in other Dravidian languages, nouns are assigned into classes strictly on the basis of semantics (Corbett, 1991, p. 11).

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[6] Niger-Congo languages are found in western, central and southern Africa, and Indo-European languages are mainly found in Europe and the South Asian sub-continent (Corbett, 2013).

[7] As an example of an exception, the sun and the moon are treated as masculine (Corbett, 1991, p. 9).

As another interesting example is Dyirbal, an Australian Aboriginal language. In Dyirbal, there are four classes: (1) *bayi*: male human beings, animate non-human beings, (2) *balan*: female human beings, water, fire, fighting, (3) *balam*: non-flesh food, (4) *bala*: other things (Dixon, 1982, p. 179). The second category may be well known among linguists since George Lakoff titled his book 'Women, Fire, and Dangerous Things' inspired by Dyirbal (Lakoff, 1987, p. 5). In Dyirbal grammar, it is obligatory to assign nouns into one of those four classes as a general rule (Dixon, 1982, p. 163).[8] However, since these four categories do not seem to be adequate to cover all nouns, Dixon noted some more supplemental rules in order to understand some exceptional assignments. One of the supplement rules is that even if some noun has a general characteristic X, which usually leads the noun to be assigned into one of the four classes, another characteristic Y of the noun will precede X in the case that Y is related to the belief system or myths of the speakers. For example, speakers of Dyirbal language believe birds to be the spirits of dead human females, so the noun bird is assigned not to (1) *bayi*: male human beings, animate other than human beings (general characteristic X: an *animal* bird) but instead to (2) *balan*: female human beings, water, fire, fighting (belief or myth-related characteristic Y) (Dixon, 1982, p. 180). Thus, nouns are assigned by applying both the general and supplemental rules in Dyirbal. Dixon reports that there are still some nouns whose assignment cannot be explained clearly by these rules. He concedes that this is probably due to his own lack of knowledge about Dyirbal myths and beliefs (Dixon, 1982, p. 183). Accordingly, speakers need to have a certain amount of historical and cultural knowledge to assign all nouns properly. This presumption would probably be true for Dyirbal learners from outside of the community. However, for people who learn Dyirbal within the community, particularly for those who acquire Dyirbal as their first language, they

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[8] A noun may not be accompanied by a noun marker when the noun is in ablative, allative, or locative form (Dixon, 1982, p. 163).

probably pick up the usage of those four classes naturally without being consciously aware of the related system.

The focus now moves to the second of three factors used to classify nouns into classes: morphological criteria. Strictly speaking, a morphological system cannot serve as a sole rule by itself to assign nouns into classes. It is claimed that there are always semantic cores, and morphological factors work only supplementally or in an overlapping way (Corbett, 1991, p. 34; Corbett & Fedden, 2016). In Russian (an East Slavonic language), for example, sex-differential nouns are assigned into masculine and feminine as a basic rule (Corbett, 1991, p. 34). For instance, 'uncle' is masculine and 'lioness' is feminine. The remainder of nouns are generally assigned by their declensional type. In addition to this, Corbett claims that a couple more sub-rules are needed, since not all nouns are declinable. He states three sub-rules: (1) for acronyms, the class is determined by the head noun by following the morphological rule, (2) nouns denoting animates are masculine, and (3) others are neuter (Corbett, 1991, p. 41). While Russian employs only a couple of different criteria, some languages such as Bantu languages, which are mainly spoken in the southern half of Africa, show more complexity. Bantu languages usually have several classes, for instance, Swahili employs no less than eighteen classes (Corbett, 1991, p. 46).[9] Corbett makes a claim that there are three semantic rules and six morphological rules to assign nouns in Swahili (Corbett, 1991, p. 46).[10]

The third and final criterion for classifying nouns is phonological assignment. Regarding this criteria, it should be first noted that no language in the world is considered to assign nouns solely by phonological principals (Aikhenvald, 2000, p.

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[9] This number includes three locatives, which are different from lexical genders (Corbett, 1991, p. 46). The number of noun classes identified in Swahili can vary depending on the criteria used for defining the classes (Contini-Morava, 1994).

[10] '5/6' is a traditional convention used by modern Bantu scholars, which means 5 in the singular and 6 in the plural in the class (Corbett, 1991, p. 46).

25). In order to observe phonological assignment, Qafar (an East Cushitic language which is spoken in north-eastern Ethiopia and Djibouti) is a good example (Corbett, 1991, p. 51). In Qafar, there are only two classes: masculine and feminine. Nouns are first assigned according to biological gender, namely, male humans and male sex-differentiable animals are masculine, and female humans and female sex-differentiable animals are feminine. However, it is obvious that this rule does not cover a lot of nouns, and so phonological criteria are employed. In this system, nouns whose citation form ends in an accented vowel are feminine and others are all masculine (Corbett, 1991, p. 51).

This subsection has taken a general view of how nouns are assigned into classes in noun class systems. Overall, nouns are assigned on the basis of semantic, morphological, and phonological features, or a combination of these. Among these criteria, semantics seems to precede other criteria in general as well as in combination types. In addition to these features, it appears that in order to assign nouns into classes, the speaker needs to have a certain amount of knowledge about not only the language itself but in some cases the cultural background as well. In the following subsection, noun classes in Indo-European languages ('grammatical genders'), for which it has been traditionally argued that there are no clear rules for assigning nouns, are particularly focused on.

2.2.2.3. Genders in Indo-European Languages

In this short subsection, I will refer to noun classes employed in Indo-European languages, which typically have masculine, feminine, and neuter, as 'grammatical genders' (G-genders). Technically speaking, these genders are also members of noun class classification systems. However, as mentioned previously (see 2.2.2.1), G-genders in Indo-European languages have been studied by European scholars for a

long time, so the term 'gender' is still sometimes considered to indicate particularly European noun classes, especially among non-linguists. Due to this historical background and its characteristics, this subsection focuses on these G-genders.

As the previous subsection illustrated (see 2.2.2.2), nouns are assigned into classes on the basis of certain rules involving semantic, morphological, and phonological criteria. However, it seems to be hard to find something in common in each category of class in G-gender systems. For example, the 'sun' is feminine in German and masculine in French, and the 'moon' is the opposite. In addition to this, it is difficult to guess how these genders are determined even within one language (Inoue, 1998, p. 179). Allan (1977) makes a claim that grammatical classification systems, including noun classes, must have meaning. He also states that G-genders employed in European languages do not classify inanimate entities based on their observable characteristics. Accordingly, Allan considers that G-genders in European languages are not semantic, so they are not regarded as a grammatical classification system in the sense of his definition (Allan, 1977, p. 291). However, at a glance, these claims are all made from a semantic point of view only. Corbett (1991) argues that even French, whose gender system is commonly considered to be one of the most difficult systems to understand among all languages, has some rules (Corbett, 1991, p. 57). Corbett went back to a number of old studies regarding genders in French, such as Bidot (1925, as cited in Corbett 1991, p. 57) and Mel'čuk (1958, as cited in Corbett 1991, p. 57). In particular, based on the study conducted by Tucker, Lambert, and Rigault (1977), Corbett claims that even though it is quite complex, there are still rules for assignment in French. Firstly, there are two semantic rules: (1) sex-differential nouns denoting males are masculine, and (2) sex-differential nouns denoting females are feminine (Corbett, 1991, p. 57). This is very straightforward and can cover a number of nouns (e.g., *père* 'father' is masculine and *tante* 'aunt' is feminine). Next, there is a morphological rule: compound nouns formed by a verb plus some other element/s are

masculine. Interestingly, even if a noun used in a compound noun itself is feminine, the compound noun formed in this way is treated as masculine (Corbett, 1991, p. 58). Additionally, there are many more rules based on phonological criteria. Though the rules vary, Corbett summarised them as following: (1) nouns ending in /ɛzɔ̃/, /sjɔ̃/, /zjɔ̃/, /ʒjɔ̃/, and /tjɔ̃/ are feminine, and (2) remaining nouns ending in /ɔ̃/ are masculine (Corbett, 1991, p. 60). In sum, semantic factors precede other criteria as in other languages, and morphological as well as phonological factors also play an important role. Though there are still some exceptions, those rules can be called an assignment system, and therefore French genders are not as irrational as it has been generally considered (Corbett, 1991, p. 61).

2.2.2.4. Grammatical Gender (G-Gender) and Biological Gender (B-Gender)

G-genders have been discussed mainly from a grammatical point of view. Needless to say, however, the term 'gender' can refer to biological gender (B-gender) as well in daily conversation. Thus, this subsection takes a look at how G-genders and B-genders could influence or interact with each other in people's minds. Although the assignment of nouns is often motivated by B-genders in some languages, G-genders are still frequently considered not to be necessarily relevant to B-genders. Yet it has also been pointed out that the sex of inanimate things is often determined by the grammatical gender in Indo-European languages (Ibrahim, 1973, p. 93), and it is disputable whether or not G-gender language speakers are clearly able to distinguish between G-genders and B-genders in their mind.

In order to approach this issue, Imai, Schalk, Saalbach, and Okada (2010) conducted a study with native speakers of German (a G-gender language), and native speakers of Japanese (a language that does not use a system of noun classes). From the results, Imai et al. concluded that German speakers could be influenced by G-genders

when they were asked to identify the B-gender of animals. To be exact, German speakers can be confused between the G-gender and B-gender of a given subject; the confusion happens when their mind processes the B-gender of a noun that is presented with a grammatical gender article. This case is one piece of evidence which suggests that G-genders involve more than simple grammatical agreement which is automatically processed in our mind. Rather, they are one factor of language which could influence our thought to some extent.

Aikhenvald (2012) discusses this issue from a slightly different perspective. In Manambu, which is a member of Ndu family and is spoken in five villages in New Guinea, G-genders are determined by semantic criteria such as shape and size. As a general rule, G-genders for human beings agree with B-genders, for example, 'father' and 'uncle' are masculine, and 'woman' and 'sister' are feminine. Regarding other entities, small and roundish referents are feminine, and long and biggish referents are masculine. For instance, a big dog will have a masculine gender even if the dog is biologically a female (Aikhenvald, 2016, p. 34). It is notable that the choice of G-genders is not strictly fixed in Manambu. Manambu actually allows its speakers to choose one of the two G-genders depending on which can describe the speaker's perception of the entity more appropriately at the time of speech (Aikhenvald, 2012). In other words, the choice could be influenced by a number of factors. Even for human beings, masculine can be used for females and vice versa in informal situations. For instance, a smallish, fat man can be referred to by a feminine form if his physical characteristics are thought of as womanlike. This kind of usage is observed when people speak in a joking way as well as when they express negative emotion towards the referent person (e.g., speak in an insulting or demeaning way). Aikhenvald also introduces other languages from the Sepik region of Papua New Guinea and in those languages, speakers choose a G-gender depending on which aspect or factor of the referent they want to focus on. In addition to this, it should be also noted that the

selection can be frequently made based on the speaker's cultural background as well (Aikhenvald, 2012). So, in Sepik languages, the selection of G-gender could be an embodiment of how the speaker perceives and feels about the referent at the time of speech, and cultural background or expectation can affect the choice of noun class. These studies by Aikhenvald also support the claim that the choice of G-gender cannot be regarded simply as involving empty grammatical agreement. Rather, these systems seem to have more flexibility, which can be motivated by the speakers' understanding or by features of the referent concerned.

In this regard, these kinds of noun class systems have common characteristics with Japanese NCs. Japanese NCs are also chosen fundamentally on a semantic basis. However, these choices are not firmly fixed, but rather Japanese NCs can also be used flexibly to embody the speaker's perception of the referent. The detailed discussion of this point from previous studies is addressed in 2.4.4 (extended usages of Japanese NCs) and 2.4.5 (Japanese NCs for animate beings). The analysis with data from this study is presented in the analysis chapters (see chapters 4 and 5 below).

2.2.3. Noun Classifiers

This section describes noun classifier systems as the last example of the three major classification systems dealt with in this chapter. Noun classifiers are characterised as occurring with a noun, making a noun phrase, or within a noun phrase (Aikhenvald, 2000, p. 81; Hopkins, 2012; Sands, 1995). This system is found in Australian languages, Mesoamerican languages, some Western Austronesian languages, Amazonian languages, and some isolated languages in East and Southeast Asia (Aikhenvald, 2000, p. 82). The number of noun classifiers varies in each language from only two (e.g., in one of the Australian languages, Emmi) to several hundred (e.g., in some languages in East and Southeast Asia) (Aikhenvald, 2000, p. 84). Noun

classifiers are independent lexemes and are generally selected on a semantic basis, whereas noun classes (discussed in 2.2.2.2 above) could be based on not only semantics but also morphological and/or phonological factors, as well as complex combinations of these. The inherent characteristics of entities are strongly related to the choice of noun classifiers (Aikhenvald, 2000, p. 82). For example, in Mayan, Hopkins (2012) reports that about a half of the noun classifiers classify by 'natural' categories and the other half classify by 'social' categories. The term 'natural' here refers to the inherent nature of the material of the referent. For instance, in Chuj (one of the Mayan languages with noun classifiers), bowls made of different material, such as wood, ceramic, and stone, all take different noun classifiers (Hopkins, 2012). The 'social' categories deal with social statuses such as male, known person, and god. One of the 'social' categories includes some noun classifiers which indicate kinship, such as kinswoman (Hopkins, 2012).

When it comes to their functions, there are two main roles of noun classifiers to be mentioned. Firstly, in some languages, noun classifiers are used to make the meaning of a noun clear. In Minangkabau (one of the Austronesian languages spoken in parts of Indonesia and Mayasia), 'lemon tree' is *batang limau* (CL: tree lemon) and 'lemon fruit' is *buah limau* (CL: fruit lemon) (Marnita, 1996, as cited in Aikhenvald 2000, p. 84). Secondly, noun classifiers can be used as anaphoric pronouns to replace the referent noun (Craig, 1986; Hopkins, 2012; Sands, 1995). These two characteristics are actually both observed in NC systems as well. In the Japanese NC system, for example, the noun salmon (*sake*) can take at least three different NCs, each indicating a different state: *sake* 1-*hiki* (a live salmon), *sake* 1-*hon* (a whole, processed salmon), and *sake* 1-*kire* (a piece of salmon) (see 2.4.3 below for details). A set of a numeral and an NC can work anaphorically in a sentence as well (see 2.4.1.2 below). In these ways, noun classifiers and NC systems have similar characteristics. The main difference between noun classifier systems and NC systems is that NCs are specifically

used whenever the number of entities is counted or mentioned, and so they are used with numerals as a general rule (Hopkins, 2012). The details of NC systems are discussed in the following section (2.3).

2.3. Numeral Classifiers

The last section (2.2) took a general view of different grammatical classification systems. Now, this section particularly examines numeral classifier (NC) systems. First, basic features of NC systems are outlined (2.3.1), then the Chinese and Korean NC systems are introduced, since these languages share a lot of features, such as the origins and use of NCs, with Japanese (2.3.2 and 2.3.3). Overviewing these languages will help us to deepen our understanding of NCs in general and also in regards to Japanese NCs specifically.

2.3.1. Basic Features of Numeral Classifier System

Numeral classifier (NC) systems are the second most frequently employed type of classification system, after noun class/gender systems. NCs are employed by languages in a range of areas from across East and Southeast Asia and Oceania, and some parts of North America (Aikhenvald, 2000, p. 121; Gil, 2013). An NC system is usually employed in languages which have a large number of numerals. Some languages employ very few numerals, such as 'one', 'two', 'three, and 'many' only.[11] These languages tend not to have NCs (Aikhenvald, 2000, p. 99). While an NC system is regarded as a type of grammatical classification system, the presence of an NC system in a language does not necessary exclude other such systems. For example,

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[11] For example, many languages in New Guinea, Australia, and South American Indian languages have very few numerals (Aikhenvald, 2000, p. 99).

Yucatec Maya (one of the Mayan languages spoken in some parts in Mexico), is an NC language, but employs a pluralisation system as well. In Yucatec Maya, plural markers are used only for countable animate objects, unlike English which requires plural markers for all countable entities (Foley, 1997, p. 209). Not only in Yucatec Maya but also in some other NC languages, it is not uncommon to attribute plural markers to countable nouns. Korean, for instance, uses *–tul*, and Japanese uses *–tachi*, which attach to countable nouns in some cases.[12] These morphemes are not obligatory in these languages from a syntactic perspective, but still work as plural markers (Kang, 1994; Lee, 1999).

About the properties of NCs, firstly from a morphological perspective, Aikhenvald (2000) illustrates three possible properties:

1. They may be independent lexemes. This happens often, but not always, in languages with an isolating structure.
2. They may be affixes, or clitics, attached to, or fused with, numerals.
3. They may be attached to, or fused with, the head noun. This is extremely rare.

(Aikhenvald, 2000, p. 101)

For example, Thai, Burmese, and Vietnamese have NCs which are independent lexemes, so these languages belong to type (1). Japanese NC system, on the other hand, belongs to type (2), as Japanese NCs cannot stand alone but must be attached to numerals at all times.

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[12] '*-tachi*' is often used for animate beings including human beings, but can be used for inanimate entities as well (*Shinmeikai Kokugo Jiten [New Clear-understanding Japanese Dictionary]*, 1995, p. 780).

Secondly from a semantic point of view, broadly speaking, classifiers are generally characterised as having meaning. Allan (1977), for example, conducted one of the major early studies on classifiers by surveying more than 50 classifier languages, and identified seven categories of classification: material, shape, consistency, size, location, arrangement, and quanta. NCs are no exception in terms of having meanings, and it has been claimed that NCs are chosen normally on a semantic basis regarding the referent's animacy, shape (which sometimes includes size), function and structure (Aikhenvald, 2000; Denny, 1976; Iida, 1999; Matsumoto, 1993). As an extreme case of the animacy criterion, Khasi (Austroasiatic family language, which is mainly spoken in Meghalaya state in India and some areas in Bangladesh) has only two numeral classes: for human beings and for non-human beings (Adams, 1986). Regarding the way shapes can be distinguished by NC systems, long and thin (one-dimensional), flat (two-dimensional), and three-dimensional are commonly observed differentiations (Aikhenvald, 2000; Allan, 1977; Bisang, 1999; Craig, 1986; Downing, 1996). It has also been maintained that animacy and dimensional features are perceptually salient to all human beings, so those categorisations are frequently employed across different cultures too (Downing, 1996, p. 135; Yamamoto, 2005, p. 11).

Typological studies have shown that NCs can be thought of as comparatively hierarchically structured systems based on parameters of animacy, shape, and function (Aikhenvald, 2000, p. 98; Allan, 1977; Bisang, 1999; Iida, 1999). On the other hand, some studies which focus more on individual languages argue that NCs are unstructured systems to a degree, that is, that NC systems require speakers to have certain cultural knowledge to choose a 'correct' NC for a noun (Matsumoto, 1993; Yamamoto, 2005, p. 11). Yamamoto considers that the actual substance of NCs would be in between these two claims. This is because NC systems are cognitive-based as well as culturally biased, and the former characteristic is related to structured hierarchy

while the latter is not (Yamamoto, 2005, p. 12) (see also 2.4.4 for the structure of Japanese NCs below).

When it comes to the culturally biased aspect of NC systems, Denny's analysis makes an interesting contribution (Denny, 1976). Denny says that 'nouns have more to do with what is out in the world, and classifiers more to do with how humans interact with the world' (Denny, 1976, p. 125). He claims that there are three kinds of human interaction portrayed through the use of classifiers: physical interaction, functional interaction, and social interaction. Physical interaction is dealing with spatial configuration and strength of materials, and these are related to any manual technology that the community of speakers has (Denny, 1976). For example, members of a culture with hunting and agriculture tend to be more concerned with things like strength of materials (Denny, 1979). In other words, if one culture has more complicated technology for a certain thing than other cultures, its use of classifiers could differ from the others' in ways that reflect those cultural attributes. Functional interaction is similar to physical interaction in this regard, and social interaction includes distinctions between social members such as men from women, adults from children, and people from animals. These categories of classifiers are key to the expression of status among members of society, among other things. In other words, classifiers reflect the different ways in which speakers view and interact with objects and with others from culture to culture.

NCs in Mesoamerican languages may also provide an example which shows the relationship between the use of NCs and the culture. In some Mayan languages, for example, there is a set of core classifiers which are 'humans', 'animals', 'plants', and 'inanimate entities' (Hopkins, 2012). Some of those Mayan languages employ only these four classifiers, but some other Mayan languages utilise hundreds of NCs. According to Hopkins (2012), use of NCs is grammatically similar across Mayan languages, however, the number of NCs employed in each language and what semantic

criteria are applied for NCs differs significantly. Based on these facts, Hopkins considers that though these Mayan languages belong to the same language family, NC systems in those languages are not inherited from one original language but came to be utilised in each language after diversification (Hopkins, 2012).

Concerning more practical points of NCs in use, it has been argued that nouns can often be matched to more than one NC. In many cases, it depends on the perspective the speaker has towards the referent in the context. However, this feature differs from language to language. For example, it has been claimed that Thai does not allow speakers to use NCs flexibly to the extent that some other languages do, due to its lexical rules (Bisang, 1999). [13] On the other hand, NCs in some languages demonstrate a considerable variety of uses (Gil, 2013).

Regarding the reason for such variation in possible NCs for one noun, Adams (1986) considers that nouns are just a symbol and classifiers are supplementally giving information about specific characteristics of the noun as far as the speaker is concerned. For instance, in Burmese, the speaker's emotion can affect the choice of NC for human referents. Speakers tend to use NCs normally used for animals for human beings when they are angry at the referents (Adams, 1986). Usage very similar to this is found in Japanese as well. In Japanese, the NC for comparatively small animate beings, *hiki*, is sometimes used for human beings quite creatively and metaphorically. *Hiki* being a target NC in this thesis, details are discussed in the analysis chapter (see 4.4 for the metaphorical use of *hiki*). These kinds of extended or metaphorical usages are frequently observed in poetry and novels as well. For example, in Bahnar (of the Austroasiatic language family, spoken in Vietnam), in poems, children are counted by

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[13] In some cases, Thai speaker's emotion can affect the choice of the NC used for human referent, in a similar way to Burmese (as introduced below). For example, when the speaker is upset, NCs normally used for other animate beings can be employed to count human beings in some specific circumstances (C. Svetanant, personal communication, June 30, 2018).

a classifier which means 'seed' instead of the one for human beings.[14] With the use of this classifier, the writer can subtly include the special meanings of 'smallness' and 'the possibility of growing in the future' (Adams, 1986).

So far, basic features of NC systems and a variety of uses of NCs have been illustrated. In the following subsections, NC systems in Chinese and in Korean are described.

2.3.2. Numeral Classifiers in Mandarin Chinese

First of all, it should be noted that Japanese has derived a lot of language elements, including orthographic characters and lexical items, from Chinese (Frellesvig, 2010). The Japanese NC system itself also may have been derived from Chinese, judging from some of the oldest written Japanese documents as evidence, such as *Kojiki* 古事記 (713), *Nihonshoki* 日本書紀 (720), and *Manyooshuu* 万葉集 (759) (Downing, 1996, p. 35) (see 2.4.2 for details about this literature below). These are the oldest surviving written Japanese literature, and NCs appearing in this literature seem to have been borrowed from Chinese. Thus, it can be assumed that the Japanese NC system has been borrowed from Chinese, or at least has been signifianly influenced by Chinese even if there had been an indigenous Japanese system before contact with China (Downing, 1996, p. 35). Therefore, it is quite understandable that, even nowadays, the Japanese NC system is similar to the Chinese NC system to some extent. However, there are notable differences between NC systema in these two languages. For example, Chinese NCs appear not only with numerals but also demonstratives such as *zhèi ge píngguǒ* (this CLF apple), while Japanese NCs can only occur with a numeral (Gil, 2013).

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[14] This can also occur in Thai (C. Svetanant personal communication, June 30, 2018).

It is well known that Chinese has a large number of NCs. More than 900 classifiers appear in the Dictionary of Chinese Classifiers (1988, as cited in H. Zhang, 2007) and the Mandarin Chinese Classifier Dictionary has 427 NCs and measure words (Chang et al., 1994; Huang et al., 1995, as cited in C.-R. Huang & Ahrens, 2003).[15] According to H. Zhang , there are two types of NC in Chinese: count-noun classifiers and mass-noun classifiers (H. Zhang, 2007).[16] As the names indicate, count-noun classifiers are used for countable entities which have a clear outline. Mass-noun classifiers, on the other hand (Nishida, Watahiki, & Gao, 1998), can be used for countable nouns as well as uncountable nouns which do not have a clear boundary. For instance, *ben* in *liang ben shu* (two-books) is a count-noun classifier. Though the referent 'book' is the same, *xiang* in *liang xiang shu* (two boxes of books) is a mass-noun classifier. Similarly, *ping* in *liang ping jiu* (two bottles of wine) is a mass-noun classifier (H. Zhang, 2007), but the referent 'wine', unlike 'books' is one that does not have a clear boundary and therefore could not be counted with a count-noun classifier. From a syntactic perspective, both count-noun classifiers and mass-noun classifiers occur in almost the same position, however, they play a different role in each use. Count-noun classifiers can convey some meaning while mass-noun classifiers are just expressing quantifying information about the referent concerned. This is quite similar to Japanese. In Japanese, there are also NCs which are generally used for nouns with a clear outline, and quantifiers, which are used more as a container to quantify entities which do not have a clear shape (Iwasaki, 2013, p. 75). In Chinese, count-noun classifiers do not only quantify but also qualify and convey specific information about the referent. The moon, for example, can take a few different classifiers depending on

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[15] The number found in the Dictionary of Chinese Classifiers includes not only NCs but also verb classifiers, measurement units, and so on (H. Zhang, 2007).

[16] Count-noun classifiers are also referred as 'count-classifiers' or 'qualifying classifiers' and mass-noun classifiers are referred as 'massifiers', 'quantifiers' or 'measure words'.

its shape, so the full moon is matched to *lun* and a crescent moon takes *wan*.[17] Though the noun 'moon' is the same, the choice of NC can convey additional information about its shape. For another example, '*san zhang baozi*' means 'three pages of a newspaper', '*san fen baozi*' means 'three subscriptions of a newspaper' and '*san jia baozi*' means 'three newspaper companies'. The words for 'three' and 'newspaper' remain the same in each, so this example also clearly shows that each NC transforms the meaning conveyed by the noun (H. Zhang, 2007).

Furthermore, though children are taught 'correct' NCs for each noun in school, the choice of NC in Chinese in the context of real life is not always predictable. This is the same in Japanese, in that one noun can often take a couple of alternative NCs. Since NCs have their own meaning, they are not always chosen by following grammatical rules; the speaker's perception towards the referent concerned at the time of speech often affects the choice of NC in both Chinese and Japanese (C.-R. Huang & Ahrens, 2003; H. Zhang, 2007). Concerning differences between NC systems in these two languages, Japanese NCs are generally divided into animate and inanimate, and this is considered to be a fundamental boundary (Downing, 1996, p. 67; Iida, 1999; Iwasaki, 2013, p. 77). This is by no means a unique characteristic of Japanese but is observed in a number of NC languages (Aikhenvald, 2000, p. 112). On the other hand, this boundary in Chinese is not as rigid as in Japanese, so some Chinese NCs can be used for both animate and inanimate entities. For instance, *tiao* is used for any entities which are one-dimensionally long and thin. Therefore snake, river, and street are all able to be counted by *tiao* (Yamamoto, 2005, p. 43; H. Zhang, 2007). In Japanese, the NC *hon* is used for long and thin objects, however *hon* cannot be used for long and thin animate beings such as snakes or worms.[18] Instead, Japanese employs *hiki* for

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[17] The word '*lun*' refers to a wheel, and *lun* is used for the sun as well. '*Wan*' means curved or bending.

[18] These thin creatures might be counted by *hon* when they are dead and therefore no longer treated as living creatures.

animate beings in general. In Chinese, moreover, even fish and sharks can be counted by the same NC *tiao* while they can also be counted by another NC, *zhi*, normally used for animate beings (C.-R. Huang & Ahrens, 2003; H. Zhang, 2007).

It should also be mentioned that Chinese employs NCs not only for entities but also for events. C.-R. Huang and Ahrens (2003) propose that Chinese NCs consist of three kinds: those for individuals, kinds, and events, while the majority of studies have focused on only the NCs that cater for individuals. In Chinese, there are indeed 35 event NCs (Huang et al. 1995, as cited in C.-R. Huang & Ahrens 2003). C.-R. Huang and Ahrens claim that Chinese event classifiers are highly specialised since they require a particular type of event. Compared to Chinese, Japanese employs far fewer classifiers for events and actions (C.-R. Huang & Ahrens, 2003). Japanese has just a few NCs which can be used for events, while there are hundreds for entities. However, in Japanese, there are NCs which can be used for both entities as well as events (see 2.4.5 for details of these below).

It is also an interesting characteristic of the Chinese NC system that Chinese does not have a specific NC for human beings.[19] In general, *ge* is used for ordinary people, but *ge* is actually a general NC in Chinese. Nor does Chinese employ a general NC to cover animate beings other than human beings (Bisang, 1999). There are a few specialised NCs for animate beings, but there is no general NC which can replace all others. Compared to Chinese in this respect, Japanese has both a general NC for human beings (*nin*) and for animate beings other than human beings (*hiki*).

In the present section, the Chinese NC system has been reviewed, and the following section (2.3.3) takes a brief look at the Korean NC system.

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[19] There is an NC for human beings, which is *wei*, but *wei* is used only for people in a high position in a formal context (Bisang, 1999).

2.3.3. Numeral Classifiers in Korean

Along with Chinese, the Korean NC system also has some similarities to the Japanese system. Concerning the languages and their grammatical rules, Japanese and Korean have many things in common such as word order, use of particles, and large numbers of words derived from Chinese (Cho, 2003; Martin, 1966). Also, both languages have indigenous numerals as well as Sino-numerals. Typical Korean NCs cannot stand alone and are used with a numeral to make a numeral-NC combination, as in Japanese (Bond & Paik, 1997).[20] Hwang, Yoon, and Kwon (2008) claim that there are four types of NC in Korean: mensural-CLs, sortal-CLs, generic-CLs, and event-CLs. Mensural-CLs are not qualifying, but serve only to quantify the amount of the entity, and so serve the same purpose as measure words in general (e.g., *sentimiteo* centimetre). Sortal-NCs, the most common type of NC in Korean, classify nouns which denote entities (e.g., *myeong*, which is used for human beings). Generic-NCs classify nouns denoting only inanimate entities (e.g., *gae*, which is a general NC). Lastly, event-NCs are used for abstract events (e.g., *geon*, which is used for accidents) (Hwang et al., 2008).

From a semantic point of view, Unterbeck (1994, p. 370) maintains that Korean NCs are divided according to semantic criteria of animacy, shape, and function. These criteria are quite similar to NCs in other languages as mentioned previously, including Japanese (see 2.3.2 above). Japanese NCs have been characterised to be first divided into the animate and the inanimate, and under animate, they are next categorised into human and non-human beings. Then inanimate entities are classified depending on their inherent characteristics, shape, and function (Iida, 1999, p. 328; Iwasaki, 2013, p. 77).

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[20] There are also at least two more types of NC in Korean, which are quasi-classifiers and classifier nouns. According to Hwang, Yoon, and Kwon (2008), quasi-classifiers are mostly used as classifiers but can be used as nouns as well and classifier nouns are a subset of 'countable noun'. For example, *saram* (people) is usually a noun but can also function as an NC (Hwang et al., 2008).

Korean is considered to have more than 100 NCs and interestingly, all are derived from nouns (Woo, 2001, as cited in Koo, 2008). Koo (2008) investigates this characteristic of Korean NCs and claims that, in the case of some NCs, the original nominal use has been lost and they are used purely as NCs in modern society. In other words, these NCs have been 'grammaticalised'. In the Korean NC system, each main category (human beings, animals, plants, and inanimate entities) has a core NC, which can be replaced with other possible NCs in the group. According to Koo, this replacement can be possible because these core NCs have lost meaning, so they do not have any semantic restrictions that apply (Koo, 2008). Regarding NCs used for human beings, they carry meaning pertaining to social status. For instance, *myeong* is the most frequently used NC for human beings and also neutral. On the other hand, *pun* has an honorific meaning and *nom* can carry negative meaning. *Nom* bears a disrespectful overtone and might be used for unsavoury types such as thieves or murderers. Therefore this NC *nom* itself has a negative meaning in general, however, in some cases where it is used for children, it can be regarded as a joke (Unterbeck, 1994, p. 370). This usage of making a joke by selecting a particular NC for the human referent is found in Japanese as well. In Japanese, *hiki* can be applied to a human referent in a teasing or joking way (see 4.4.2.1.2). Indicating social status by choice of NC can be observed in other NC languages such as Burmese and Thai. These two languages utilise five different NCs to express social hierarchy (Becker, 1975; Haas, 1942).[21] On the other hand, Japanese does not have a variety of NCs for human beings, unlike Korean, Burmese, and Thai. In Japanese, social status is generally marked within a verb phrase instead. By changing the verb phrase, different levels of respect and

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[21] Burmese employs five NCs for (1) Buddhas and their pagodas, relics, images and words, (2) spirits, clergy, royalty, (3) people of status, (4) ordinary people, and (5) defective people, children, animals, ghosts, corpuses (Becker, 1975). Thai also employs five NCs for (1) royals, dukes and duchesses, (2) Buddhist monks and priests, (3) nobles and high-rank officials in the army and navy, (4) people who are slightly higher than common people, and (5) ordinary people (Haas, 1942).

nuance pertaining to social hierarchy can be expressed (Denny, 1979). Also in Japanese, regarding possible NCs used for human beings other than the standard NC *nin*, there is an NC *mei* used for human beings honorifically, but while it can express the speaker's respect towards the referent person in context, it does not necessarily convey information regarding social status. In order to degrade a human referent on the other hand, one might simply select an atypical NC. For example, *hiki* can be used for human beings when the speaker has a negative feeling towards the referent (see 4.4.2.1.1 for this usage).

This section has overviewed general features of NC systems, as well as some particular examples from a number of NC languages. By comparing Japanese with these NC languages, especially Chinese and Korean, similarities and differences between them have also been revealed. The following section puts the focus particularly on Japanese NCs in order to determine their characteristics, and compare them to findings from previous studies.

2.4. Japanese Numeral Classifiers

This section of the literature review focuses on Japanese numeral classifiers (NCs). First, basic features of Japanese NCs, such as their grammatical characteristics and usage, are illustrated (2.4.1). Next, the historical background of Japanese NCs is briefly described (2.4.2). In 2.4.3, how NCs are actually chosen and used in Japanese is discussed, and this is followed by an explanation of extended usages of Japanese NCs (2.4.4). The next section particularly focuses on NCs used for animate beings (2.4.5). A number of studies have been conducted on the usages of NCs for animate beings, and it is essential to review them in order to investigate the first target NC *hiki*. Lastly, the characteristics of NCs which can be used for both entities and events are discussed. Since the majority of NCs are used only for entities in Japanese, previous

researchers have been mainly concerned with entity NCs. However, there are NCs which are used for events, and some of them are used even without a referent noun, but with a referent verb only. Since this issue is closely related to the second target NC *hatsu*, it is covered in the last section (2.4.6).

2.4.1. Basic Features of Japanese Numeral Classifiers

Japanese is a language in which the speaker is not obligated to mark grammatical number: singular or plural. Therefore as a general rule, it has been claimed that NCs are basically used whenever the number of entities or events is counted or mentioned (Iida, 1999; Iwasaki, 2013, p. 75). Thus, all referents must be accommodated by at least one NC in order to be counted (Downing, 1996, p. 146; M. Yoshida, 2005). However, the definition of an NC is actually debatable as shown in the previous section (see 2.3.1), and Japanese is no exception. Therefore, let us first discuss the definitions that have been proposed for Japanese NCs in previous research.

2.4.1.1. Definitions of Japanese Numeral Classifiers

In order to consider definitions of Japanese NCs, the meaning of the term 'numeral classifier' should first be clarified. There are a number of terms used when discussing counting expressions in Japanese: numeral classifiers, quantifiers, measure words, mensural words, etc. These terms are sometimes used interchangeably and sometimes defined in slightly different ways.

Iwasaki (2013, p. 74) claims that there are three types of numeric phrases in Japanese: a numeral suffixed by a measure word, a quantifier, and a numeral classifier (NC) (Iwasaki, 2013, p. 74). Measure words are used to express an object's length, weight, volume, or a period of time. For example, *ichi-meetoru* (one meter) and *ni-kiro* (two kilograms / two kilometers) are expressions involving measure words.

Quantifiers are characterised as quantifying an object's amount by giving an outline with a concrete container. Iwasaki lists, for instance, *hito-hako* (one box of) and *mi-saji* (three spoonfuls of) as examples of quantifiers. Their function is similar to English quantifiers such as 'a *glass* of water' and 'a *loaf* of bread'. Quantifiers generally provide the referent with an outline and also involve some minimum information relevant to the nature of the referent, so there are still certain 'correct' quantifiers for some referents. It is the same in English, in that 'a *bottle* of bread' is not acceptable.[22] Lastly, Iwasaki mentions that NCs differ from measures and quantifiers in that they are used to count objects which have a clear outline (Iwasaki, 2013, p. 75).

Regarding the difference between quantifiers and NCs, Iwasaki takes up a syntactic point as well. He argues that quantifiers can be preceded by a specifier, which gives an outline to mass referents, which do not have a clear outline, whereas NCs cannot. For instance, with a word *koppu* (glass)', '*koppu* (specifier) *ni-hai* (two-quantifier) *no* (genitive) *mizu* (water) (two glasses of water)' is grammatically correct. According to Iwasaki, this is because quantifiers do not count the referent itself but the number of containers. On the other hand, NCs directly count the referent itself, for example, '*san-biki* (three-NC) *no* (genitive) *kobuta* (piglet)' (Iwasaki, 2013, p. 76). More importantly, when discussing differences between NCs and other numeric phrases, it should be noted that NCs serve to semantically classify nouns in some way, as discussed in the previous section (Aikhenvald, 2000; Allan, 1977; Denny, 1976). Like other classifiers, NCs are also generally considered to denote perceivable characteristics of entities. In this regard, NCs can be distinguished from quantifiers, which do not really have a meaning that relates directly to the intrinsic properties of the referent but work simply as containers for a wide range of possible entities.

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[22] In Japanese, there are also lexical items which can also be thought of as quantifiers, but which do not co-occur with a numeral and refer to quantity in less precise ways, such as *takusan* (many, a lot) and *sukoshi* (a little).

However, attention should be paid to the fact that, in the list of quantifiers provided by Iwasaki, both *kai* 回 and *do* 度 appear, both of which are used exclusively to count events and actions. Nevertheless, neither of these can be used with a specifier, because they do not describe a container used to outline referents that lack their own, natural boundary. In addition, Iwasaki's classification, which includes *kai* and *do* as quantifiers, is not completely consistent with that of other scholars. Iida includes *kai* and also *ken* 件, which is used for incidents, enquiries, and accidents, as NCs in her discussion (Iida, 1999). Downing and Matsumoto also treat *ken* as an NC (Downing, 1996; Matsumoto, 1991, p. 58), but include neither *kai* nor *do*. These classifiers used for events and actions (*kai* 回, *do* 度 and *ken* 件) though frequently used and often appearing in previous studies, have not been deeply discussed. However, their nature is clearly related to that of the second target NC of this thesis, *hatsu* 発, which can also be used when counting events and actions. Therefore, these classifiers are more closely examined in section 2.4.6 below. In the following sections, when any of these classifiers are treated as an NC in the original literature, they are 'tentatively' referred to as an NC in this review as well.

It has also been pointed out that some nouns seem to play the role of NCs in some cases, and the question of whether or not these nouns should be regarded as NCs has been discussed (Tanaka, 2012; Tojo, 2014). For example, in the phrases '*san-daigaku* (three-universities)', and '*ni-tenpo* (two-shops)', the nouns *daigaku* (university) and *tenpo* (shop) occur in the same position as NCs such as *hiki* and *hon* in '*san-biki* (three-CL: small animate beings)' and '*ni-hon* (two-CL: long and thin objects)'. These two nouns ('university' and 'shop') in the phrases above directly follow a numeral to make a numeric phrase just as NCs do. Downing (1996, p. 15) notes that these kinds of nouns are used to denote abstract referents such as units of time, colours, kinds, grades, classes, and geographical areas. She calls these nouns, which can be directly attached to a numeral and used as a set of 'numeral and NC', 'unclassified

nouns'. Downing actually does not regard these unclassified nouns as NCs from a syntactic point of view. Downing points out that these unclassified nouns cannot co-occur with a noun denoting the referent while genuine numeral classifiers can, as in the examples below.[23]

(2-1)

    a. 大学   を   三大学   つくった

        daigaku o   san-<u>daigaku</u>   tsukut-ta

        university ACC   three-university establish-PAST

        [They] established three universities.

    b. 車   を   一台   買った

        kuruma o   ichi-dai kat-ta

        car   ACC   one-CL   buy-PAST

        [I] bought a car.

In (2-1a), a noun *daigaku* (university) is used as an NC (underlined), but *daigaku* also appears as a standalone object at the top of the sentence (bolded), thus it sounds repetitive and quite unnatural. On the other hand, the referent noun 'car' can co-occur with its NC *dai* (an NC for machines and vehicles) perfectly naturally in (2-1b).

From the grammatical role and behaviour of Japanese NCs, Downing proposes three criteria as follows:

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[23] Downing names the genuine numeral classifiers 'true classifiers' (Downing, 1996, p. 15).

1. It may directly follow a numeral.[24]

2. It readily co-occurs with a noun denoting the referent whose number is indicated by the numeral-classifier construction.

3. In denotes a natural unit of the referent, whose (usually but not necessarily inherent) characteristics dictate its choice.

<div align="right">(Downing, 1996, p. 16)</div>

Downing aims to distinguish genuine numeral classifiers from unclassified nouns on the basis of the syntactic test in the second criterion above.

From a syntactic perspective, Tanaka (2012) also raises a question regarding nouns that can be used as an NC. He claims that there is a continuum between NCs and nouns and that while these nouns have some of the syntactic properties of regular NCs, they don't share them all. One example given by Tanaka is shown below:

(2-2)

a. 東京　都立　大学　など　４大学　を

Tokyo　toritsu　daigaku　nado　yon-**daigaku**　o

Tokyo　metropolitan　university　and.so.on　4-university　ACC

廃止し…

haishi-shi...

abolish…

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[24] Though Downing states 'It "may" directly follow a numeral', she also supplementarily mentions that this criteria is 'fulfilled by all NCs' (Downing, 1996, p. 16).

[They decided to] abolish four universities, including the Tokyo Metropolitan University...

b. 東京　　　都立　　　　　大学　　　など　　　を　　　4 大学

*Tokyo　toritsu　　　daigaku　　nado　　　o　　　yon-**daigaku**

Tokyo　　metropolitan　university　and.so.on　ACC　4-university

廃止し…

haishi-shi...

abolish…

[They decided to] abolish four universities, including the Tokyo Metropolitan University...

(Tanaka, 2012, p. 123)

According to Tanaka, example (2-2a) is grammatical, but (2-2b) is not. This is because the numeric phrase *yon-daigaku* (4-university) in (2-2b) is in the adverb position (the syntactic positioning of NCs is discussed in (2.4.1.2)), and this position is not available for nouns used in the role of an NC.

Tojo (2014) points to another way in which these kinds of nouns denoting abstract referents do behave like NCs, that is, the fact that they can be attached to the question word *nan*- 'how many', which means that they can be attached to any numeral. For example, since *nan-shurui* (how many kinds) is grammatically fine, the noun -*shurui* (kind) can take any numeral and thus work like a classifier. For other examples, *daigaku* (university), *tenpo* (shop), and *gengo* (language) can be used with '*nan*- (how many)' as well. Tojo considers that these nouns in the role of classifiers are used to supplement the NC system in Japanese.

From these studies, it is clearly accepted that there are nouns which can play the role of NCs, but the question of whether or not they should be regarded as a type of NC or not is still under debate. Also, it is considered that these nouns tend to be used for abstract referents. This is because the majority of Japanese NCs are used for entities, and there are not many NCs for abstract referents, thus these nouns are used instead.

2.4.1.2. Characteristics of Japanese Numeral Classifiers

The last section (2.4.1.1) has described how previous studies have attempted to define Japanese NCs, and what issues remain unresolved. This section will illustrate the basic characteristics of Japanese NCs: how they can be used as an anaphoric device, their syntactic features, the number of NCs employed in Japanese and their frequency of use, and a current issue regarding the simplification of the NC system in contemporary Japanese. Many of these characteristics are not directly related to the issues that are central to this thesis, and so only a brief summary of key characteristics is given here.

Downing claims that a 'true' NC should be able to co-occur with a noun denoting the referent (Downing, 1996, p. 16) (see 2.4.1.1); it is surely a basic pattern of Japanese NCs that they can appear with both a noun and a numeral. However, the noun can actually be omitted in some cases. Downing examined the usage of Japanese NCs and asserts that NCs can play as the role of an anaphoric device (Downing, 1986). If the referent is already obvious from the context, the NC can be used with only a numeral and without the noun denoting the referent.[25]

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[25] This feature that NCs can be substituted for the antecedent noun is observed in other NC languages such as Thai (Tai-Kadai language family) as well. In Japanese, this usage is particularly seen with an NC *nin* (an NC for human beings). Another characteristic of this usage is that this anaphoric usage can be used a long distance after the antecedent while other anaphoric such as ellipses and pronouns are used comparatively close to the original antecedent (Downing, 1986).

Furthermore, except for nouns which can be occasionally used as an NC (see 2.4.1.1), Japanese NCs are usually not comprehensible when standing alone. They generally follow numerals and these two elements must be analysed as one combination (Backhouse, 1993, p. 119).

The syntactic features of this numeral–NC combination have been investigated by a considerable number of studies because a range of syntactic positions is possible for the numeral-NC combination (Downing, 1993; Minagawa, 2008; Tsujimura, 1996, p. 193). It is observed that NCs can appear in at least the three different positions in sentences like the following.

(2-3)

a.

むかし	ある	ところ	に	こぶた	さんびき
mukashi	aru	tokoro	ni	kobuta	**san-biki**
once.upon.a.time	a.certain	place	LOC	piglet	three-CL

が	すんでいました
ga	sundeimashita
NOM	live-PAST

'Once upon a time, there lived three little pigs.'

b.

むかし	ある	ところ	に	こぶた	が
mukashi	aru	tokoro	ni	kobuta	ga
once.upon.a.time	a.certain	place	LOC	piglet	NOM

さんびき	すんでいました
san-biki	sundeimashita
three-CL	live-PAST

'Once upon a time, there lived three little pigs.'

c.

むかし	ある	ところ	に	さんびきの
mukashi	aru	tokoro	ni	**san-biki-no**
once.upon.a.time	a.ceratain	place	LOC	three-CL-GEN

こぶたが	が	すんでいました
kobuta	ga	sundeimashita
piglet	NOM	live-PAST

'Once upon a time, there lived three little pigs.'

(from Okutsu, 1969)

Numerous studies in the generative framework have been conducted. These discuss at length which structure is the 'basic' form and which structure is a transformation (Kamio, 1977; Okutsu, 1969). The phenomenon in which the numeral-NC combination occurs outside the noun phrase in an adverbial position is often referred to as quantifier floating (the numeral-NC combination itself is called a 'floating quantifier') (Kimura, 2005; Tsujimura, 1996, p. 193).[26] This suggests that, for many scholars at least, the NP-internal positions are the more basic. Concerning this phenomenon of quantifier floating, there is a critical difference between English and Japanese. While quantifier floating can occur only from the subject phrase in English, not only subject noun phrases but also object noun phrases can be related to a floating quantifier in Japanese (Shibatani, 1990, p. 286).[27]

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[26] Floating quantifiers are observed in some other languages, such as Korean (Kang, 2002).

[27] E.g., 'All the children are happy' can be rephrased as 'The children are all happy', but 'John read all the books' can not be rephrased as 'John read the books all' (Shibatani, 1990, p. 286) .

Other scholars have paid more attention to the question of whether there is a difference in meaning between the various structures. Denny (1979) compares (2-3b) and (2-3c) constructions and claims that in (2-3b) construction, when the numeral-NC combination appears in the adverb position (before the verb and after the subject marker *ga*) the little pigs are not specific but could be any little pigs. On the other hand, in (2-3c), in which the numeral-NC combination is within the noun phrase, the three little pigs are specific. This issue of the relationship between the constructions and specificity is more deeply discussed in some studies, as shown below.

Downing (1993) investigates two positions of NCs in a sentence: 'Pre-Nominal' (inside the NP) and 'Q-Float' (outside the NP). In the following sentences, (2-4a) is Pre-Nominal and (2-4b) is Q-Float construction:

(2-4)

a. 三人　　　の　　　学生　　　が　　　昨日　　　来た

san-nin　no　　gakusei　ga　　kinoo　　ki-ta

three-NC　GEN　student　NOM　yesterday　come-PAST

'Three students came yesterday.'

b. 学生　　　が　　　昨日　　　三人　　　来た

gakusei　ga　　kinoo　　**san-nin**　ki-ta

student　NOM　yesterday　three-NC　come-PAST

'Three students came yesterday.'

(from Kimura, 2005)

Downing claims that the Pre-Nominal construction is used 'in mention of specific referents important to the ongoing text; it may appear either in introductions or repeat mentions of such individuals (Downing, 1993, p. 91)'. On the other hand, Q-Float is used only when information regarding their number newly appears (Downing, 1993).

Minagawa (2008) also examines the relationship between these syntactically different constructions involving a numeral-NC phrase, and relates them to the independent domains of indefiniteness and specificity. If the speaker can assume that their listener can identify the referent, it is definite, and if not, it is indefinite. If the speaker has a particular entity in mind, the noun (or noun phrase) is specific. Minagawa claims that the NP-external construction expresses indefiniteness and this pattern can take either a specific or a non-specific referent. The pre-nominal construction, on the other hand, is associated with specificity (Minagawa, 2008). Minagawa states that when the referent is specific as well as indefinite, either of the two constructions can be used (Minagawa, 2008).

In regards to the total number of NCs, Downing (1996) reports that Japanese employs more than 150 NCs (Downing, 1996, p. 18). Downing calculated this number from her data, collected by extracting lists of NCs from six studies by other scholars (Downing, 1996, p. 17).[28] When Iida conducted her study in 1999, she collected around 100 NCs from her data obtained by interview, survey, and from newspapers and novels (Iida, 1999).[29] This is a comparatively large number among NC languages (Aikhenvald, 2000, p. 103). However, Downing reports that only around 30 or 40 of

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[28] These are Haguenauer (1951), Hoojoo (1973), Lewin (1959), Oshida (1965), Satow and Ishibashi (1942), and Yano (1968) (Downing, 1996, p. 269).

[29] Iida first collected 358 classifiers which can be directly attached to a numeral. Among them, about 220 are nominal classifiers that can be used alone as a noun, and around 40 are measure words (Iida, 1999, p. 7).

all NCs are frequently used (Downing, 1996, p. 18). In order to examine the frequency of usage of NCs, Downing used 'Studies on the Vocabulary of Modern Newspaper' published by the Japanese National Language Research Institute.[30] In addition, she also examined oral and written texts, and questionnaires on NCs which she designed. In Downing's data, *nin* 人 and *tsu* つ account for more than half of all uses, followed by a few major NCs such as *hiki* 匹, *hon* 本, *mai* 枚, and *mei* 名 (Downing, 1996, pp. 55, 57).[31] On the other hand, Iida reports slightly different results regarding the frequency of usage of NCs. In Iida's data, *nin* 人 and *kai* 回 appeared exceptionally frequently followed by *ken* 件, *bu* 部, *do* 度, and *ten* 点 (Iida, 1999).[32] Iida notes that the relative proportions of each NC may be influenced by the fact that she collected her data from newspapers. For example, *kai* and *ken* are used for events and actions, and she considers that they are both likely to appear in newspapers quite frequently (Iida, 1999).

In connection with the number of NCs, it has been claimed that the Japanese language has seen a simplification of the NC system, which is to say the range of their

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[30] Japanese National Language Research Institute is a forerunner of National Institute for Japanese Language and Linguistics (*Kokuritsu Kokugo Kenkyuujo* 国立国語研究所).

[31] *Nin* 人 is used for human beings (Iida, 2004, p. 374).

Tsu つ is characterised as a general NC for inanimate referents and can be used for both concrete and abstract entities (Iida, 2004, p. 366).

Hiki 匹 is used for comparatively small animate beings such small mammals, fish, and insects (Iida, 2004, p. 380).

Hon 本 is used for long and thin objects such as pencils (Iida, 2004, p. 386).

Mai 枚 is used for flat or two-dimensional things such as paper (Iida, 2004, p. 390).

Mei 名 is an honorific form of *nin* and used to count patrons, people in a tour or meeting (Iida, 2004, p. 390).

[32] *Kai* 回 is used to count the number of times an action takes place (Iida, 2004, p. 333).

Ken 件 is used to mainly count events, difficulties, enquiries (Iida, 2004, p. 344).

Bu 部 is used for a part of something such as music, or documents such as books or booklets (Iida, 2004, p. 382).

Ten 点 is mainly used for products, goods, and works of arts (Iida, 2004, p. 370).

usage has declined especially in daily conversation (Hamano & Lee, 2007). This is probably true to some extent. For instance, rabbits are no longer counted by *wa* 羽 (an NC for birds that has been customarily also used for rabbits) but are now counted by *hiki* 匹. In another type of simplification, *tansu* (a chest of drawers) has been traditionally counted by a specific NC *sao* 棹, but is nowadays counted by *dai* 台 (an NC for comparatively large furniture such as tables, and also for vehicles and machines) in general, or *ten* 点 (an NC for products or items) by furniture shops (Iida, 2004, p. 181). Concerning the numbers of NCs, however, if the objects to be counted no longer exist or are no longer frequently seen in contemporary society, NCs for those objects also disappear accordingly. Thus, regarding the disappearance of some classical NCs, they are usually replaced with another NC. However, some NCs are no longer used, not because of the simplification of the NC system, but due to the disappearance of the nouns they formerly accompanied (Iida, 1999).

2.4.2. Historical Background

This subsection briefly introduces the historical background of Japanese NCs. First of all, it will be helpful to outline the system of numerals used in the language. Japanese employs both indigenous numerals and Sino-Japanese numerals (Downing, 1996, p. 35; Iwasaki, 2013, pp. 72-74). In general, indigenous numerals are used from one to ten, and Sino-Japanese numerals are employed from eleven and onward, with some exceptions (Iwasaki, 2013, p. 72).[33]

There is no clear written evidence concerning the origin of Japanese NCs. However, we can find records of classifier forms in the oldest Japanese written works, which appeared in the eighth century, such as *Kojiki* 古事記 (713), *Nihonshoki* 日本

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[33] For an example of an exceptional case, when counting a person's age, 'twenty years old' is expressed by indigenous numerals: *hatachi*.

書紀 (720), and *Manyooshuu* 万葉集 (759) (Downing, 1996, p. 35).[34] Downing points out that there are classifiers which are obviously borrowed from Chinese in these texts, so it seems that indigenous Japanese probably had not employed NCs before contact with China. On the other hand, Ikegami (Ikegami, 1940 cited in Downing, 1996, p. 35) argues that there is evidence which implies that indigenous Japanese already had classifiers, though it is still true that the system experienced a big expansion at the time of and after contact with Chinese.

In addition to indigenous Japanesne and Sino-Japanese, Western numerals as well as new NCs, some of which are borrowed as loanwords from Western languages, have appeared in modern Japanese. Thus, contemporary Japanese employs three kinds of numerals and NCs. Since new words can be added to the class, NCs are open-class words. In terms of a combination of a numeral and an NC, Downing (1996, pp. 46-48) claims that there are certain patterns of frequency which are summarised in the table 2.1 below.

Table 2.1
Relative frequency of numeral classifier lexical stock combination patterns

Classifier / Numeral	Indigenous	Sino-Japanese	Western
Indigenous (*hito-*)	○	△	△
Sino-Jap (*ichi-*)	△	◎	○
Western (*wan-*)	×	×	△

◎= extremely frequent   △= extremely rare

○ = of intermediate frequency   × = non-existent

(from Downing, 1996, p. 47)

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[34] *Kojiki* 古事記 is the oldest extant Japanese history book.

Nihonshoki 日本書紀 is the oldest Japanese official history book at the behest of the Emperor.

Manyooshuu 万葉集 is the oldest Japanese poetry book.

Below are examples of each of these combinations.

(a) Indigenous numeral + Indigenous NC

     hito-tsubu 'one grain'

(b) SJ numeral + SJ NC

     ichi-mai 'one sheet (or something flat and thin)'

(Downing, 1996, p. 47)

(c) Indigenous numeral + SJ NC

     hito-kokyuu 'one breath'

(Kenboo, 1976)

(d) SJ numeral + indigenous NC

     ichi- wa 'one bird'

(Kenboo, 1976)

(e) Indigenous numeral + Western NC

     hito-shiizun 'one season'

(Kenboo, 1976)

(f) SJ numeral + Western NC

     san-geemu 'three games'

(g) Western numeral + Western NC

     wan-kuuru 'one season'[35]

From table 2.1, extracted from Downing (1996, p. 47), it appears that the combination of Sino-Japanese numerals and Sino-Japanese NCs are most frequently used among all of the possible combinations. Iwasaki also notes that indigenous numerals are only used for the numbers one to ten in normal usage, and Sino-Japanese are generally employed for mathematical purposes (Iwasaki, 2013, p. 74). Similarly,

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[35] *Kuuru* クール is a loanword derived from 'cours' in French, which is often used for TV series. In general, one-*kuuru* describes a series which is broadcast once a week for thirteen weeks.

when Western numerals are used, generally only *wan* (one) and *tsuu* (two), and sometimes *surii* (three) are used, but from four and onward SJ numerals are used.

2.4.3.   The Choice of Numeral Classifiers in Japanese

As discussed previously (2.4.1), Japanese generally requires the use of an NC whenever the number of an entity or event is mentioned. In this section, the ways in which NCs are generally matched with referents is discussed. The choice of NC is usually considered to be on a semantic basis. Specifically, Japanese NCs are often said to be chosen according to the inherent qualities (e.g., human beings), physical characteristics (e.g., long and thin objects), and function (e.g., vehicle) of the referent concerned. Though only one NC is chosen for one noun in each usage, the matching is not so simple or rigid, but can in fact be quite flexible. In the following, firstly a general rule for choosing a Japanese NC for a referent is described. Next, some examples which show that different NCs can be used for the same noun are introduced. Lastly, how the process of choosing NCs is affected by other factors such as cultural background is discussed.

It has been frequently claimed that Japanese NCs are first divided into animate and inanimate, and under animate, they are then divided into two groups: human beings and non-human beings (Iida, 1999, p. 328; Iwasaki, 2013, p. 77). As a general rule for animate beings, for example, human beings are counted by a specific NC *nin* 人，and comparatively small animate beings are counted by *hiki* 匹, whereas comparatively large animate beings are counted by *too* 頭. There are a few more NCs used for animate beings such as *wa* 羽 and *bi* 尾, but most are accounted for by *hiki* and *too*.[36]

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[36] *Wa* is used for birds, and *bi* is used specifically for fish.

Inanimate referents are considered to fall into two main groups: concrete inanimate and abstract inanimate (Downing, 1996, p. 67; Matsumoto, 1993). In Downing's terms, there are two types of NC for concrete inanimate entities: 'quality-based' classifiers and 'kind-based' classifiers (Downing, 1996, p. 90). Matsumoto suggests a similar distinction: 'quality-based' classifiers correspond to 'configurational classifiers' and 'kind-based' classifiers to 'non-configurational classifiers' (Matsumoto, 1993). As the names suggest, quality-based classifiers are defined by configurational characteristics such as the shape and size of the referent concerned. For example, *hon* 本 for long and thin objects, and *mai* 枚 for flat things, are regarded as quality-based classifiers. On the other hand, kind-based classifiers are defined by non-configurational properties, such as the function of the referent (Downing, 1996; Matsumoto, 1993). For instance, Matsumoto (1993) picks up two NCs used for buildings: *ken* 軒 and *mune* 棟, to show how they are non-configurationally defined. The first one, *ken*, is used for a building or unit used by human beings, usually as a dwelling or for commercial purposes. Thus a shrine, for example, does not sit well as referent of *ken*, as the building is not for human beings but for gods, and used only for rituals. The second one, *mune*, on the other hand, is used for a building when the building is considered more as a lifeless object. Thus, if you use *mune* for a building you have just dropped in to, it would sound as if the building were uninhabited, and that you had gone there not to see somebody in the building, but rather to view it as a real estate agent, or perhaps work on it as a tradesman (Matsumoto, 1991).

Lastly, for abstract inanimate, Downing introduces *kyoku* 曲 for songs as an example, and she also includes some NCs used for events such as *ken* 件 (used for events, predicaments, and enquiries) in the abstract inanimate category. Japanese has a comparatively small number of NCs for abstract inanimates compared to those for concrete inanimates (C.-R. Huang & Ahrens, 2003; Tojo, 2014).

It should be noted that not all NCs are used for referents in only one of these three groups defined by Downing and Matsumoto (animate, concrete inanimate, abstract inanimate). There are actually quite a few NCs that are used for both concrete inanimate and abstract inanimate. For example, *hon* is used for physically long and thin objects as well as for certain events, such as home run hits in baseball and telephone calls. *Hon* has been studied by many scholars and this characteristic has been discussed at some length (Hamano, 2006; Hamano & Lee, 2007; Iida, 2005; Lakoff, 1987; Matsumoto, 1986). However, little attention has been paid to other NCs that have the characteristic of being used for both concrete and abstract inanimate referents. Since one of the target NCs of this thesis, *hatsu*, is one such NC, this issue will be discussed in detail in a later section (see 2.4.6).

One general and important point about the choice of NC is that each noun is not automatically matched to a 'correct' NC, but rather, in some cases, different NCs can be selected for the same noun according to the state of the referent or the speaker's frame of mind toward the referent in the context. In short, NCs are not matched to a noun, but matched to a referent, and this matching may vary depending on the context each time they are used.

It is frequently observed that referents referred to by the same noun can exist in different states of being, and that different NCs can be used accordingly. For instance, a salmon can be counted by at least three different NCs depending on its physical state: a living salmon (*hiki* 匹), a whole processed salmon (*hon* 本), or a piece of salmon (*kire* 切れ) (Iida, 1999, p. 4). Another example is noted by Downing: flags may be counted by different NCs according to whether they are flying or folded (Downing, 1996, p. 142).[37] Moreover, even for the same noun in the same state, different NCs can be used to focus on different features of the referent. For instance,

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[37] Flags are generally counted by *hon* 本 when flying, and by *mai* 枚 when folded (Iida, 2004, p. 237).

the noun *ume* (plum) can take at least three NCs: *ume ip-pon* (one plum branch or one plum tree), *ume ik-ko* (one plum), and *ume ichi-rin* (one plum blossom) (Downing, 1986). Likewise, rooms in a building can be counted using *heya* 部屋, *ma* 間, *shitsu* 室, or even by the general NC *tsu* つ. Inoue (2000) claims that these various NCs are used to indicate which feature of the referent the speaker focuses on: *heya* (room), *ma* (space), and *shitsu* (place) (Inoue, 2000, p. 218). The NC can thus help the hearer to understand the precise reference of the noun or a certain feature of the noun that the speaker has in mind. In this regard, NCs seem to be able to play a similar role to noun classifiers in some languages, which can be used to make the meaning of a noun clearer (Marnita, 1996, as cited in Aikhenvald 2000, p. 84) (see 2.2.3). This usage is also observed in other NC languages, such as Chinese (H. Zhang, 2007). These cases make one of the important features of NCs evident: NCs can be used to convey specific information that the speaker wants to express regarding the referent. These are the reasons why a lot of nouns have one or more alternative NCs, and why nouns are not necessarily matched to an NC automatically or mindlessly, as can happen in the case of noun classifier systems involving pure grammatical agreement, such as gender systems.

Downing (1996) illustrates another pattern in which some NCs are able to alternate with other NCs. General NCs such as *ko* and *tsu* are used especially when counting a group of different kinds of entities that do not share the same NC. Downing also introduces an example which shows a possible usage of the NC *nin* for a group which consists of human beings and another animate being such as a dog (Downing, 1996, p. 71). Though it is usually thought that no animate other than human beings can be counted by *nin*, this is clearly an exceptional case.

From a slightly different perspective, Inoue's study (2000) also indicates that Japanese speakers try to choose an appropriate NC on the basis of their understanding of the quality of the referent at the time they encounter it. She surveyed Japanese

students from Japanese primary schools both in the U.S.A. and in Japan (Inoue, 1998, p. 153). Interestingly, some of the participants in the U.S.A. selected the NC *hiki* 匹, for three referents: American people, rabbits, and sheep. In fact, American people should be counted by *nin* 人, the specific NC for human beings. Therefore this choice is grammatically incorrect. Inoue considers, however, that this choice of *hiki* makes sense to some extent since those three referents (Americans, rabbits, and sheep) are all living things. From this result, it can be assumed that, not knowing the standard 'correct' NC in this case, the participants unconsciously tried to understand the entities in order to match them with the 'most correct' NC among possible NCs at the time of utterance.

Inoue (2000) also claims that the semantic approach is not sufficient, and that neither morphology nor lexical semantics can be a single factor which is responsible for the combination between a noun and an NC in Japanese (Inoue, 2000, pp. 218-219). According to Inoue, contextual information and cultural knowledge also account for the choice of NCs. More specifically, one's ability to visualise plays an important role. In order to examine this hypothesis, Inoue (2000) conducted a number of case studies. In one of these studies, Japanese children were asked to memorise some sentences with a numeral and an NC, and then recall the NC after a certain time. In this questionnaire, Inoue set two sentences as below. After memorising each sentence, the participants were asked to fill in the NC which they had memorised in the empty brackets after a numeral (bolded in the sentences below, but left blank in the real questionnaire).

(2-5)

a.　　ブドウ　を　1（**粒**）　　食べた

　　　budou　o　hito-<u>tsubu</u>　tabeta

　　　'[I] ate one (small sphere of) grape.'

b.　　ブドウ　を　100（房）　食べた

　　　budou　o　hyaku-<u>fusa</u> tabeta

　　　'[I] ate 100 (bunches of) grapes.'

<div align="right">(from Inoue, 2000, p. 225)</div>

About the half of the children incorrectly recalled the phrases as either '*hito-<u>fusa</u>* (one bunch)' or '*hyaku-<u>tsubu</u>* (100 small spheres)'. As neither a single grape nor a hundred bunches of grapes represent a normal amount of grapes to consume at one time, Inoue considers that the shift between *tsubu* (sphere) and *fusa* (bunch) was made presumably due to the shape of the referent 'grape', and knowledge about normal behaviour in 'eating'. These two factors interacted with each other and led the children to regurgitate more 'reasonable' phrases than the ones they were asked to memorise (Inoue, 2000, p. 225).

In another case study, Inoue investigated whether Japanese with Japanese background only and Japanese with experience of staying both in Japan and in the U.S.A. choose different NCs for the noun *manga* (Japanese comics). The result shows that the adult participants with only Japanese background tended to choose mainly *satsu* 冊, as well as *hon* 本 in some cases, whereas the adult participants who lived in the U.S.A. mostly chose *satsu* only (Inoue, 2000, p. 232) .[38] On the basis of this result, Inoue considers that Japanese who have lived only in Japan have more opportunities to see *manga* in cartoon films, TV animation, and comic strips in the newspaper, which are generally counted by *hon*, while the other group see *manga* in the form of books only (in the U.S.A., they rarely see *manga* in any form other than books) (Inoue, 2000, p. 234).

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[38] *Satsu* 冊 is usually used for books and notebooks (Iida, 2004, p. 351).

From these case studies, Inoue argues that speakers of a language extend images based on specific knowledge, which is built not only on their culture but also in relation to their personal experience. This is also reported by Matsumoto (1991). Matsumoto observed that children who already know prototypical referents of *hon* (long and thin objects) can apply *hon* to unfamiliar objects whose shape is apparently long and thin, such as a test tube. On the other hand, the children cannot use *hon* for other objects whose shape is not saliently long and thin but can still be counted by *hon* by adult speakers, such as a pair of pants (Matsumoto, 1991). Thus, from these studies, it is assumed that NCs are chosen as a result of a nuanced integration of syntax, semantics, and conceptual cultural knowledge (Inoue, 2000, p. 235). In the following subsection, more about these 'extended' images and usages of Japanese NCs are discussed.

2.4.4.   Extended Usage of Japanese Numeral Classifiers

As seen in the previous subsection (2.4.3), Japanese nouns quite often have multiple 'correct' choices of NC. Among these, there are uses that cannot be thought of as either core or typical, and that we must consider as 'extended' uses. In this subsection, these extended uses of NCs are examined. One of the major NCs, *hon* 本 (used for long and thin, or one-dimensional objects), has been taken up as an example of this extended usage of Japanese NCs in a number of studies, as *hon* clearly shows this aspect of the diversity of the uses of NCs.

Lakoff (1987) examines the usage of *hon*, and demonstrates that *hon* is used for not only typically long and thin physical objects but also other entities or even abstract concepts such as movies, telephone calls, martial arts contests, and home run hits in a baseball game. These are not physically long and thin, and they may not even seem to have anything in common. However, Lakoff explains these usages of *hon* with

the notion of image-schema transformation, in other words, the extension of a category (Lakoff, 1987, p. 108). Lakoff claims that a commonality can be found in the classification of the objects if we consider that they are connected through a certain image. For instance, there are long and thin weapons, counted by *hon* as a general rule, such as swords, used in martial arts contests. The notion of a win in these kind of games is also counted by *hon*, even though it is just an abstract notion by virtue of its relation to the weapon (Lakoff, 1987, p. 109). Lakoff's explanation attempts to clarify how the image of NCs can be extended. These examples bring up the possibility that the image and thus the usage of many NCs could be extended quite flexibly. Although there are some arguments challenging aspects of his analysis, which will be discussed in the latter part of the present section, Lakoff's analysis is still very important since it is one of the very early works on extended usages of Japanese NCs using ideas from cognitive linguistics such as image-schema transformation, metaphor, and prototype theory.

Based on Lakoff's analysis, Inoue examined how Japanese children living in the U.S.A. use *hon* (Inoue, 1998, p. 156). The result shows that these children demonstrated that they are able to use *hon* in its basic usage, namely, for physically long and thin objects. However, children who had left Japan before 12 years of age and have lived in the U.S.A. for more than two years after leaving Japan were far less likely to use *hon* for movies or home runs.[39] In addition, Inoue observes that the longer the children lived in the U.S.A., the less competent they were at employing extended usages of *hon*. Conversely, children who had lived in the U.S.A. for less than two years counted movies and home runs with *hon* properly (Inoue, 1998, p. 157). Inoue presumes that these results can be explained by the critical period hypothesis.[40]

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[39] Which NCs were chosen by the participant children instead of *hon* is not mentioned.

[40] The critical period hypothesis is the claim that there is a certain optimal period time for language acquisition which ends at around puberty (Clark, 2009).

Furthermore, she concludes that NCs can play a role as an indicator of which categories a speaker *thinks* an object belongs to (Inoue, 1998, p. 157).

From a different point of view, Iida (1996a) claims that Lakoff seems to mix up categorisation and classification. In Iida's explanation, even if two entities share the same NC, that does not necessarily mean those entities belong to the same category. Taking up an example from Iida (1996b), although bananas and pencils are both counted by the same NC *hon* 本, these two are not considered to belong to the same category: bananas are regarded as fruit, or more broadly food, whereas pencils are stationery. In her study, Iida examined the four Japanese NCs *hon* 本, *kai* 回, *ken* 件, and *tsuu* 通, as used in various modern communication systems: the telephone, the answering machine, the facsimile, email and postal mail (Iida, 1996a).[41] From the results, Iida claims that classifiers can vary according to inherent aspects of the co-occurring verb—activity, accomplishment, and achievement—even for the same object. For example, a phone call is counted by *kai* when it is not connected to the right person, and by *hon* when it is successfully connected to the right recipient. Moreover, when the purpose for which the phone call was made is achieved, it is counted by *ken*. Iida concludes that these three concepts of activity, accomplishment, and achievement are important in the context of these modern communication systems. Which of these concepts a speaker perceives as relevant can lead the speaker to choose a different NC from among four NCs (*hon*, *kai*, *ken*, and *tsuu*) (Iida, 1996a).

Matsumoto further argues that one of those NCs, *hon*, can indicate 'a continuum we can experience' (Matsumoto, 1993, p. 678). When we can 'experience' one-dimensionality, the experience is metaphorically expressed by *hon*. This point is missed in Lakoff's (1987) analysis, and Matsumoto lists some examples such as a

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[41] *Kai* 回 is used to count actions (p. 333).

Ken 件 is used to mainly count events, predicaments, and enquiries (p. 344).

Tsuu 通 is used to count letters, messages, and official documents (p. 367) (Iida, 2004).

serialised novel, a thesis, a play script, and TV programmes that can all be counted by *hon*. Matsumoto also mentions the fact that the adjectives *nagai* (long) and *mijikai* (short) can be used for these referents as supporting evidence for his point (Matsumoto, 1993).

Matsumoto also points to other problems in Lakoff's analysis. Most problematic, Matsumoto argues, are Lakoff's analyses regarding cultural imagery. Lakoff considers the fact that a Japanese traditional letter was a scroll, which is a long and thin object, as one reason that letters are counted by *hon*. However, scrolls are usually counted by another NC, *kan*, in contemporary Japanese, and there is no evidence that scrolls were ever counted by *hon* (Matsumoto, 1993). More importantly, Matsumoto points out that Lakoff's explanations using the notion of metonymy in relation to cultural imagery are sometimes questionable as well. For instance, Lakoff gives another reason why letters are counted by *hon*: that letters are written with a pen, which is a long and thin object (Lakoff, 1986, p. 109). However, letters can be counted by *hon* only when they are sent, but not when they are actually written (Matsumoto, 1993).

Lakoff explains the extended usages of *hon* using a radial structure model. This means that he sets the central sense and then the non-central senses around it, and explains the non-central senses using image-schema transformation, metaphor, and metonymy. He uses multiple methods to analyse the complex structure, all of which are potentially useful approaches to investigate the extended usages of NCs. Nevertheless, Matsumoto points out that there are still more aspects to be considered regarding the Japanese NC system. He maintains that the Japanese NC system is 'a good example of a lexical field that cannot be characterized by neatly organized "objective" structures' (Matsumoto, 1993, p. 701). The Japanese NC system contains a number of non-configurational (or 'kind-based') NCs that cannot be explained by

hierarchically organised semantic distinctions (as explained in 2.4.3). Also, the choice of Japanese NCs is considerably affected by pragmatic principles (Matsumoto, 1993).

Hamano (2017), on the other hand, claims that while the meaning and uses of the most common NCs have been investigated in a number of studies, the relationship between the polysymy of the noun counted and the choice of NCs has not been considered. Hamano conducts a case study of the noun *denwa* 電話 (telephone), which can be counted by at least three different NCs: *dai*, *hon*, and *ken*. She employs the theory of metonymy and examines its application to the use of *denwa*. It is observed, for example, that the NC *dai*, which generally is an NC for machines, is used not only when the noun *denwa* is used to mean a machine, but also when it is used to indicate a facility or in reference to its function of making a phone call. These usages are attributed to the metonymous use of word '*denwa*' for *denwa-ki* (telephone machine) and for *denwa-kaisen* (telephone line) in the contexts examined. Other metonymies, which are assumed to lead to the use of the NCs *hon* and *ken* rather than *dai* with this same noun, are also found in the analysis (Hamano, 2017).So far, the general characteristics of Japanese NCs and previous studies on them have been reviewed. The following two sections take up an issue that is particularly closely related to the target NCs analysed in this thesis. In section 2.4.5, NCs used for animate beings are examined in relation to the first target NC, *hiki*. The second target NC, *hatsu* is one of the NCs which can be used both for entities and events, and these kinds of NCs are discussed in section 2.4.6.

2.4.5. Japanese Numeral Classifiers for Animate Beings

In this subsection, NCs used for animate beings are discussed, as the issues associated with these NCs are closely related to the first target NC of this thesis: *hiki*. In the traditional view, Japanese NCs are fundamentally divided into animate and inanimate,

as seen in many studies mentioned above (Downing, 1996; Iida, 1999, p. 75; Iwasaki, 2013, p. 77; Matsumoto, 1993). Under the animate group, all animate beings are divided into human beings and non-human beings as a general rule (Iida, 1999, p. 328; Iwasaki, 2013, p. 75; Yamamoto, 2005, p. 20). On one hand, the boundary between the animate and inanimate has been considered to be quite rigid. On the other hand, there are usages observed in daily language which transgress this boundary. Thus, a number of studies have been conducted to examine these exceptional usages.

Iida (2001) examined several Japanese NCs used for animate beings: *nin* 人 (human beings), *hiki* 匹 (comparatively small animate beings), *too* 頭 (comparatively large animate beings), *wa* 羽 (birds), and three NCs used for inanimate entities: *tai* 体 (animate-looking inanimate entities), *dai* 台 (machines and vehicles), and *ko* 個 (a general NC for inanimate entities). Iida considers how native speakers of Japanese distribute nouns into animate beings and inanimate entities by focusing on a robotic dog, called AIBO.[42] Her analysis shows a variety of choices of NC for AIBO. When AIBO was regarded as simply a machine or a product, it was counted by *dai*, an NC for machines, vehicles, and equipment. After AIBO had become well known and people started to appreciate its efficiency and close semblance to a real dog, it started being counted more by *tai*, which is used for animate-looking inanimates, such as statues. In addition, there are some example sentences in which AIBO is even counted by *hiki* or *too* (both of which are usually used for animate beings). This occurred when AIBO had come to be regarded as a kind of pet in a family. Lastly, AIBO was also counted by *ko*, a general NC for inanimate entities. The general NC *ko* is used for entities which do not have any particularly salient characteristics (Iida, 1999). Therefore Iida considers that *ko* started being used for AIBO some time after it was released, when AIBO had become so widespread that it lost its novelty

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[42] AIBO is a dog-like entertainment robot, which was produced by SONY from 1999 to 2006. It was designed to develop its own personality by communicating with people.

(Iida, 2001). Iida's study thus shows that the robot dog AIBO is counted by a number of NCs depending on the situation. It clearly illustrates the fact that the speaker's perception of a referent can motivate them to choose a different NC each time. More importantly, it appears that deployment of NCs for animates and inanimates do not necessarily correspond with biological boundaries.

Komatsu (2013) conducted a study on NCs particularly focusing on the boundary between the animate and the inanimate using science-fiction movies as data. She examined which NCs are used for robots, androids, aliens, and animals in the Japanese subtitles in English science-fiction movies. From the results, it was found that the use of NCs can be considerably influenced by a variety of contextual features including the appearance of the referent, the relationship between the speaker and the referent, and also the speaker's feeling towards the referent at the time of speech. For example, in one movie, the same robot was first counted by *tai* (an NC for animate-looking inanimate entities) when the speaker was hostile to the robot, and by *nin* (an NC specifically for human beings) after the same speaker had befriended the robot.

This kind of usage, in which the speaker's feeling affects the choice of NC, is potentially relevant to any referent. However, animate beings can attract attention in positive and negative ways more easily than emotionless, inanimate referents. Therefore, it can be assumed that animate beings are more likely to be accompanied by a subjectively chosen NC. Thus, this study suggests that investigating NCs for animate beings is likely to contribute to understanding more precisely how NCs can be used to embody the speaker's recognition of the referent. *Hiki*, the first target NC of this study, is an NC used for comparatively small animate beings, and also used as a general NC for animate beings. The analysis of *hiki* is shown in chapter 4, particularly focusing on subjective, creative uses by the speaker. Examples with atypical referents serve especially well to illustrate how NCs can be used metaphorically to modify the meaning of the referent.

2.4.6. Counting Entities and Events

As briefly explained previously (2.4.3), it has been claimed that Japanese NCs are fundamentally divided into three groups: animate, concrete inanimate, and abstract inanimate (Downing, 1996; Matsumoto, 1993). The distinction between the three groups might seem clear, however, by looking at each NC, it appears that there is actually a continuum between the categories of concrete inanimate and abstract inanimate. It should be noted that in the category of abstract inanimate, there are not only abstract notions and entities such as choices (e.g., *toori* 通り) and songs (e.g., *kyoku* 曲), but also events (e.g., *ken* 件) (Matsumoto, 1991).[43] Thus though the majority of NCs are used for concrete/abstract entities, there are some classifiers which are used to count the number of events and actions in Japanese. This section first addresses the issue raised in section 2.4.1.1 regarding the classifiers, which are exclusively used to count the number of events and actions and then NCs which can be used both for entities and events, including the second target NC of this thesis *hatsu*, are discussed.

First of all, from a typological perspective NC systems are regarded as one of the *noun* classification systems in the languages of the world, which means that NCs are fundamentally assumed to classify nouns. However, this certainly does not mean that events cannot be counted by NCs, as events can be represented by a noun. For instance, *hanzai* (crime, a criminal act) is a noun, but it can be used to represent an event. In Japanese, crimes are counted by a specific NC *han*. Similarly, bows are actions which are represented by a noun *ojigi*, and also have a specific NC *rei* (Jarkey & Komatsu, In Press, p. 354).

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[43] Matsumoto also includes some NCs for different types of classical Japanese poetry, in the abstract inanimate category, such as *shu* for Tanka and *ku* for Haiku (Matsumoto, 1991).

Among the three 'event' classifiers mentioned in section 2.4.1.1 (*kai* 回, *do* 度, and *ken* 件), *ken*, which describes events and abstract notions, such as accidents, predicaments, and enquiries, is assumed to be the same type as *han* and *rei* since *ken* is most often used with a noun.[44] On the other hand, *kai* and *do* are used for events represented by a verb in most cases. These two classifiers are often excluded from the discussion of NCs and, though this is a critical issue regarding the classification system of Japanese, this point has not been substantially addressed in previous studies. Iida does consider the usages of these three classifiers in her study (Iida, 1999). She claims that NCs can be used not only for entities, but also for events and incidents, and carries out a detailed analysis of the referents of these classifiers on the basis of a considerable number of examples. Iida actually discusses *kai* and *do* together, and *ken* in a separate section, and claims that *kai* and *do* are interchangeable in many cases. On the other hand, she says that *ken* is quite different from *kai* and *do*, in that it is incapable of indicating the repetition or duplication of an event (Iida, 1999, p. 212). However, the point that *kai* and *do* can be used for events which are represented by a verb, while *ken* presumably cannot, is not clearly mentioned in her study.

Downing and Matsumoto, on the other hand, treat *ken* as an NC and include it in their analysis, but do not mention *kai* and *do* at all (Downing, 1996; Matsumoto, 1991, p. 58). Though they do not give a reason for this, it is likely because these two classifiers are used for events represented by a verb, so that they are not regarded as NCs and are thus excluded from their analysis. Iwasaki (2013, p. 75) mentions both *kai* and *do* in his discussion of numeral classifiers and numeric phrases, but refers to them as quantifiers rather than numeral classifiers.

Although *kai* and *do* have been investigated very little, and clearly need further research, as mentioned in the introduction (1.1), a thorough study of these classifiers is beyond the scope of this thesis. They certainly have a lot in common with

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[44] This assumption needs further investigation to be confirmed.

morphemes whose inclusion as NCs is beyond doubt, insofar as they refer to an instance of a referent that is perceived as a natural occurrence rather than one that has a boundary (or measure) imposed on it. Therefore, they are tentatively regarded as NCs in a broad sense in this thesis.

Regarding the three classifiers *kai*, *do*, and *ken*, although there is a difference in whether their referents are generally represented by a noun or a verb, it is not debatable that these three classifiers are mostly used to count instances of events and actions. On the other hand, there are some NCs which are used both for entities, and events and actions, and characteristics of these NCs are a primary focus of the present study.

In section 2.4.4, it was shown that *hon* can be used for physically long and thin objects such as pencils, umbrellas, and trees, as well as for certain concepts and events such as telephone calls and home run hits in baseball. It is considered that *hon* is fundamentally used for concrete entities, which are long and thin, and its usage has been extended to cover those abstract events. Thus, *hon* is used for both entities and events, but still has a meaning of 'long and thin' as its central sense. In other words, prototypical referents of *hon* are concrete, rather than abstract, entities (Lakoff, 1987, p. 105).

On the other hand, there are some NCs which can be assumed to be mainly used for events, but which can also be used for entities, presumably as an extended usage. For instance, *furi* 振り is used for swinging actions with an item such as a sword, a tennis racket, or a baseball bat. *Furi* is also used for real swords and sword-like weapons such as bamboo swords used for practice (Iida, 2004, p. 384), although, curiously, not for other entities such as tennis rackets. It is notable that the kanji character for *furi* (振) refers to an action of swinging, shaking, or waving. The NC *furi*, however, is considered to be fundamentally used for a swinging 'action'.

A similar pattern can be found in the case of the NC *ori* 折, which is used to count the number of an action of folding a piece of paper or cloth. At the same time, *ori* can also be used for boxes, particularly containing food and sweets in contemporary Japanese (Iida, 2004, p. 331).[45] This is considered to be because these kinds of boxes used to be made of thinly sliced wood, which are folded to make a box shape. The kanji character for *ori* (折), again, refers to the 'action' of folding. Thus, *ori* is similar to *furi*, in that it is presumed to be originally used for actions, and its usage has been extended to entities.

It is therefore assumed that there are a certain number of NCs which are used for both entity referents and event referents, and among them, some are fundamentally used for entities, with extended usages for events (such as *hon*), whereas others are fundamentally used for events, with extended usages for entities (such as *furi* and *ori*). However, there is little evidence to confirm these assumptions since previous research has not deeply investigated these NCs in this respect.

There are of course, many more NCs which are used exclusively for entities. For example, one of the target NCs of this thesis, *hiki*, cannot be used for any events or actions. Similarly, *nin* for human beings, and one of the general NCs for inanimate referents *ko*, are used exclusively for physical entities. On the other hand, as introduced above, *kai*, *do*, and *ken* are exclusively used only for events or abstract concepts.[46] From the characteristics of these types, alongside those of the *hon* type and the *furi / ori* type, it is assumed that there is a continuity between entity NCs and event NCs. A model of this continuum is displayed below (Figure 2.1). It illustrates the fact that there are NCs which are used exclusively for entities and others used exclusively for events,

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[45] These boxes can be and are more generally counted by *hako* 箱, which literally means 'box'. However, *ori* gives a more elegant, sophisticated impression.

[46] The *ken* in question is represented by 件 in kanji. There is another NC *ken* with different kanji (軒), which is used for houses.

and some NCs that can readily can be used for both. But even the latter sort tends to favour fundamentally one end of the continuum over the other.

Figure 2.1 A model of the continuum between entities and events

However, there are few previous studies on NCs that can be used for both entities and events, with the singular exception of *hon*, which has been examined by a number of scholars (Iida, 1996b; Lakoff, 1987; Matsumoto, 1986). Therefore, even *furi* and *ori* are assumed to be fundamentally used for events rather than entities, based only on the evidence of the part of speech from which they are derived.

One of the target NCs of this thesis, *hatsu*, is one of these NCs that can be used to count both entities and events. *Hatsu* is assumed to be more the *furi* / *ori* type than the *hon* type; that is, it is considered to be fundamentally used for events, and can be applied to entities in extended usages. *Hatsu* as an NC has not been deeply investigated in previous studies, so the analysis, shown in chapter 5, starts with an investigation of the general features of *hatsu* and then looks into its extended usages.[47]

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[47] Iida analysed actual examples with *hatsu* 発 in her thesis in 1999, but it mainly focused on just one of the main characteristics of its referents: explosiveness.

2.5. Chapter Summary

In this chapter, previous research relevant to the present study has been reviewed. This began with introducing the relation between language and thought, especially in regards to grammatical classification systems, which showed the significance of studying grammatical classification systems from a broad perspective. Next, an overview of the major grammatical classification systems was presented from a typological point of view. The general features of NC systems were then introduced, and the focus was narrowed down to the Japanese NC system in particular.

In the section on Japanese NCs, the basic characteristics of the system and its historical background have been briefly described. Then, a major issue which is deeply related to this thesis was addressed: how NCs are generally chosen. It has been shown that NCs are generally chosen on the basis of semantic criteria, and that a different NC can be used for the same noun depending on the state of the referent, or which aspect of the referent the speaker is particularly focusing on at the time of speech. It was also noted that contextual information and cultural knowledge can account for the choice of NC. This was followed by another issue that is essential to the present study: the nature and use of versatile NCs that cater for both entities and events, and the extended usages of NCs across these two categories.

The process of reviewing all these valuable studies has helped with understanding the background to this study, and has made the issues to be investigated clearer. In particular, two issues which have not been deeply examined have been identified.

First, it has been widely recognised that nouns can be matched with more than one NC, and also that extended usages of NCs are not at all uncommon. However, few scholars have acknowledged that NCs are actually sometimes used for atypical referents, which is often regarded as grammatically incorrect. From those studies that have examined this issue, it appears that the speaker's perception of the referent can

affect these atypical matchings; however, insufficient investigation has been conducted to date. Regarding this issue, it is notable that animate beings are likely to attract the speaker's attention more easily than emotionless entities. Thus, investigating NCs used for animate referents will contribute to our understanding of how NCs can be used subjectively or creatively. From this perspective, investigating the first target NC *hiki* is expected to show a variety of these usages, and thus be conducive to further investigation of this issue.

Second, NCs which are used for events and actions, and some of the issues related to these, were highlighted. It was first recognised that there are NCs which count the number of events represented by a noun as well as by a verb. Next, it was shown that there seems to be a continuum between entity NCs and event NCs, and that some NCs are used for both of these referent types. This study takes a close look at one of these NCs, *hatsu*, as the second target NC, because although *hatsu* is quite commonly used in daily language, it has not been investigated in depth. The study of *hatsu* will contribute further to understanding the use of Japanese NCs, especially those which are used for events.

Chapter 3　　　　Research Questions, Design, and Method

This chapter presents the research questions to be answered in this thesis along with the research design (3.1), which is followed by the theoretical frameworks most relevant to the study (3.2). Then, the data (3.3) and procedure (3.4) used in this research are explained.

3.1.　Research Questions and Research Design

Based on the background to the study described in 1.1. and the review of relevant studies above, this study addresses the research questions below in order to examine the target NCs as case studies, and their meaning and use in relation to the range of referents they relate to in the contexts in which they appear. This section first presents the research questions to be addressed in this thesis (3.1.1) and the research design of the study (3.1.2).

3.1.1.　Research Questions

This thesis basically concerns the meaning of Japanese NCs and their use in terms of the referents they refer to. The review of relevant literature has identified two significant issues regarding the use of NCs in Japanese that have been underexplored in previous research. These two issues are both associated with the range of referents that a Japanese NC can refer to, beyond those that exhibit certain objectively observable properties or characteristics. The first of these involves the typicality of the referents that a particular NC can appear with, and the second, the categories of

referents (entities and/or events) to which a particular NC can be applied. Thus, this study aims to respond to the following major research question.

Major research question

What factors account for the extension in range of referents of an NC, beyond cases in which the objectively observable characteristics associated with that NC are evident?

This major research question is addressed in relation to the two specific aspects outlined above: (1) the typicality of referents of a single NC and (2) the categories (entities and events) to which the referents of an NC can belong. This leads to the more specific research questions below:

(1) a. What are the conditions in which an NC can be matched with an atypical referent?

b. What factors account for this atypical matching of a referent with an NC?

(2) When an NC can be used for referents that belong to both the category of entities and the category of events/actions, is it always the case that entity uses are the most basic, and that event uses are extended from them?

As explained in 1.1, with a view to answering these questions, this study targets two Japanese NCs as case studies: *hiki* (used for comparatively small animate beings) and *hatsu* (used for explosive or hitting events/actions, and related entities). The first case study with the NC *hiki* is conducted with the specific aim of answering

the first research question: (1-a) and (1-b). The second case study with *hatsu*, on the other hand, is more closely related to answering question (2). However, this second case study is also expected to make some contribution to responding the questions in (1).

As mentioned previsously, NCs are generally characterised as matched to the referent of a noun on the basis of semantic criteria, all of which relate to properties or characteristics inherent to the referent. Although previous studies have pointed out that, in some cases, one noun can be matched with more than one NC, the focus has mostly been on the idea that NCs work to convey objective information about the physical properties or functional features of the referent. Therefore, it has been generally considered that, in cases where there is flexibility, speakers can choose from a pool of possible 'correct' NCs based on the objective characteristics of the particular referent of the noun, in the context in which it appears. However, as noted above, this does not, in fact, occur in all cases. It is indeed occasionally observed in a particular context that an NC is matched to a completely 'atypical' referent – a matching that would be considered 'incorrect' in any other context. Since these atypical matchings have not been highlighted in previous research, research question (1-a) is set to examine the conditions under which these matchings can happen. Research question (1-b) is closely associated with question (1-a) since question (1-b) aims to investigate the factors which account for the atypical matchings and the mechanisms by which these factors function to trigger these atypical matchings. Examples extracted from the data with the NC *hiki* are examined to answer these two questions.

Next, the data with the NC *hatsu* are examined to seek the answer to question (2). As stated above, it is generally thought that meanings are extended from concrete to abstract. In this context, it makes good sense that the range of referents of a particular NC could be extended from concrete entities to abstract notions such as events. This has, indeed, been claimed in the case of the Japanese NC *hon* in a number

of previous studies (Iida, 1996b; Lakoff, 1987; Matsumoto, 1986, 1993). However, as noted, the NC *hatsu* seems to be used more frequently and with a greater variety of events compared to entities. Could this mean that, in this case the event uses are the most basic, and that entity uses are extended from them? By picking up *hatsu*, the second case study aims to give evidence which will respond to this question about the possible direction of extension of meaning in a case of Japanese NCs.

The second case study with *hatsu* is also expected to support the first case study to answer research question (1). As mentioned above, *hatsu* has been noted as an NC in previous research, but its usage has barely been touched on. Therefore, although the focus of the second case study is more concerned with categories of referents of NCs (entities and events), the analysis also aims to contribute the issue of the typicality of the referents of NCs in Japanese addressed by the research question (1). Thus, the case study on *hatsu* examines not only on the cases in which referents are events, but also examples in which they are entities.

3.1.2. Research Design

In order to answer these research questions, this study analyses data extracted from a corpus of authentic written Japanese called the Balanced Corpus of Contemporary Written Japanese. Both quantitative and qualitative approaches to data analysis are utilised. For each target NC (*hiki* and *hatsu*), the data are first examined to see which types of referents are used in each sample, and their proportions are calculated (see 3.3.1 and 3.3.2 for details about the data and procedure). This quantitative analysis allows identification of the prototypical referents of the NC (see 3.2.1 below for the strict sense in which the term 'prototypical' is used in this thesis).

Next, examples with a variety of referents, including both prototypical and less prototypical referents, are taken up to be qualitatively investigated, together with

a consideration of the broader context in which the examples appear and the relevant cultural background. By examining examples with prototypical referents, the meanings carried by the NC as its central sense are revealed. On the other hand, through close analysis of examples in which less prototypical referents appear, more extended meanings become evident. The central senses and the more extended meanings of NCs revealed through this process are called 'core semantic components' and 'extended semantic components' respectively in this thesis. These two types of semantic components will constitute key notions throughout the thesis. The core and extended semantic components of both of the target NCs, *hiki* and *hatsu*, will be presented and discussed at the beginning of each analysis in chapters 4 and 5.

The present study thus employs an inductive empirical approach, and analyses speakers' actual usages from a semantic perspective. Therefore, the focus is on how particular NCs are actually utilised, rather than on the grammatical rules or syntactic features of Japanese NC constructions in general. Also, this thesis does not look at historical use and development, but at contemporary data only.

In the analysis chapters, numerous, authentic examples are presented and discussed. Each example is accompanied with a romanised transcription, my own translation (unless the example comes from the work of another scholar), and the source of the example. The numeral and the NC are underlined in each case and the referent in question is bolded as a general rule, except for examples involving common lexical collocations in 4.3.1 (where the whole common phrase is bolded) or where otherwise noted.

3.2. Theoretical Frameworks and their Application in This Study

While the semantic structure of some classifier systems is quite straightforward, there are other classifier systems whose semantic structure can be rather complex

(Aikhenvald, 2000, p. 307).[48] The Japanese NC system is an example of the latter type, with further complexity added in various ways, such as the ways in which some types of classifier can be semantically extended (Aikhenvald, 2000, p. 308; Matsumoto, 1993). Therefore, to investigate the semantic structure of Japanese NCs, a range of approaches is needed.

This study employs three main theories in its theoretical framework: Prototype Theory, the theory of metaphor, and the theory of metonymy. Prototype Theory is first used to identify prototypical and less prototypical referents of the target NCs, *hiki* and *hatsu*. Prototype Theory is also applied to understand the meaning components of each NC. The notion of the theory of metaphor, on the other hand, is applied to investigate specifically the extended usages of NCs. Finally, the theory of metonymy is used to understand some cases in which the matching of an NC with a particular noun would seem entirely unexpected without recognition of the fact that the noun is being used to stand for something other than its literal referent.

In the following, an overview of each theory is first briefly given, and the way in which it is applied in this study is then described.

3.2.1. Prototype Theory

In the classic view, categories were thought to be defined by necessary and sufficient criteria (Barnes, 1984). This means that members in the same category share the same properties and the boundary of each category is assumed to be distinct and clear. In this view, all members in the same category are considered to represent that category equally well (Jitsumori, 2006, p. 343). However, this classic view is not based on empirical or experimental studies but on philosophical thought, and it has been widely

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[48] For instance, Malay and Minangkabau are known to have a very clear semantic rule: 'person is used for all human beings and the animal classifier is used for all animals (Marnita 1996, as cited in Aikhenvald, 2000, p. 308).

acknowledged that this view is not without problems (Lakoff, 1987, p. 6). The following are two major problems that have been identified through experimental studies.

It was first argued that, within a category, some members may be 'better' examples of the category compared to other members. Rosch and her associates conducted experimental studies (Rosch, 1973, 1975a, 1975b), and claimed that 'many natural categories are internally structured into a prototype (clearest cases, best examples) of the category, with non-prototype members tending towards an order from better to poorer examples' (Rosch, 1975a, p. 544). One of the best-known examples given in her study concerns the category of birds. Respondents in Rosch's study considered robins and sparrows to be the best examples of the category, with penguins and bats the poorest examples.[49] Likewise, football and baseball were regarded as the best examples of the category of 'sport', while cards and sunbathing were rated as the poorest examples (Rosch, 1975b). In the classic view, on the other hand, there are no better or poorer examples in a category, because each category is considered to consist of members whose 'membership [is] defined by an item's possession of a simple set of criterial features' (Rosch, 1975b, p. 193). Thus, in the classic view, no more complex semantic structure is considered necessary for understanding category membership.

Another problem identified with the classic view is that categories are not formed only by the inherent properties of members. Categorisation is not the same at all times but sometimes depends on context. In Labov's study (1973), for instance, participants were asked to tell what vessels were drawn in a set of pictures in two conditions: just being shown pictures of the vessels, and with being told that the vessels were for food. Answers given by the participants were different in the two different

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[49] Though bats are biologically not birds but mammals, it is included in the list used by Rosch (1975).

conditions. This is one of the experiments which led to the conclusion that categorisation is not done simply based on information inherent to the items to be categorised, but that contextual information is also taken into consideration.[50]

Prototype Theory has been applied not only to lexical categories but also to the category of NCs, a category that has not only lexical but also grammatical features (see 2.3.1). Regarding Japanese NCs, at least in the case of the most commonly used ones, each NC has a number of possible referents, all of which would be regarded by virtually all adult native speakers of the language to be 'correctly' classified by that NC.[51] However, although all those referents are regarded as belonging to the category of 'referents of the NC', not all are equally good examples of the category. Each of these categories actually consists of prototypical referents and comparatively less prototypical referents.

For the Japanese NC system, Lakoff (1987) applied Prototype Theory to examine the NC *hon* (see 2.4.4 and 2.4.6). He identified 'long and thin' as the central senses of *hon*, so physically long and thin objects, such as sticks and pencils, are regarded as prototypical referents of *hon*. There are non-prototypical referents as well, which are also counted by *hon*, but are not literally long and thin. For example, some abstract concepts or events, such as telephone calls and home run hits in a baseball game, are regarded as non-prototypical referents of *hon* (Lakoff, 1987).

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[50] This claim is highly relevant to the present study. In general, referents are thought to always be matched with the 'grammatically correct' NC. Yet, atypical matchings were also observed in the data examined. If these atypical matchings were encountered without any context, they would be automatically regarded simply as 'grammatical mistakes'. However, because they do, of course, appear in a meaningful context, these matchings are well understood. This issue is addressed in 3.2.2.

[51] There are some NCs that are used differently from general use in certain contexts or by certain groups of speakers. For example, *too* 頭 is generally used for comparatively large animate beings such as horses and tigers, but can be used for small animate beings in a specific condition such as rats used for experiments, and insects which are very rare and get a good price for collectors, such as beetles. Also, there are NCs which are known and used only among experts.

In this study, Prototype Theory is used as a framework in two different domains: with regard to referents of the target NCs, and to the meanings of these NCs. As we will see in the discussion below, these two domains are closely related but nevertheless need to be considered separately.

First, Prototype Theory is used with regard to referents of the target NCs. This has been already proposed in some previous studies (Lakoff, 1987; Matsumoto, 1991, 1993) as explained above in the case of the referents of the NC *hon*. In comparison to previous studies, it should be noted that this study examines authentic data in context and, as a result, concerns some cases that would not be considered 'correct' referents of the target NCs. For example, 'correct' referents of the NC *hon* would include both the prototypical referents (like 'sticks' and 'pencils'), as well as less prototypical ones (like 'telephone calls' and 'home run hits'), which are also classified by *hon*. In addition, however, this study also encounters some cases of absolutely atypical referents, which would be regarded (out of context) by native speakers as grammatically 'incorrect' choices for the NC concerned, and thus not actually in the category of 'referents of the NC' as defined above. In order to differentiate these different types of referents from each other, three terms are used in this thesis: 'prototypical', 'less prototypical', and 'atypical'.

The term 'prototypical' is used for prototypical referents (like sticks and pencils for the NC *hon*), each of which satisfy a larger number of core semantic components of the NC than do 'less prototypical' referents (like telephone calls and home run hits for the NC *hon*). In addition, prototypical referents are also ones that are frequently seen or mentioned in general conversation, so much so that they easily come up in people's minds as 'prototype', best case examples of the NC.

The term 'less prototypical' indicates referents that may exhibit a smaller number of the semantic components of the NC, and/or involve some non-literal extension of some of these components (telephone calls and home run hits for *hon*),

and/or do not frequently occur in everyday conversation, but for which the NC concerned is still clearly considered 'correct'. In other words, they are still very clearly in the category of the NC's referents. These 'less prototypical' referents are generally called 'non-prototypical' in other studies, which tend to consider only the members within the category of 'correct' referents of the NC.

Lastly, this thesis uses the term 'atypical' to indicate referents which do not belong to the category of the 'referents of the NC' concerned at all as it is defined above, but which this study finds *do* occasionally occur as referents of that NC in authentic texts. These referents are actually prototypical referents of another NC. For instance, one of the target NCs in this study, *hiki*, is basically regarded as being used for animate beings other than human beings and which are comparatively smaller than human beings. Therefore, small, common creatures such as kittens, fish, and insects are 'prototypical' referents. On the other hand, amphibians and microorganisms are 'less prototypical' referents, as they are not as frequently observed or mentioned as prototypical referents in general. Finally, inanimate entities and human beings, which surprisingly do occasionally emerge as possible referents of *hiki* in the data, are regarded as 'atypical referents'. This is because they do not satisfy the most basic semantic criteria of *hiki*: non-human, animate beings. Also, human beings have their own dedicated NC, *nin*.

Prototypical referents and less prototypical referents are both in the category of 'referents of the NC'. As noted above, this category is defined as 'referents that would be regarded by virtually all adult native speakers of the language to be 'correctly' classified by that NC'.[52] Thus, prototypical referents and less prototypical referents are not expected to be completely distinct from one another, but rather to exist on a continuum; they differ in degree rather than in kind. Atypical referents, on the other

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[52] It would be difficult to define "'all' or 'almost all' adult speakers" here because usages of NCs can vary extensively depending on generations, residential areas, and individuals.

hand, are different in kind. They are outside the category of what is here termed 'referents of the NC', and have another NC as their most appropriate NC.

While prototypical and less prototypical referents of NCs were identified in most past studies mainly by experiments or surveys and the researcher's own intuitions, this study approaches the identification of these referents at least partially through quantitative analysis of authentic data.[53] The quantitative data allows the present study to investigate the frequency of the occurrence of referents of the target NCs. Also, the data is extracted from a large corpus of authentic written Japanese. Thus, the language data is neither controlled nor consciously generated by the researcher or by research participants, but naturally used by native Japanese speakers/writers. By checking the frequency of types of referents, prototypical and less prototypical referents of the NC are identified. Those data are next examined from a qualitative perspective. By examining both prototypical and less prototypical referents in the context in which they appear, the analysis reveals the meanings of the target NCs. These meanings are different from necessary conditions, but constitute a set of core meanings and extended meanings, which are explained below.

The second domain in which Prototype Theory is applied in this thesis is in relation to the meanings of the NC. From the analysis, it appears that each NC has a number of elements of meaning, which are introduced as 'semantic components' above (3.1.2). As mentioned previously, among these there are 'core' semantic components and 'extended' semantic components. However, great attention should be paid to the point that these 'core' semantic components do not necessarily correspond directly to necessary conditions for the NC to be used, nor to meanings that are shared by all prototypical referents of the NC.

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[53] As mentioned above, 'less prototypical' referents are mostly referred to as 'non-prototypical' referents in the previous studies.

The identification of core semantic components begins with an analysis of the features that are shared by all referents that are considered by native speakers to be 'correctly' classified by the NC concerned.. These features must be included amongst the core semantic components of the NC. For instance, *hiki* is considered to first have the core meanings of 'animate' and 'non-human', features that are shared by all prototypical and non-prototypical referents (Matsumoto, 1991). In addition to that, 'smaller than human beings' is also considered a core meaning in this study, as revealed by a comparison with other NCs used for animate beings, such as *too* (comparatively large, non-human, animate beings).

However, in order to be able to fully understand the 'extended' semantic components that emerge when less prototypical and atypical examples are examined, it is important to understand any additional 'semi-core' semantic components which may naturally arise from these core meanings. These additional semantic components may cover broader referents than just the prototypical referents of the NC and there may be some semantic components that go beyond the core semantic components. From the three most basic meanings of the NC *hiki*—'animate', 'non-human', and 'smaller than human beings'— for example, the additional semantic components of 'natural' and 'less than human beings' are frequently inferred. These are not included as core semantic components of this NC, but in between core and extended components not only because these meanings can be objectively extracted from the more basic meanings, but also because a thorough examination of the extended uses of the NC alerts us to their importance as part of its core meaning (see 4.2, 5.2, and also 5.3.3).

In addition to the core semantic components and 'semi-core' components, there are more potential meanings of an NC that can emerge depending on the referent with which the NC is matched and on the context in which the NC and the referent appear. These additional, potential meanings are referred to here as 'extended'

semantic components. In the case of the NC *hiki*, for example, the meanings of 'unimportant' or 'cute' are more subjective meanings that come to light only in specific contexts, so that these are regarded as extended semantic components (see 4.2 for a complete picture of the semantic components of *hiki*).

Thus, the idea of Prototype Theory is employed in the two domains: referents of the NCs and the semantic components of the NC. These domains are overlapping (prototypical referents tend to have a majority of core semantic components of the NC), but not identical.

3.2.2. The Theory of Metaphor

As explained above, NCs are used not only for prototypical referents, but also for less prototypical referents. These referents are still in the category of 'referents of the NC'. In addition to those referents, sometimes it is observed that NCs are also used for atypical referents, which are not members of that category at all. Out of context, those would be regarded as grammatically 'incorrect' matchings. However, the choice to use a certain NC with an atypical referent is generally made by the speaker not by mistake but on purpose. The second theoretical framework, the theory of metaphor, is employed to understand these two levels of extension: from prototypical referents to less prototypical referents, and from inside the category of 'referents of the NC' to outside the category, that is, to completely atypical referents.

In general, metaphors are often thought to be poetic, or literary expressions. However, metaphors are actually used extensively in everyday utterances and conversations. Lakoff and Johnson (1980) approached metaphor from the perspective of cognitive linguistics and their work summarises the idea of metaphors in the single sentence below.

'The essence of metaphor is understanding and experiencing one kind of thing in terms of another.'

(Lakoff & Johnson, 1980, p. 5)

They further explain that we can use a simpler and more concrete term metaphorically to understand and experience something that is more complex and abstract. Simpler and more concrete terms are, in other words, something we can understand easily, such as through bodily experience. For example, in a sentence 'He has been *battling* his disease with homeopathic medication' and 'The virus has *invaded* southern and central Europe', vocabulary items related to war are used to talk about something much more abstract: disease. We know what the disease is, but we cannot directly experience the cause of the disease: microorganisms. Thus, vocabulary that relate to war, a more concrete experience, are used to conceptualise the disease (Hilpert, 2015).

The notion of metaphor used in this study needs to be differentiated from the notion of 'conceptual' metaphor. In Lakoff and Johnson (1980), they explain the theory of 'conceptual' metaphor as involving two domains: a source domain and a target domain. We use a source domain as the source of vocabulary to talk about or understand the target domain. For example, Lakoff and Johnson take up 'war' as a source domain and 'argument' as a target domain. Thus, 'he attacked every weak point of my argument' does not mean the person physically attacked visible or physical weak points of the speaker, but rather that 'he raised objections' to the argument. Source domains tend to be something we can bodily experience, such as space, force, and vision (Lakoff & Johnson, 1980). Thus, in the theory of 'conceptual' metaphor, the mapping is done between two domains (source and target). However, in this study, domains are not relevant. The types of metaphor involved when NCs are used simply relate a single source (here referred to as the 'vehicle' of the metaphor) with a single

target. This is what Palfreyman and Zeshan (Forthcoming) refer to as 'single-stage metaphor'. Therefore, the theory used in this study is simply referred to as 'the theory of metaphor' instead of 'the theory of conceptual metaphor'.

In the process of using metaphor, a sentence involving a metaphorical expression may seem to have two possible meanings: a literal meaning and a metaphorical meaning (Fromkin et al., 2012). Regarding this issue, Searle (1993) claims that sentences and words have only one meaning, which means that both a literal meaning and a metaphorical meaning are not uttered in one, single instance. In cases where some metaphorical expression is used in a phrase or a sentence, the literal meaning is first computed in the listener's mind, then, if the literal meaning seems unlikely to be what the speaker intended, the listener tries another interpretation, namely, a metaphorical meaning (Fromkin et al., 2012; Searle, 1993).[54] In order to have the metaphor understood in the way the speaker intended, it is essential that both the speaker and the listener share the literal, original meaning of the term and the context in which the term is used. In addition to that, some shared-world knowledge or cultural knowledge may be required to interpret the metaphorical expression. For instance, the phrase 'time is money' can be understood in the context of a cash economy, in which people are paid by the number of hours they work (Lakoff & Johnson, 1980).

In this analysis, the idea of metaphor is applied to explain an extension of meanings at two levels. Firstly, metaphorical extension is employed within the category of the referents of the NC. This approach has already been taken in previous studies. For example, as mentioned, Lakoff (1987) discusses the fact that telephone

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[54] Wilson and Sperber (2006) claim that literal interpretations do not always need to be tested before seeking figurative interpretations. Based on the relevance theory, the lister has an assumption about the speaker's utterance that will satisfy their expetations of relevance so that figurative iterpretations can be directly selected to be accessed first (Wilson & Sperber, 2006, p. 619).

calls are counted by *hon* (long and thin) in Japanese. Telephone calls are not physically long, thin entities, but rather invisible events. Lakoff explains this use by applying the notion of metaphor: a telephone call is a way of communication, which comes through a conduit, and conduits are typically long and thin (Lakoff, 1987, p. 104).[55] It is observed in this study, however, that not all less prototypical referents are counted by the NC due to metaphorical extension, as what determines prototypes is not only the meaning but also the frequency with which speakers encounter particular potential referents, particularly in a context in which they may need to be counted. For example, microorganisms are less prototypical referents of *hiki*, not because they do not satisfy the semantic components of *hiki* just as well as kittens and fish, but because they are not commonly counted. Therefore, metaphorical extension is used only where applicable within the category of each target NC to account for less typical referents.

Let us now turn to the question of how the notion of metaphor might relate to referents that are outside of the category of 'referents of the NC', in general. NC language speakers acquire (or learn in school) a 'correct' NC for each referent so that the matching is done almost automatically in everyday language. However, there are cases in which a 'wrong' NC is intentionally chosen by the speaker. In this kind of case, the use of the NC with an atypical referent is not automatically considered to be wrong. As claimed by Searle (1993), the listener would detect that the NC is not what they are expecting to occur in the sentence, and it is that grammatical incorrectness that triggers their mind to seek a metaphorical meaning. As long as the listener assumes that the speaker has good knowledge of the grammar of the language and they are genuinely intending to communicate, the listener consciously or unconsciously finds another interpretation of the meaning injected into the referent by the unusual NC.

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[55] It has been pointed out that the use of *hon* for telephone calls cannot be explained only by metaphor, but more factors are involved. These arguments are described in 2.4.4.

NCs in Japanese have tended to be thought to function in a sentence simply to satisfy grammatical rules: because they are grammatically required whenever a noun is counted and in order to indicate information about the referentiality of the noun. They are not considered to convey much in the way of meaning compared to other elements related to the noun phrase, such as numerals, adjectives, and nouns. However, as explained and further discussed in the analysis chapters, each NC actually has a number of semantic components, and these semantic components are all potential meanings of the NC. Therefore, the speaker can manipulate the normal use of an NC to draw on one or more of those semantic components to emphasise any of a range of aspects of, or to add subjective meaning to, the referent. Based on the assumption that the listener has good knowledge of both the referent and an NC, the speaker can expect that he/she can find a *tertium comparationis*, that is, something shared between these two things to compare. Thus, without the need for explanation, the shared meaning between two things is highlighted and emphasised through metaphor. Not only the meaning of the NC, but also the context in which it is used, and even real-world or cultural knowledge that is shared with the speaker can be interpreted by the listener. By simply pairing an 'incorrect' NC with a referent, the speaker can thus express their personal, subjective attitude towards the referent in a creative way.

3.2.3. The Theory of Metonymy

In addition to the theory of metaphor, the theory of metonymy is employed in some cases in order to understand usages of NCs. Along with metaphor, metonymy is also extensively used in the languages of the world. Both metaphor and metonymy are non-literal device, and allow the speaker to significantly extend the meaning of a word (Fass, 1988). Due to these similarities, metonymy is often discussed together with metaphor. However, there are critical differences between them.

As mentioned above, the theory of 'conceptual' metaphor usually involves quite extensive mappings between two domains (source and target), so that in theory, not only a meaning of a word borrowed from a source domain but also the whole structure of the source domain is mapped to the target structure. For instance, again in the 'argument is war' example, it is possible to also state 'his argument was *strong*', 'I *defended* my PhD thesis', and so on, as multiple aspects of the source domain 'war' are mapped to the target domain 'argument'. The point is that there is no actual overlap between these two domains involved in a metaphor. On the other hand, metonymic mapping occurs within only one domain (Croft, 2006). Therefore, compared to metaphor, the relationship between the source and the target is simpler in cases of metonymy (Haser, 2011). Metonymy is used to 'take one well-understood or easy-to-perceive aspect of something and use it to stand either for the thing as a whole or for some other aspect or part of it' (Lakoff, 1987, p. 77). Thus, metonymy involves a cognitive activity that uses one reference point in order to establish mental contact with another reference point, and this activity occurs within a domain, as mentioned above (Croft, 2006; Langacker, 1995). In general, one entity is used as a metonym for another, related entity. Metonymy occurs, for example, between a container and content (e.g., 'The kettle is boiling'), an appendage and a main constituent (e.g., 'The red T-shirt was looking for you'), a way / method and a main constituent (e.g., 'A police car caught the accused'), a producer and a product (e.g., 'This Picasso is extraordinarily expensive'), materials and a product (e.g., 'I need a glass'), and place and an institution (e.g.,'The White House isn't saying anything') and so on (Lakoff, 1987, p. 77; Yamanashi, 2004, p. 61).

According to Yamanashi (2004), metonymy is employed in a variety of ways, and in a broad sense, metonymic phenomena are categorised into toponymy and partonymy. Toponymy refers to speech which is used based on the contiguity of room or space. For instance, in the sentence 'the dog came in through the door', the word

'door' is used not to indicate the physical door, but rather a pathway to the room. On the other hand, partonymy is characterised as used to describe parts of whole. In 'Romeo kissed Juliet', for example, Romeo kissed a part of Juliet (most likely her lips, but still a part of Juliet, wherever it is) (Yamanashi, 2004, p. 62).[56]

In this study of NCs, it is frequently observed that what sometimes appears to be an atypical referent is actually being used metonymically. For example, from the present data, it was found that a body part is often used to indicate some attacking action involving the use of that body part. For example, '*hirate* 平手' (open-hand) is used to mean 'slapping'. In the case of this example, as a referent, the 'open-hand' is not literally referring to 'a body part', but rather to an 'attacking action', and is matched with an appropriate NC accordingly. Similarly, it is also often observed that *kobushi* (fist) is used to mean an attacking action 'punching'. Thus, when counted by the NC *hatsu* (events/actions with force), these are not considered to be atypical referents but, on the contrary, prototypical referents.

In this section, three theories and their application within the study have been discussed. Prototype theory is used to identify prototypical and less prototypical referents of the target NCs as well as to understand core and extended semantic components for each NC. The theory of metaphor is used to understand extension of the meaning of an NC, both within the category of its referents, and from the inside to the outside of the category. Lastly, the theory of metonymy is applied in some cases in which nouns are used metonymically to indicate a referent counted by the target NC.

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[56] It is sometimes argued that synecdoche, which is a device used to present the whole by a word indicating its parts or to present a part by the whole, is also a kind of metonymy. However, several studies have been conducted and claim that these two are distinguishable (Ogata, 2011; Seto, 1995, 1999).

3.3. Method

As noted, in order to respond to the research questions, this study adopts an inductive empirical approach, using 'language data' as evidence. Dörnyei explains that language data is composed of samples of language that are derived particularly for language analysis. He states that collecting and analysing language data is a highly specialised procedure (Dörnyei, 2007, p. 19).

There are a number of possible ways to collect data for analysis in linguistics. For example, multiple-choice surveys or experimental elicitation procedures are possible methods to yield data for the purpose of quantitative analysis. Data for qualitative analysis can be collected using a wide range of strategies including questionnaires, interviews, ethnography or case study. In this section, the data source chosen for this study, the reasons for this choice, and the procedures used to collect and analyse the data will be described.

In previous research (Komatsu, 2013), I conducted a preliminary study to investigate what factors might account for the choice of selected NCs, using Japanese subtitles translated from English in science-fiction movies as data.[57] This data was very limited in three senses: firstly, it was collected only from one genre; secondly, it was not from an original Japanese source but from translated data; and finally, the number of sample tokens was quite small. For these reasons, the findings could not be considered to be more widely applicable. By reflecting on these limitations, in this study I aimed to use a large data set collected from natural situations, produced by Japanese native speakers in a wide range of genres and registers.

Another requirement of language data suitable for responding to the research questions in this study was that it is in a form that allows *both* qualitative and

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[57] In this study, *nin* (human beings), *hiki* (comparatively small animate beings), *too* (comparatively large animate beings), *tai* (human-like inanimate entities, such as statues), and *dai* (machines, equipment, and vehicles) are examined.

quantitative analysis. For example, in order to reveal which types of entities are the most representative / prototypical referents of an NC examined, the proportion of each referent type counted by that NC needs to be determined through quantitative analysis. This process helped to some extent to figure out the characteristics of both prototypical and less-prototypical referents of the NC. However, qualitative data analysis is still needed in order to investigate individual instances of the use of each target form in the context in which they originally appear, rather than to simply focus on common, general features. Since this study aims to examine in depth the meaning and use of the target NCs, access to the precise contexts in which the NCs occur was crucial.[58]

Among a number of possible sources of data, a large, balanced, machine-readable corpus of written Japanese was selected for the data source. Corpora are defined as structured sets of texts, generally assumed to be machine-readable (McEnery & Hardie, 2011). As these corpora are stored in databases, they can provide a large number of samples of the target forms embedded in their original contexts. Corpus linguistics is one of research methods that has been developed over the past several decades, especially for research in English and some European languages (Biber, 2010; Maekawa, 2008). By analysing the actual use and its pattern in natural texts, it allows the researcher to discover systematic patterns of use that have been previously identified by linguistic theory. This is called corpus-based approach.

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[58] It was once suggested to use cluster analysis, which was employed in Hamano and Lee (2007) to investigate use of an NC *hon*, for the present study. However, in order to mechanically extract text samples for the analysis, it is crucial to define a fixed text form. Hamano and Lee indeed state that they searched texts in a form of 'X *hon no* Y' only, in order to ensure that the data was not syntactically biased. However, NCs can appear in a wide range of positions in a sentence in Japanese (see 2.4.1.2), so restricting the form to only examine certain NC constructions may result in considerable bias in the data. Therefore, I decided to manually examine each sample, rather statistically analyse just one kind of data set, to avoid bias for the porpose of this study.

Another pattern, called corpus-driven approach, is more inductive, and attempts to discover new linguistic constructs (Biber, 2010).

Japan has been behind in preparing corpora and in studying languages by using corpora compared to some other countries, but Japanese scholars have started releasing corpora since middle 1990s (Maekawa, 2008; Sunakawa, 2011). The first and only (as of today) balanced corpus of written Japanese was released in 2011, from which the data was collected for the present study. The term 'balanced corpus' means that the data is collected not only from one genre or register but from a broad range of genres and registers in balanced proportions. This strategy ensures that the corpus is representative of the medium concerned (usually either written or spoken language). These characteristics have two main merits. First, a large amount of data can be used to demonstrate broad tendencies in language use. Second, by making available a lot of data in a machine-readable form and from a source that is representative of the medium, balanced corpora can allow us to identify not only the most common but also less common or genre-specific cases of language use, the latter of which can be easily overlooked if we simply look at a single text, a single genre, or a single register.

Using a large, balanced corpus has helped to overcome the limitations of the previous study (Komatsu, 2013) and made the findings of this study more generalisable and widely applicable. Furthermore, since the corpus chosen for this study is compiled and stored electronically, it has allowed access to an enormous data set much more easily and quickly than collecting data manually from a range of sources. The details of corpus are given below, followed by the procedures used for the present study.

3.3.1. Data

The data used in this study is collected from the Balanced Corpus of Contemporary Written Japanese (BCCWJ). This is one of the biggest written Japanese corpora, consisting of over one hundred million words (about 104,930,000 words, excluding punctuations marks) and compiled by the National Institute for Japanese Language and Linguistics (NINJAL).[59]

According to NINJAL, this is the only balanced corpus of written Japanese to date. As noted above, the fact that is a 'balanced corpus' means that the data is collected from a broad range of genres and registers in balanced proportions, in order to make the corpus representative of written Japanese. Data in this corpus was randomly collected from written genres including books, newspapers, magazines, blogs, internet forums, business papers, and legal documents such as white papers, and the Diet record. Compared to a single-genre or single-register corpus, a balanced corpus such as this can provide more reliable, valid data for the purpose of this study, so as to make findings generalisable.

All lexical items in the corpus are analysed morphologically and in addition, precise bibliographical information (e.g., title, author's name, year of publication, and publisher) is provided for each source. The compiled data is collected primarily from 1976 to 2005, while texts from books are collected from 1986 to 2006. This is because International Standard Book Numbers (ISBN), which were used to sample the data from books, did not become widespread until around 1986.

BCCWJ is available in both DVD format and as an online service. In this study, the online service version is used, as this service has its own search function that is not included in the DVD version. This search function is referred to by NINJAL

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[59] The Japanese name for this research institute is *Kokuritsu kokugo kenkyuujo* 国立国語研究所.

as *Chuunagon* 中納言. It allows the user to find key terms in a range of different ways. The corpus is available for authorised users who have purchased this service.[60]

It was initially planned to also use a corpus of spoken Japanese as a data source and the Corpus of Spontaneous Japanese (CSJ), which is compiled by NINJAL in collaboration with the Communication Research Laboratory at the Tokyo Institute of Technology, was considered for this purpose. CSJ includes 3,302 lectures held in Japan, yielding a total of 661.6 hours of spoken data, available on DVD.[61] In these DVDs, not only voice data but also transcripts of all lectures (about 7,520,000 words in total), morphology, intonation, and information on speakers (gender, age, birthplace, and history of place of residence) are incorporated. However, in spite of its clear value for other purposes, this corpus did not prove appropriate as a data source for the present study. 50 of the transcripts were first examined, and no tokens of one of my target NCs *hiki* (an NC for comparatively small animate beings) were collected. Since CSJ is not a balanced but a single-genre corpus, it is therefore assumed that an insufficient number of the target NCs could be collected, even if the entire data set were to be examined. In order to make the findings of this study generalisable for spoken as well as written Japanese, a large, balanced corpus of spoken Japanese, with samples from a variety of genres and registers, would be necessary. As I was not able to locate such a corpus at the time of the data collection, I decided to focus on written data only.

3.3.2. Procedure

In this section, how the data were actually collected from the Japanese corpus BCCWJ is explained, and how the data were analysed is briefly described.

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[60] I am grateful for the support provided to become an authorised user of this corpus through the Postgraduate Research Support Scheme (2014), a competitive funding scheme for postgraduate research students of the Faculty of Arts and Social Sciences at the University of Sydney.

[61] From May 2015, NINJAL started providing the data in a USB flash drive.

3.3.2.1. Data Collection

One of the most useful characteristics of BCCWJ is its search function. Corpus linguistics studies quite frequently employ independent software (e.g., AntConc) to search for the specific data targeted by the researcher and to extract it from a corpus. However, the online version of BCCWJ has its own system to search and extract data, *Chuunagon* 中納言. *Chuunagon* allows the researcher to use a variety of criteria to search for target words, such as word class and lexeme.

In this study, I collected sample sentences by entering each target NC as a 'lexeme' together with a numeral, using the 'co-occurrence function'. I also set this numeral as a 'lexeme' so that the search system would automatically locate instances of the NC and numeral combination entered no matter how they appear in the orthography. For example, if I enter '1' and '匹' *hiki* treating each as a lexeme and using the co-occurrence function, the results will include not only '１匹' *ip-piki* but also '一匹' *ip-piki* (one-CL in *kanji* characters) and 'いっぴき' *ip-piki* (one-CL in *hiragana* characters).

The target NCs analysed in this study are *hiki* 匹 and *hatsu* 発. When I searched for the numerals 1 to 9 co-occurring with each of these NCs in BCCWJ, the NC *hiki* yielded 2,980 hits and *hatsu* 1,972 hits. Considering the fact that this number of hits resulted from searching for only the numbers 1 to 9, it would clearly be extremely time-consuming to examine the target NCs with all the numerals that appear with them in the corpus. Even for the purposes of quantitative analysis, it was still necessary to look at every hit individually in order to ascertain what type the referent in the sentence involves. For this reason the present study analysed only the target NCs appearing with a sample of four numerals: 1, 2, 3, and 0 for this study.

There are different reasons why each of these four numerals was chosen to contribute to the sample for analysis. Firstly, in order to determine the most commonly occurring numeral, the numerals from 1 to 9 were searched individually as lexemes in

BCCWJ and their raw frequencies compared. In addition, each of these numerals was searched together with each of the four NCs *hiki, hatsu, ko* and *hon* as a collocation to see how frequently each numeral appears in these collocations.[62] The results are shown in the following bar charts.

Figure 3.1 The frequency of numerals from 1 to 9

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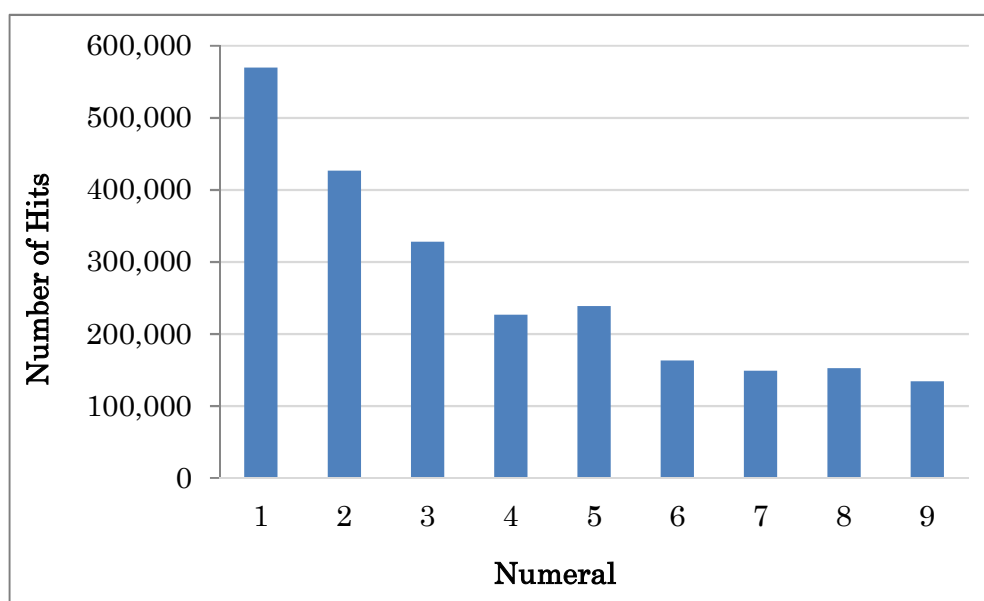
[62] The first two are the target NCs in this thesis, and the other two are both among the most frequently used NCs (Iida, 1999). *Ko* 個 is a general NC for inanimate, concrete entities and *hon* 本 is generally used for long, thin objects (Iida, 2004, pp. 345-346, 386-388). In addition to the fact that they are among the most frequently used, these two were selected in addition to the target NCs for the following reasons: *ko* is a general NC so it can be associated with a range of different types of inanimate entities, and *hon* is the NC which has been most frequently discussed by researchers to date (Hamano, 2006; Iida, 1996b; Inoue, 1998; Lakoff, 1987), and can be used for both entities and events.

Figure 3.2 The frequency of the numerals from 1 to 9 with the four NCs
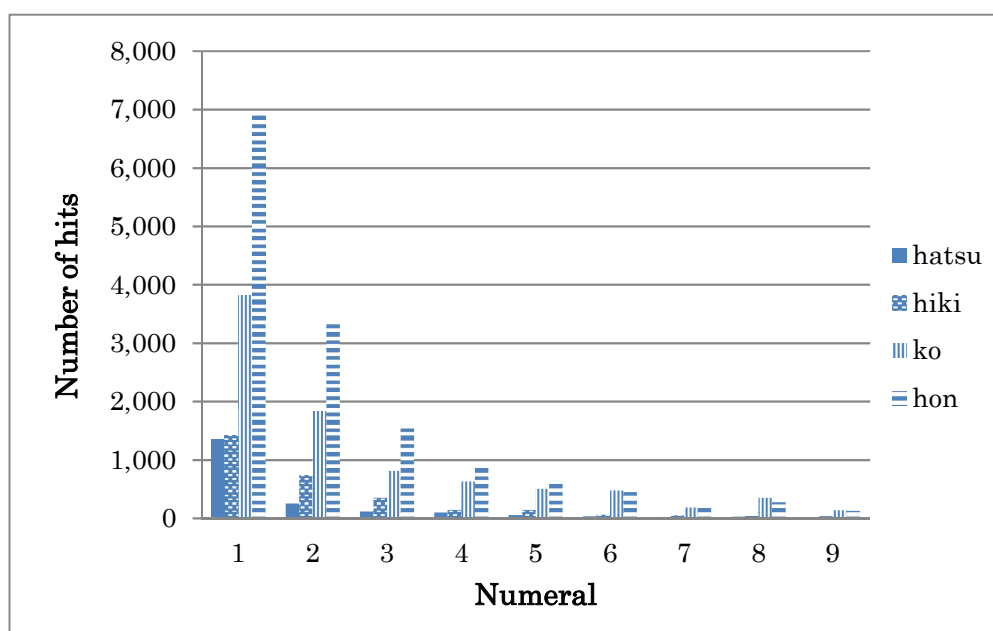
Figures 3.1 and 3.2 show the tendency for the numeral 1 to appear most frequently in BCCWJ, followed by the numeral 2 both in general and with NCs. This is the reason why the numerals 1 and 2 were chosen for analysis. Although not as commonly occurring as the numeral 2, the numeral 3 was chosen as it has traditionally been considered a significant number by the Japanese people and is frequently used in common expressions and idioms (Hatada & Kase, 1993; Lin, 2013; Xiang & Washio, 2010). Examples of common expressions involving the number 3 include: *ishi-no ue-ni-mo san-nen* 'three years on a cold stone [will make the stone warm]' (i.e. perseverance will win in the end); *mitsugo-no tamashii hyaku made* 'the soul of a baby at three is the same at 100' (i.e. as the boy, so the man); and *san-bon-no ya* 'three arrows' (i.e. three pillars of stability). Japanese people also favour the numeral 3 when they rank something, such as 'Japan's three great views', 'Japan's three major festivals', and 'the three Sacred Treasures' (Iida, 2008, pp. 165-166). There is even a book comprising a collection of more than 1,000 examples of phrases, proverbs, and

expressions that employ the numeral 3.[63] Lastly, including the numeral 0 in the search strategy also allowed me to collect NCs accompanied with large and rounded numbers efficiently.[64]

When using the search function *Chuunagon*, the researcher enters his/her own criteria in the specific form required to extract the target forms or phrases along with a portion of the context in which they occur. Once a search is made, *Chuunagon* keeps the history of the retrieval formula, enabling the original researcher, and any other user, to extract exactly the same data on a subsequent occasion. Below the retrieval formula used for the NC *hiki* co-occurring with the numeral 1 is given as an example. All the retrieval formulae used are listed in Appendix A.

[Retrieval Formula: *Hiki* and numeral 1]

キー: 語彙素 = "匹" AND 前方共起: 語彙素 = "一" ON 1 WORDS FROM キー WITH

OPTIONS unit="1" AND tglWords="50" AND limitToSelfSentence="0" AND endOfLine="CRLF"

AND tglKugiri="" AND encoding="UTF-8" AND tglFixVariable="2"

3.3.2.2. Data Analysis

For the analysis procedure, *Chuunagon* provides the data returned by the retrieval formula in the form of a text file. All the data in these text files were copied and pasted

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[63] This book is called '*Nihon sandai bukku* 日本三大ブック [*The Book of Japan's Three 'Greats'*] written by Kase Kiyoshi and Hatada Kunio (1993).

[64] From a statistical point of view, it is important to consider how to ensure the generalisability of quantitative analysis. One possible way is to undertake random sampling, to make sure the samples represent the whole data set. However, in the present study, random sampling would inevitably yield some unusable data, and the amount of valid data left would be unpredictable. Thus, instead of random sampling, total inspection of a selected data sample (1, 2, 3, 0) was employed in this study.

into Excel files. Having data in the form of an Excel file enables it to be easily managed and manipulated. For example, unwanted information can be hidden, data can be sorted according to certain criteria, or instances of a certain form can be counted by entering an appropriate formula.

In the Excel workbook, two worksheets were created for each data search: one with 50 characters of the context both before and after the target NC, and the other with 500 characters of the context before and after. The former data sheet, with 100 characters of context in total, was generally sufficient to determine the nature of the referent counted by the target form and in which situation the NC is used. However, when the referent was not clear or when more background information was needed for analysis, the sheet with 1,000 characters of context was checked to obtain more information.

Concerning the main procedure for the analysis, different strategies were adopted for each target NC *hiki* and *hatsu*, so they are shown separately below.

3.3.2.2.1. Data Analysis of *Hiki*

For the first target NC *hiki*, the first step was to figure out what the referent is by examining the context in which each hit occurred. In the majority of samples, the referent is clearly mentioned, or if not, the referent could be easily guessed from the context in some cases. When the referent was not clear even from the 1,000 characters of context, the original source was checked where possible. However, in cases in which this revealed no further information regarding the referent, the hit was removed from the analysis.

The next steps of the analysis procedure were to categorise the referents into groups, or superordinate semantic 'types', and then to summarise the raw number and the proportion of each referent type in order to check the tendency of usage of that NC

from a quantitative perspective. For the NC *hiki*, the types identified (in order of frequency) were:

(1) Mammals

(2) Fish and crustaceans

(3) Insects and worms

(4) Imaginary creatures

(5) Reptiles and amphibians

(6) Human beings

(7) Inanimate entities

(8) Birds

(9) Others.[65]

These referents were categorised into types based mainly on their inherent and physical features since these are the criteria that are generally considered to be used to choose an NC. When a noun used metaphorically or in a fixed expression was found, this instance was categorised not according to the literal meaning of the noun used, but rather according to what the actual referent is in the sentence. For example, '*ip-piki ookami* 一匹狼 (a lone wolf)' is a common expression used not only for wolves but more commonly for human beings. In the sentence '*kare-wa ip-piki ookami-da* 彼は一匹狼だ (He is a lone <u>wolf</u>)', the noun is *ookami* 'wolf'. However, the actual referent is a human being, thus the instance was categorised into the group of human beings due to the actual referent: a male human.

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[65] The category 'other' includes a group of more than one type of referents (e.g. a fish and a reptile) and a coined word, created by the speaker, for which the referent type was not clear.

Finally, for the qualitative analysis, sample sentences with atypical uses of *hiki* such as for human beings and inanimate entities were particularly focused on. In order to analyse these usages of *hiki*, the context was closely examined, and factors were considered that may have motivated the speaker to choose the atypical NC *hiki* to count the referent on that occasion. To understand how *hiki* was used in some of these atypical cases, not only the context itself but also the native intuitions of the researcher were sometimes necessary to understand the cultural background and shared, real-world knowledge likely to be relevant.

I thus took an inductive approach in which I started by analysing each case individually, with a view to seeing if any pattern emerged that might allow more general claims. This approach was taken for the analysis of the other target NC *hatsu* as well, as explained in the following section. The quantitative and qualitative findings concerning each target NC, as well as a comparative analysis of both target NCs, are shown in the following chapters.

3.3.2.2.2. Data Analysis of *Hatsu*

For the analysis of the second target NC *hatsu*, from the data, it soon appeared that *hatsu* demonstrates different characteristics when it is used with the numeral 1 than with other numerals. When *hatsu* is used with the numeral 1 in the form of 1-*hatsu* (pronounced *ip-patsu*), a variety of usages including adverbial usages and idiomatic phrases are observed. In addition to that, there are far more samples with the numeral 1, at a total of 1,355, than with any other numeral: 251 with the numeral 2, 113 with the numeral 3, and 121 with 0 (i.e. with bigger numbers). Therefore, the analysis of *hatsu* particularly focuses on the data with the numeral 1, and uses samples with other numerals as subsidiary data only. For this reason, this section also focuses on how the data with the numeral 1 were organised for the analysis.

From the corpus, a total of 1,355 samples that have a combination of the numeral 1 and *hatsu* (*ip-patsu*) were extracted. Before the analysis, some samples were removed from the usable data. Those are samples in which:

- *ip-patsu* is combined with '*me* 目' and forms a compound word '*ip-patsu-me* 一発目', which means 'the first turn' or 'the first one' (60)
- the referent of *hatsu* is not clear from the context (35)
- *ip-patsu* is a part of a proper noun (16)
- *ip-patsu* is used not as a phrase containing an NC, but means something else (8).
  For example, a sentence about a transport departure time, such as '15:11 発 *hatsu* (departing at 15:11)'.

The rest of the data—1,236 samples—were used for the analysis and the data were categorised into two categories with five subcategories depending on the nature of the referent and use of '1-*hatsu*' as follows.

(1) *hatsu* as an NC

    a. events and actions

    b. entities

    c. others (extended usages)

(2) *hatsu* not purely as an NC

    a. adverbial use

    b. idiomatic use

Before illustrating the procedure, it should be first noted that classifying the samples with *hatsu* was extremely challenging for two reasons mainly. Firstly, *hatsu*

is used for both entities and events/actions, while *hiki* is used only for entities, which are comparatively easy to classify based on the referent's semantic types. In particular, there are a large variety of referents of *hatsu* that are events and actions. This may be because that there are far fewer NCs which can be used for events/actions compared to those for entities, so one NC can cover a greater variety of events/actions than an entity NC does. Second, there are a considerable number of samples in which '1-*hatsu*' is used either idiomatically or adverbially. Therefore, in order to organise the data in a manageable way for the analysis, several steps had to be taken. Due to the complexity of the data, these steps were taken not in the order of the numbering shown above. Thus, which category was identified is indicated in each step in the following.

Firstly, all the usable samples were checked to ascertain whether or not *hatsu* is used idiomatically (group 2-b). Concerning this 'idiomatic use', not only classical idioms with *ip-patsu*, such as *ip-patsu gyakuten* 一発逆転 'turning the tables at a single stroke' and *ip-patsu shoobu* 一発勝負 'a make-or-break game', but also common phrases such as *ip-patsu kensaku* 一発検索 and *ip-patsu gookaku* 一発合格 are identified as idiomatic uses.[66] For this selection, a syntactic test was used: whether the referent can be counted by *hatsu* in a different position in the same context (see 2.4.1.2 regarding the various syntactic positions possible for NCs). For instance, the phrase *ip-patsu gookaku* 一発合格 (passing a test on a single attempt) is commonly used, but neither *gookaku o ip-patsu suru* 合格を一発する ([I] do one-CL passing) nor *gookaku ga ip-patsu aru* 合格が一発ある ([There] is one-CL passing) makes any

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[66] *ip-patsu gyakuten* 一発逆転: This literally means 'one shot upside down' and originally means turning things around with a home run in a baseball game. However, it has become widely used in a variety of other scenarios.
ip-patsu shoobu 一発勝負: This literally means 'one-shot game' and is frequently used when you have only one chance to get something challenging done.
ip-patsu kensaku 一発検索: This literally means 'one shot searching'. It started being used when the Internet became widespread to mean you need to search only one time to get what you are looking for.
ip-patsu gookaku 一発合格: This means taking an exam or test only one time and passing it.

sense. This kind of use is thus categorised as an idiomatic use. From the data, a total of 226 samples with idiomatic use of *hatsu* were found.

After identifying the idiomatic uses, there were 1,010 samples left. As the second step, the data were examined to determine whether the '1-*hatsu*(-*de*)' phrase is used adverbially (group 2-a). Regarding the adverbial use, it should be first noted that the phrase often has a particle '-*de*' as indicated in brackets above and forms a phrase '*ip-patsu-de* (1-*hatsu-de*)'. In general, the particle –*de* adverbialises a combination of a numeral and an NC. For instance, *san-nin-de* (3 CL-human beings de) means 'as (a group of) three people' such as in the example below.

(3-1)

彼らは<u>三人で</u>来た。

karera-wa <u>san-nin-de</u> kita.

They came <u>as a threesome</u>.

This pattern with *hatsu* is observed in a number of samples in the data. The samples were tested to see if the phrase '1-*hatsu*(-*de*)' can be replaced with an adverb or adverbial phrase. If there are any adverbs or adverbial phrases that can fit perfectly well in terms of making good sense in the position of '1-*hatsu*(-*de*)' in the sentence, the *hatsu* phrase is regarded as working adverbially. For example, '1-*hatsu*(-*de*)' can be replaced with an adverb '*sugu-ni* (immediately)' or '*dake-de* (only)' in quite a few samples.

After the two preceding steps, there are 726 samples left. These samples constitute the data for the main analysis as *hatsu* in these samples is used purely as an NC. For the third step, the samples were examined to determine if there were any nouns or verbs that were likely to have evoked the use of the NC *hatsu* in that context.

These are called '*hatsu*-evoking nouns' or '*hatsu*-evoking verbs', and together as '*hatsu*-evoking words' in this thesis. For this procedure, 500 characters before and after the target *hatsu* (in total 1,000 characters of context) were examined. While the question of whether there were any target nouns or verbs was checked, the number of these in each data sample was not investigated. Thus, even if one context has more than one *hatsu*-evoking noun/verb, it is just noted as 'this sample has a *hatsu*-evoking noun/verb'. This procedure was necessary to expose samples which are likely to have a prototypical referent of *hatsu*. However, it is important to reiterate that NCs are grammatical elements that are not matched to nouns as grammatical genders are, but that are instead matched to referents (see 2.4.3). Thus, when these samples were classified into groups of 'events/actions' and 'entities', which is the next step, the classification was done depending on the nature of the referent (groups 1-a, and 1-b).

For this classification, firstly verbs always indicate events or actions, so samples with *hatsu*-evoking verbs all go to the 'events/actions' category. On the other hand, nouns can indicate not only entities but also events and actions. For instance, a nominalised verb is grammatically a noun, but clearly indicates an action, not an entity. Therefore, samples with *hatsu*-evoking nouns were classified according to the nature of the referent rather than the part of speech of the *hatsu*-evoking word for analysis. The summary of number of each group is shown in the analysis chapter (see 5.1).

For the last step, the rest of the samples were checked. After examining the samples with *hatsu*-evoking words, the prototypical referents had emerged (see 5.1 for the prototypical referents of *hatsu*). This enabled me to check examples that had no clue other than context to see if the NC *hatsu* is used to count some prototypical referents or not. When the referent is the same as or similar to those which have a *hatsu*-evoking word that had already been classified, the sample was also classified into the same group (either events/actions or entities). On the other hand, when the

referent of the sample appeared to be an 'atypical' referent of *hatsu*, it was classified into the 'others (extended usages)' category.

The procedure illustrated above is summarised in the diagram below. Each circled number indicates the number of the step. First, idiomatic usages were identified and second, the adverbial usages were examined. Once classified, these two groups were ready for analysis. Then, each sample that was still unclassified was checked to see if it had any *hatsu* evoking words (nouns or verbs) as an interim step. These samples with a *hatsu*-evoking word were next classified into two groups based on the nature of the referent: events/actions or entities. Examining these samples closely and classifying them into the groups allowed me to identify the prototypical referents of *hatsu*. Then as the final step, the remaining data were checked; if a sample had any prototypical referent of *hatsu*, it was re-classified into either the events/actions or entities group. Samples which appeared to have an atypical referent, on the other hand, were classified into the group of 'Others (extended usages)'.

Figure 3.3 Procedures for classification of samples with *hatsu*
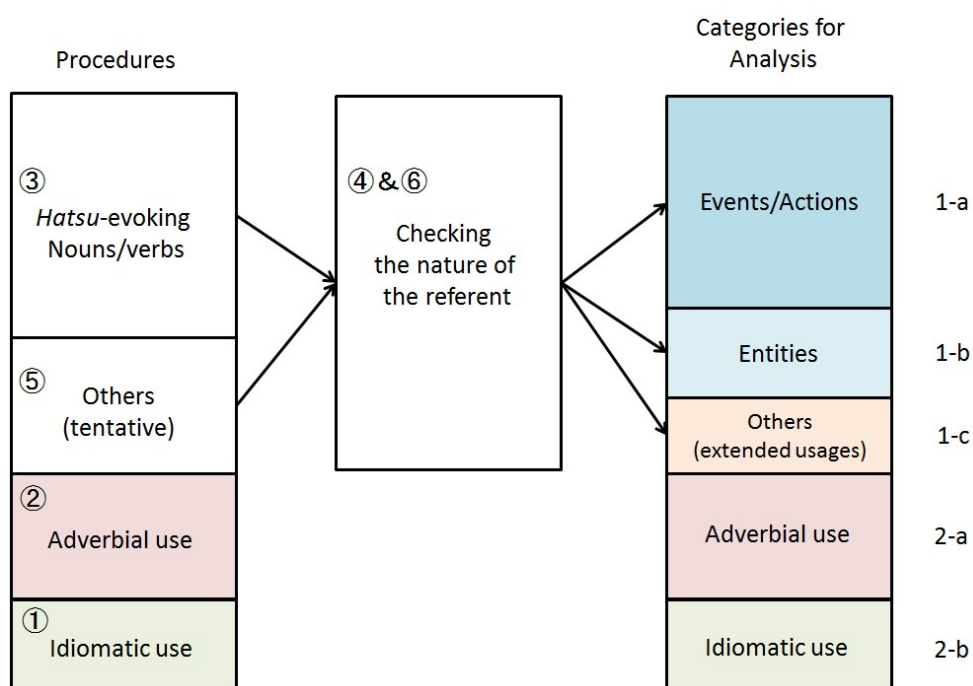
Chapter 4 *Hiki* – Results and Analysis

This chapter analyses the first target NC: *hiki*. *Hiki* is generally characterised as being used for comparatively small animate beings. However, from the data, it is evident that *hiki* is sometimes used with an 'atypical' referent such as human beings and inanimate entities. This chapter discusses these 'atypical' usages of NC *hiki* with examples extracted from the data. The data show that *hiki* has a number of semantic components, and that these components allow this NC to function in a variety of ways. The chapter first illustrates the quantitative data and analysis (4.1) and summarises semantic components of hiki (4.2). Then, two main factors which influence the matching of *hiki* to its atypical referents are discussed: lexical collocations (4.3) and metaphorical usages (4.4).

4.1. Results of Quantitative Data Analysis: *Hiki*

In the research questions, research design, and method chapter (see 3.3.2.2.1), it is explained how the data samples with a combination of *hiki* and the numeral 1, 2, 3, and 0 were categorised into the following nine groups.

(1) Mammals

(2) Fish and crustaceans

(3) Insects and worms

(4) Imaginary creatures

(5) Reptiles and amphibians

(6) Human beings

(7) Inanimate entities

(8) Birds

(9) Others

Though there were originally 2,683 samples of *hiki* found in the data, the referent in 76 samples is not clear from the context, so these samples were removed from the analysis. The total number of usable samples in the data is 2,607. The number of samples in each category is first summarised in the table below, followed by a pie chart of the same.

Table 4.1 The number of samples with *hiki* in each category

Category	Number of Tokens
Mammal	1159
Fish/Crustacean	570
Insect/Worm	341
Imaginary Creature	194
Human Being	141
Reptile/Amphibian	113
Inanimate Entity	43
Bird	26
Microorganism	12
Other	8
Total	**2607**

Figure 4.1 The number of samples with *hiki* in each category
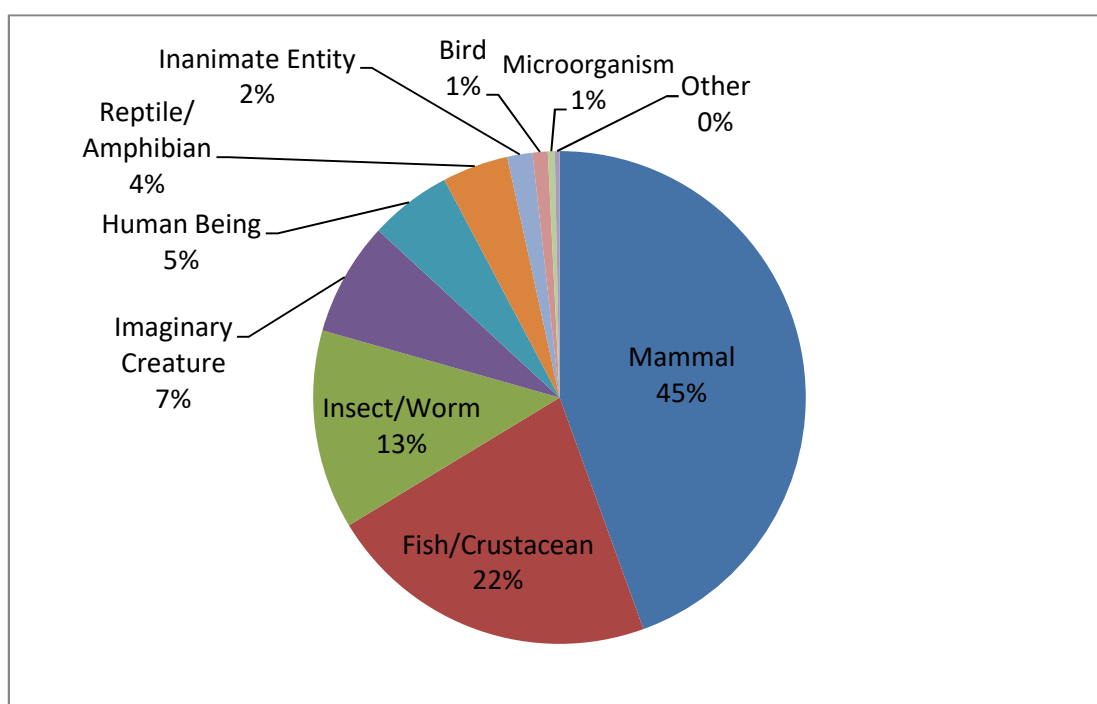
As illustrated in the pie chart, the category of mammal accounts for 45% with 1,159 samples. This is followed by the fish/crustacean group (22%), and then insects/worms (13%). The total percentage of these three biggest groups is indeed 80%. This is very consistent with the definitions given in the Dictionary of Counting Expressions as listed below (Iida, 2004). The kanji character for *hiki* 匹 has a meaning of 'two things which are paired'. According to Iida, the use of *hiki* is considered to have come from horses. In the old days, the Japanese used horses for many purposes such as pulling a cart and agriculture, so people frequently saw the horse's buttocks, which have two parts. As a result and also stemming from the word 'to pull', which is pronounced '*hiku*' and was done by horses, *hiki* started being used to count horses and, later, other animals (Iida, 2004, p. 211). This usage of *hiki* is observed in literature from as early as the 11th century. However, in modern society, large animals including horses are counted by a different NC, *too*. This NC *too* seems

to have been used only from the 20th century. *Too* is considered to have been calqued from the word meaning 'head', which is used in some European languages to count the number of cattle. This 'head' was translated to 頭 (*too*) in papers on zoology, and led Japanese people to use *too* not only for cattle but also for other comparatively large animals, including hourses (Iida, 2004, p. 211). These days, *hiki* has come to be used for a wide variety of animate beings, particularly for those that are comparatively small.

Among the definitions given in the Dictionary of Counting Expressions (Iida 2004), 1-a, b, and d are matched to the biggest three groups in the data, and 1-c also appears as part of the 'reptile/amphibian' group (4%).

Definitions from the Dictionary of Counting Expressions (*hiki*)

1. Comparatively small animate beings other than birds

a. Animals which are small enough to be held by an adult human

b. Fish

c. Small reptiles e.g., turtles and lizards

d. Insects

e. Though birds are usually counted by *wa*, *hiki* can be used when they are counted with other kinds of animals

f. *Hiki* can be sometimes used for human beings, particularly to describe animal-like qualities such as toughness or recklessness.

2. Inanimate entities which have animal-like qualities

a. Robots which act like animals

b. Virtual pets in a computer

c. Computer viruses

d. Characters which have an animal-like quality in a cartoon

(Iida, 2004, p. 380)

4.2. Semantic Components of *Hiki*

As shown in the quantitative analysis in (4.1), the data have confirmed that prototypical referents of *hiki* are comparatively small mammals, fish, insects, and some other small creatures. From these prototypical referents, three semantic components have been drawn as its core meaning:

(1) Alive

(2) Non-human

(3) Smaller than human beings

First of all, *hiki* is usually used for living things, but not for human beings, which have a special NC, *nin*.

Also, *hiki* has a strong sense of 'small' in comparison not only to referents classified by *nin* (for humans) but also to those classified by *too*, which is the NC now generally used for comparatively large animate beings.

From these core semantic components, two more meanings are derived. First, compared to human beings, other creatures are not regarded as being civilised, but are thought of as beings closer to nature. Thus from one of the core meanings, 'non-human beings', *hiki* is considered to convey the meaning of 'natural'. Next, from 'non-human beings' and also from 'smaller than human beings', a negative sense of 'less than human beings' can be drawn. These two components, 'natural' and 'less than human beings', are not as prominent as the three core meanings of *hiki* listed above, but are rather more potential meanings that are derived from them. However, in terms of being a source of extended meanings, these two components are as important as the core semantic components, as we will see in many examples below. For this reason, they will be referred to as 'semi-core' semantic components in this analysis.

The three meanings listed above are considered to be *hiki*'s core semantic components, and are accompanied by the two semi-core semantic components. As mentioned in the previous chapter (see 3.2.1.), it should be noted that these core and semi-core semantic components should not be taken as corresponding to necessary conditions for the NC *hiki* to be used, as core and semi-core semantic components include not only necessary conditions but also some meanings which naturally arise from the necessary conditions. Thus, these core and semi-core semantic components are not shared by all prototypical referents of *hiki*. However, they play an important role as a 'root' of the extended meanings, which are explained next.

On the basis of the analysis of the data (presented in detail in sections 4.3 and 4.4), a range of extended semantic components relating to each of the five core and semi-core components was identified. From one of the semi-core semantic components 'natural', extended meanings such as 'wild', 'rough', and 'independent' are drawn. 'Wild' and 'independent' can be mostly used either in a neutral or a positive way. For instance, as we will see in example (4-10) in section 4.4.1, *hiki* is used to focus on the primitive, wild part of human beings and in example (4-4), in section 4.3.1, *hiki* is used to support a description of how strong and independent the referent, a person, is. On the other hand, the extended meaning of 'rough' can mean something negative in certain contexts, especially when *hiki* is used atypically for human beings. The examples (4-11) and (4-12) presented in section 4.4.1 both show that *hiki* can describe 'non-human like' and 'rough' behaviour or states of human referents. (These extended meanings are related to the definitions 1-f given in the dictionary above.) Also, from another semi-core semantic component of 'less than human beings', some negative meanings are drawn. For example, meanings of 'unpleasant' and 'unimportant' can be extracted. For instance, in examples (4-13) and (4-14) in section 4.4.2.1.1, *hiki* is used to clearly express the speaker's unpleasant feeling towards the referent person, and in example (4-7) in 4.3.2 and (4-22) in 4.4.2.2, the sense of

'unimportant' or 'having no individuality' is added by *hiki*. On the other hand, 'smaller than human beings', can actually lead to positive meanings such as 'cute', 'adorable', and 'affectionate' as well. These meanings are observed both when it is used for human referents (see example (4-9) in section 4.4.1), and inanimate entities (see example (4-20) in section 4.4.2.2). These semantic components of *hiki* are summarised in a diagram below.

Figure 4.2 Semantic components of *hiki*
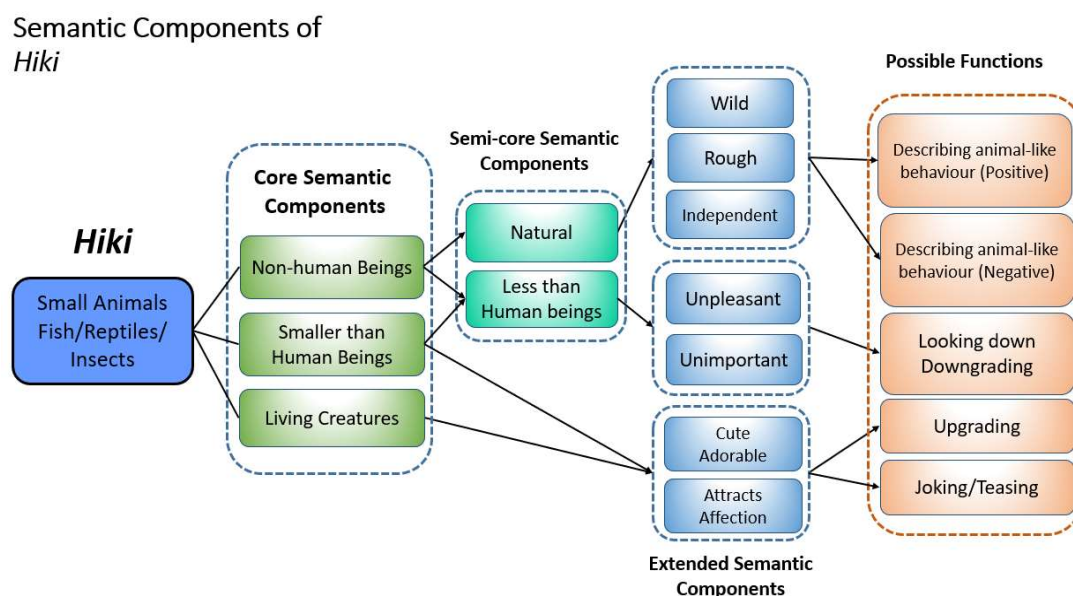
Both the core and semi-core semantic components and the extended semantic components are potentially available when the NC *hiki* is used. However, it should be noted that the extended components tend to convey more subjective meanings. These extended meanings are normally just potential semantic components and emerge particularly when *hiki* is used with atypical referents. The speaker can choose one or two, or more if they wish, to emphasise and add personal meaning to the referent in the context. Thus, these semantic components allow the speaker to portray or modify

the meaning of the referent quite subjectively. In particular, extended components are frequently picked up when *hiki* is used in a metaphorical way.

Since *hiki* is one of the most common NCs and its prototypical referents have been clearly identified, this chapter particularly focuses on 'atypical' usages of NC *hiki*. From the data, two main factors which can influence the choice of NC are identified: lexical collocations and metaphorical uses. These factors are discussed with examples extracted from the data. In particular, this study investigates the metaphorical usage of NCs and the elements which guide listeners/readers to understand the metaphorical meaning conveyed in the context in which it occurs. In the following sections, the issue of lexical collocations is first discussed (4.3), followed by metaphorical usages (4.4).

4.3. Lexical Collocations

As explained above, one of the key factors which can influence the choice of NC is lexical collocation. This is already claimed in the current author's previous research, conducted in 2013 (Komatsu, 2013). This study used Japanese subtitles in American science fiction movies as data, and found that robots are usually counted by *tai* (an NC for statues and human-shaped figures) in one particular movie. However, in thes same movie, the same type of robot is counted using *dai* in a common phrase used for them. The company which produces these robots uses the phrase '*ik-ka ni ichi-dai* 一家に一台 (one per household)' in a commercial. In general, this same phrase is used whenever any new product, in particular an appliance, which is usually counted by *dai*, becomes very popular and widespread. In the commercial, the slogan '*shingata robo o ik-ka ni ichi-dai* 新型ロボを一家に一台 (one new-model robot in every house)' appears. Though the robots are usually counted by *tai* elsewhere in the movie, they are counted by *dai* in this case in a derivation of the common phrase '*ik-ka ni ichi-dai* (one

per household)' (Komatsu, 2013). In the data for the current study, further examples have been found which illustrate a similar pattern in that the choice of NC can be influenced by common phrases (see 4.3.1).

In addition, it is observed that *hiki* can also appear in cases where, although the actual referent is not a typical referent of *hiki*, the referent is metaphorically portrayed as something that *is* a typical referent of *hiki*. This choice of *hiki* is considered to be mainly because of lexical collocation as well. For example, it is shown above that there are 141 samples with a human referent, and among them, indeed 72 have the exact same idiom '*ip-piki ookami* 一匹狼 (a lone wolf)'. The literal referent is a wolf, resulting in the use of *hiki* in the phrase, but the actual referent is a human being (see example (4-2)). The data also shows that in some cases this use of *hiki* may itself be providing additional support to the metaphor. In the examples discussed below, while the noun is functioning as the main source of the metaphor, *hiki* may not always be used in a completely automatic way (that is, not always simply 'agreeing with' the noun), but in some cases may provide supplementary assistance in conveying the metaphorical meaning. In this section, examples of *hiki* used in idioms and common phrases are first discussed in 4.3.1, and of *hiki* used due to the occurrence of a prototypical '*hiki* noun' used metaphorically in 4.3.2.

4.3.1. Lexical Collocations in Common Phrases

In this subsection, three common phrases are introduced in four examples. Three of them illustrate phrases used in a parodied way. In the first example below, *hiki* is used for mixi, which is one of the most popular Japanese social networking services (SNS). Though mixi is not animate and not even a concrete referent, the NC *hiki* is used for mixi when it occurs in this particular phrase: '*hyaku-ip-piki mixi-chan*'.

(4-1)

ポッドキャスト番組<u>百一匹</u> mixi ちゃん（無料）はこちらから..

poddokyasuto bangumi **hyaku-<u>ip-piki</u> mikushii chan** (muryoo) wa kochira kara …

The podcast program '**101 mixis**' (free) [can be watched] from here.

（「Yahoo! ブログ *Yafuu burogu*」[Yahoo! Blog], 2008)

The example parodies a famous Disney movie title '*hyaku-ip-piki wan-chan* 101 匹わんちゃん', the Japanese title of the movie 'One Hundred and One Dalmatians'. '*Wan*' in this second phrase is a dog's barking sound in Japanese and '*chan*' is a diminutive title. Dogs are quite frequently referred as '*wan-chan*' by dog lovers. In sentence (4-1), 'mixi' appears instead of *wan* but the NC *hiki* remains. This is considered to be because *hiki* is already firmly embedded in the phrase and resists being changed simply because of the substitution of a different noun.

In the next example, *hiki* is used for a human being, a referent which is generally counted by the special NC *nin*. In this sentence, the idiom '*ip-piki ookami* (a lone wolf)' appears first (underlined in example (4-2) below). Though the noun is *ookami* (wolf), this phrase is very commonly used for a human being who does not like to belong to a group or who tends to act alone, even within a group (*Shinmeikai Kokugo Jiten [New Clear-understanding Japanese Dictionary]*, 1995, p. 75). The sentence uses this idiom three times, but in the second and third instances, the noun *ookami* (wolf) is replaced with *ningen* (human being). Although human beings are usually counted by *nin*, the phrase keeps the original NC *hiki*, resulting in the phrase '*ip-piki ningen* (a lone human)' (double underlined).

(4-2)

インターネット時代に求められる人間の心のあり方として、次のような条件をあげている。　決定的に<u>一匹狼</u>ならぬ<u>一匹人間</u>としての「個」であること。<u>一匹人間</u>同士の自由なコラボレーション。

intaanetto-jidai ni motome-rare-ru ningen no kokoro no arikata to-shite, tsugi no yoo-na jooken o age-te i-ru. ketteiteki-ni **ip-piki-ookami** nara-nu **ip-piki**-**ningen** to shi-te no 'ko' de a-ru koto. **ip-piki-ningen** dooshi no jiyuu-na koraboreeshon

The following conditions are listed as the way our mind should be as a requirement in this Internet era. [You have to be] definitely 'individual', not as <u>**a** lone wolf</u> but <u>**a** lone human being</u>. Free collaboration together with <u>a lone human being</u>.

(「『ケータイ・ネット人間』の精神分析 *'Keetai netto ningen' no seishinbunseki*」[Mental Analysis of 'Mobile-Internet Human'], 2005)

This usage is likely to occur because the phrase 'one-*hiki* noun' is already euphonious to Japanese speakers' ears since the idiom '*ip-piki ookami* (lone wolf)' is so commonly used in daily life. By intentionally saying 'not as a lone wolf' at the beginning, the speaker seems to be emphasising that he is talking not in purely metaphorical terms but about 'a real human in a real society'.

The final common phrase to be discussed is another idiom used for human beings, '*otoko ip-piki* 男一匹 (one man)'. Example (4-3) is from a book named 'Speaking Language during War' and the part from which the example is taken discusses terms that are used to refer to man and woman. The author mentions that there are a number of expressions that employ '*otoko* 男 (man)' while there are no such terms with the word '*onna* 女 (woman)', and women are usually referred to along with children in the expression '*onna kodomo* 女子供 (women [and] children)'.

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(4-3)

男性中心の思想の産物である「男として」「**男一匹**」「男子の本懐」「男子一生の仕事」などの語句や表現は現在も残っている。それに対する女性は「女子供」で、女性を子供と一まとめにして指す語で表現されている。

dansee chuushin no shisoo no sanbutsu de a-ru 'otoko to shi-te', **'otoko ip-piki'**, 'danshi no honkai', 'danshi isshoo no shigoto' nado no goku ya hyoogen wa genzai mo nokot-te-iru. sore ni tai-suru josee wa 'onna kodomo' de, josee o kodomo to hitomatome ni shi-te sa-su go de hyoogen sare-te-i-ru

[There] still remain phrases or expressions [which are] products of man-centred thinking, such as '**as a man**', '**otoko ip-piki (man 1-NC hiki)**', ' man's desire', and 'man's life work', even nowadays. On the other hand, women are expressed by the phrase 'women [and] children', together with children.

(「戦時中の話し言葉 *Senjichuu no hanashikotoba*」
[Speaking Language during War], 2004)

Though *otoko* (man) is supposed to be neutral as a word, it seems that *otoko* is overall used with a positive meaning in the expressions appearing in this example. As the author explains, this came from a conservative and classic idea that men are superior to women.

Among the expressions involving *otoko* (man) in example (4-3), the idiom '*otoko ip-piki'* is found. This expression is used when emphasising a man's maturity and 'manliness' (*Shinmeikai Kokugo Jiten [New Clear-understanding Japanese Dictionary]*, 1995, p. 161), often translated into English with expressions such as 'a shining example of a man'. Therefore, this idiom, like the others given in example (4-3), clearly has a positive meaning. The use of the NC *hiki* in this idiom adds additional positive meaning to the word *otoko*, suggesting the qualities of independence and strength drawn from one of its core semantic components, 'natural'.

This idiom '*otoko ip-piki*' is such a short and simple expression, but it reflects two important values in the Japanese cultural background. The first, man-centred thinking, is clearly mentioned in the context of this example. Secondly, adults are expected to behave maturely and responsibly in Japanese culture, and they can even be despised or looked down on if they do not do what they are expected to do as a mature adult after they reach a certain age (Shirai, 2010; Takeda, 2005). This latter notion is one of the key cultural values which is often involved in the metaphorical use of *hiki* (see 4.4.2.1.2 below).

In the next example, on the other hand, the idiom itself is parodied by replacing the word '*otoko* (man)' with '*onna* (woman)'. The speaker is a woman who has been together with a man who is much younger than herself. She has kept refusing to officially marry him because she knows that she will not live long due to a cancer, and wants to keep his family register 'clean' so that it will not be an issue when he marries somebody else in the future after she dies.[67]

(4-4)

燁子は今まで浩輔の籍に入ることをかたくなに拒否してきた。娘時代からの中津川燁子という名が殊更に好きだし、**女一匹**ここまで生きてきて、そう簡単にあなたの籍になんか入ってあげるものか

Akiko wa ima-made Koosuke no seki ni hai-ru koto o katakuna-ni kyohi-shi-te-ki-ta. musume-jidai kara no Nakatsugawa Akiko to i-u na ga kotosara-ni suki-da-shi**, onna ip-piki** koko made iki-te-ki-te, soo kantan-ni anata no seki ni nanka hait-te age-ru mono-ka

Akiko has until now obstinately refused to be entered into Koosuke's family register. [She] has been particularly fond of the name Nakatsugawa Akiko since she was little,

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[67] Traditionally, divorce has been regarded as dishonourable in Japanese society, and getting divorced is even expressed as 'making one's family register dirty' (Nishida et al., 1998).

and having lived up to this point by herself as **a woman**, [she will not] be entered into his family register so easily.

(「がんと闘う・がんから学ぶ・がんと生きる *Gan to tatakao, gan kara manabu, gan to ikiru*」[Fighting Cancer, Learning from Cancer, Living with Cancer], 2003)

By saying to her partner 'I have lived up to this point by myself as "*onna ip-piki*". I will not enter into your family register', she is both deftly avoiding reminding him of her cancer while, at the same time, presenting herself as a strong, capable, and stubborn woman. She makes up the expression '*onna ip-piki*' in order to emphasise her strength. She could have chosen '*onna hi-tori* (one woman)', or '*onna hi-torik-kiri* (one woman alone)' to convey the meaning of 'single' and 'alone'. However, the speaker chose to say '*onna ip-piki*' in order to emphasise she was not just living by herself, but living independently and strongly. This is very much in keeping with the context and her character, which tell the reader that she rejects being looked down on by being compared with a man.

The examples shown so far illustrate that knowing the meaning of the original idiom or common phrase is required to understand not only a parodied phrase itself but also the use of the NC *hiki* involved. Furthermore, regarding the last two examples with the idiom '*otoko ip-piki* (one man)', in some cases, knowledge about Japanese society and traditional cultural values is also essential in order to fully understand the speaker's intention.

4.3.2. Lexical Collocations with Nouns Used Metaphorically

The previous subsection shows examples in which *hiki* is used within a common phrase or a parodied expression. On the other hand, there are a number of examples found in the data in which a different kind of lexical collocation occurs. In these cases,

a noun is used metaphorically and *hiki* occurs as the classifier that relates to that noun. In these cases the choice of *hiki* is probably more strongly related to the occurrence of the noun, which is used metaphorically, than directly to the characteristics of the referent itself. However, the use of *hiki* can be seen to reinforce the metaphorical meaning of the noun. Four examples will be given; the referents are human beings in three of these cases, and an inanimate entity in one.

In the first example, the speaker is talking about how novice English-Japanese translators can read English without being stressed or getting sick of it, but rather while having a lot of fun. He metaphorically says 'you should not be like a botanist, analysing flowers ('flowers' functioning as a metaphor for 'English'); rather, be like a honeybee, because they enjoy flowers the most in the garden'. Then he invites the novice translators to imagine being a good honeybee in a garden, enjoying flowers.

(4-5)

あなたは<u>一匹</u>の立派な**ミツバチ**です

anata wa <u>ip-piki</u> no rippa-na **mitsubachi** desu

You are <u>a</u> good **honeybee**.

<div align="right">

(「『翻訳』してみたいあなたに *'Honyaku' shite mitai anata ni*」
[For You Who Wants to Do 'Translation'], 2002)

</div>

The speaker is using a honeybee, which can fly about freely and simply enjoy the flowers in the garden, as a metaphor. The *hiki* in this sentence is assumed to be almost automatically chosen, due to the noun '*mitsubachi* (honeybee)'.

The second example of *hiki* appearing with a noun that is used metaphorically is from a story. The narrator is on an island and tries to get water from a rusted tap,

though he does not really expect the tap to still be working. After he twisted the tap handle, nothing happens for a while. However, when he begins to think that no water will come out and is about to leave, he finally hears a noise from underground and water suddenly comes gushing out from the tap. Imagining the water running under the island reminds him of blood vessels in the human body and he suddenly remembers something that his wife once said, 'the earth is one living creature'. He compares blood circulating in our body to the water circulating around the entire planet. He animates the earth, metaphorically calling it '*ikimono* (living creature)'.

(4-6)

地球はね、<u>一匹</u>の**生き物**なんだわ

chikyuu wa-ne, <u>ip-piki</u> no **ikimono** na-n-da-wa

The earth is <u>one</u> living **creature**.

<div align="right">(「生と死の幻想 Sei to shi no gensoo」 [Illusion of Life and Death], 1998)</div>

Thus, in this example, like the two above, *hiki* is also considered to be chosen due to a lexical collocation, here triggered by the term 'living creature'. Notice that, even though the earth is enormous, not *too* (the NC for large animate beings) but *hiki* is used. This is probably because *hiki* is considered to be a general NC for living things and it matches with the term 'living creature' far better than *too* in this collocation. Additionally, *hiki* also functions to support the noun '*ikimono* (living creature)' to animate the earth with its semantic component 'living things'.

The next example is extracted from a story set in the Meiji era (1868-1912). The scene describes a number of human beings, who are all gathering in a small place. The writer clearly mentions 'people who look like worms' so, strictly speaking, this is

a simile rather than a metaphor. As these people all dress up in a similar way and gather in a tiny place, they are not showing any individuality. This lack of individuation is already expressed by the simile, and the NC *hiki* serves to reinforce this sense of them being 'non-human'.

(4-7)

蛆虫の様なる人間を<u>一匹いっぴき</u>ずつ見わけ候えば男は黒色のきものに黒色の帽子にてさっぱりときれいにいたし ...

ujimushi no yoo-na-ru ningen o <u>ip-piki</u> <u>ip-piki</u> zutsu miwake-soo-rae-ba otoko wa kuro-iro no kimono ni kuro-iro no booshi nite sappari to kirei ni ita-shi ...

[If you try to] distinguish <u>each</u> person from the others [who look] like **worms**, the men wear black clothes and a black hat nicely and neatly …

(「池辺三山 *Ikebe sanzan*」 [Ikebe Sanzan], 1994)

Though *ujimushi* (worms) usually do not give a particularly positive impression, this sentence is not necessarily describing the referents negatively. There is no negative expression in the sentence and the speaker even says the people are dressed up 'nicely and neatly'. Therefore, the use of *hiki* here is assumed to be quite neutral. While the lexical collocation with the word 'worm' is clearly one reason that *hiki* is used, it should be noted that the term '*ningen* (human)' is actually right next to *hiki*, while *ujimushi* (worm) is a little further away. In general, it is assumed in this analysis that the closer two words are to each other, the stronger the effect of the lexical collocation is likely to be. Thus, it is assumed that *hiki* in this sentence is quite actively helping the readers to imagine how the people look, namely, physically similar to one another, with no individuality, and all gathering in one place.

On the other hand, *hiki* can be used in a negative way depending on the context and on the speaker's feeling about the situation. In the final example in this section, *hiki* is supporting the negative meaning primarily supplied by the noun, which is metaphorically used. The speaker is calling some drivers, who are queueing up on the road, ants, and he says he does not want to be like these drivers.

(4-8)

こいつら**アリ**やなあ、思ってね。こいつらもう、**アリ**。オレは、こいつらの<u>1匹</u>にはなりたないわ、と思って。[68]

koitsu-ra **ari** ya-na-a, omot-te-ne. koitsu-ra moo, **ari**. ore wa, koitsu-ra no <u>ip-piki</u> ni wa nari-ta-nai-wa, to omot-te

They are **ants**, [I] thought. These guys are indeed **ants**. I do not want to be <u>one</u> of them, [I] thought.

(「松本人志愛 *Matsumoto hitoshi ai*」[Matsumoto Hitoshi Love] ,1998)

In this example, *hiki* seems to be strongly supporting the meaning of 'insect-like' in the metaphor. Similar to the previous example (4-7), *hiki* is not placed directly next to the word 'ant' but instead appears next to '*koitsura* (these guys)'. Thus, the influence of the lexical collocation with *ari* (ant) is assumed to be weaker than in other cases such as ones introduced at the beginning of this section. In this sentence, the word 'ant' is metaphorically describing the drivers' ant-like, insect-like behaviour, and *hiki* is supporting and even emphasising this sense.

The examples in this section have shown that the choice of NC is not necessarily motivated by what the actual referent is but, in some cases, by the linguistic

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[68] '*Narita nai*' is Kansai dialect and means '*naritaku nai* (do not want to be)'.

context in which the referring noun occurs in certain lexical collocations. NCs employed in idioms and common phrases are quite firmly embedded in the phrase so that they tend to stay as in the original even when the usual noun is replaced with a different noun. Even outside of common phrases, the choice of NC can be still significantly influenced by a noun that is used metaphorically in the sentence. If the noun usually takes a particular NC, the NC is still used when the noun is used metaphorically for a referent that is generally counted by a different NC.

It has been also shown in this section that, in order to understand the subtle meanings conveyed by NCs in some collocations, it is sometimes essential to have relevant cultural knowledge as well as an understanding of the semantic components of the NC. These elements can be important factors in understanding parodied phrases. They are also important in understanding the highly subjective use of *hiki* when it is used itself as the source of metaphorical meaning, which is discussed next, in (4.4).

4.4. *Hiki* as a Source of Metaphorical Meaning

As shown above, in order to understand the use of the NC *hiki* in all the contexts in which it appears, it is necessary to identify its   full range of semantic components and to understand which of these may be activated in a particular context. In this section, we see how *hiki* can be used by a speaker to convey the speaker's subjective stance in relation to the referent by functioning by itself as the vehicle for metaphorical meaning, rather than simply occurring in lexical collocation with a noun as the primary vehicle. Section 4.4.1 focuses on particular patterns in which *hiki* is used to portray animalistic or insect-like states or behaviours of the referent. In these usages, *hiki*'s core semantic components are clearly highlighted. On the other hand, in section 4.4.2, we see that certain extended semantic components of *hiki* are drawn out in more subtly metaphorical ways. In all these cases we can clearly see that NCs are by no means

always matched with a noun automatically, as has been generally assumed, but can be used far more subjectively and creatively by the speaker.

4.4.1. *Hiki* Metaphorically Portraying Animal/Insect-like States or Behaviours

One of the semi-core semantic components of *hiki* is 'natural', which is drawn from the core meaning 'non-human beings', and this leads to extended meanings such as 'wild', 'rough', and 'independent' as explained above (4.1). With these semantic components, *hiki* can be used to portray or emphasise the animalistic or insect-like state or behaviour of the referent, especially when it is used for human beings. In this kind of case, the animal of '*animal*-like state or behaviour' does not always have to be the kind of animal which would actually be counted by *hiki* itself; it may be one that would normally be counted by *too* (the classifier for larger animals). From the analysis, *hiki* with this usage seems to convey animalistic or insect-like features in a general way, not specifically evoking the idea of a small animate being. In short, what *hiki* emphasises is 'NOT human being-like', in a broad sense.

This metaphorical use of *hiki* can have either a positive or negative nuance, or can even be neutral in this respect. Each usage has to be considered individually since the interpretation in each case relates to a range of different factors. Examples with each nuance are introduced below, discussing the elements that contribute to the interpretation in each case.

For an instance of *hiki* contributing a positive nuance and serving metaphorically to portray an animal/insect-like state or behaviour, I pick up one example extracted from a blog on the internet. The speaker is the mother of two daughters. One day, the older daughter comes to ask the speaker if she can go to the wooden deck outside. After the speaker gives her permission, she goes out and the younger one follows straight after her. They sit down on the wooden deck and

immediately start playing with some cards with anime characters on them. The speaker describes this scene, calling her daughters '*ichi-goo* (number one)' and '*ni-goo* (number two)', and refers to them as *ni-hiki* (the two of them).

(4-9)

もちろん、1号の後を追いかけていく2号もついていき<u>2匹</u>はデッキに並んで座り、1号の『プリキュアドリームライブ』のカードを眺めていました。

mochiron, **ichi-goo** no ato o oikake-te-i-ku **ni-goo** mo tsuite-i-ki <u>ni-hiki</u> wa dekki ni nara-n-de suwa-ri, ichi-goo no 'purikyua doriimu raibu' no kaado o nagame-te ima-shi-ta

Of course, **number two** [the younger sister] followed **number one** [the older sister] [and then] the <u>two</u> sat down on the deck next to each other, [and] looking at number one's cards of 'PreCure Dream Live'.

(「Yahoo! ブログ *Yafuu burogu*」 [Yahoo! Blog], 2008)

Regarding the fact that she calls them by number, it can be assumed that, firstly, the speaker probably does not want to use their real names on a public blog, which might allow them to be identified and, secondly, she wishes to make her depiction of them sound comical. It seems that *hiki* provides an appropriate metaphor as the way these daughters act may have evoked the idea of puppies: one runs towards something attractive and the other one follows after. Since this sentence is followed by the utterance 'they are so charming and cute; I know I am a doting parent' it is clear that the speaker is talking about her daughters' behaviour with a great deal of affection. Thus, it is likely that *hiki* is used here in a positive way, probably in order to describe their puppy-like, innocent and adorable behaviour.

Next, illustrating a neither a positive nor a negative, but a neutral case of this metaphorical usage of *hiki*, the example below is from a story set in a time of war. The speaker is talking about his colleague in the army and calls the colleague a stark-naked '*ningen* (human) *ip-piki* (one-*hiki*)'.

(4-10)

死を賭した素ッ裸の<u>人間一匹</u>、白熱した意志と行動の一部分であって、姓名とか故郷とかこえてしまったようなものであったろう。

shi o to-shi-ta sup-padaka no **ningen** <u>ip-piki</u>, hakunetsu-shi-ta ishi to koodoo no ichi-bubun de at-te, seemee toka kokyoo toka koe-te shimat-ta yoo-na mono-de at-ta-roo

[He is] <u>one</u> **stark-naked man**, [who is] risking [his] life, [he is like] a part of heated determination and behaviour, and [he is] beyond a name and a hometown.

(「昭和文学全集 *Showa bungaku zenshuu*」
[The Complete Works of Showa Literature], 1989)

From the context, this expression is assumed to indicate that the speaker and his colleague are so close to each other that they do not care about things like how much property they have, where they come from, or even their names. In other words, they are connected as soul-mates, not just as social beings. The word '*ningen* (human)' may be used rather than *otoko* (man) or *yaroo* (guy, an informal and rough way of saying 'man') in order to reflect the fact that they do not even think or care about gender. They are so close in this particularly unusual situation of war, in which the individual man and his life are not regarded as important compared to the greater purpose, that they regard themselves not as men but more simply as 'creatures'. The word '*sup-padaka* (stark-naked)' means 'having nothing other than his own body', and

'*ningen ip-piki*' serves to reinforce and emphasise that meaning. In this context, the NC *hiki* is playing a role in focusing on the most primitive core of human beings.

The next two examples of *hiki* (4-11 and 4-12), used to metaphorically portray an animal/insect-like state or behaviour, both convey a negative nuance. The first of these is from a science fiction story in which a woman is being parasitised by an unknown creature. However, people around her have no idea what is happening and are scared of her due to her abnormal, crazy behaviour. When they talk about the woman, they use '*ip-piki* (one *hiki*)'.

(4-11)

…だってもし、**あんなの**がもう<u>一匹</u>生まれたらたいへんなことになるのに」　話がどんどんホラーじみてきた。

'…datte moshi, **anna-no** ga moo <u>ip-piki</u> umare-ta-ra taihen na koto ni naru-noni' hanashi ga dondon horaa jimi-te ki-ta

'…what if, another <u>one</u> **like that** was born, it would be a disaster' the story starts having a touch of horror.

(「アナザヘヴン　*Anazahebun*」[Another Heaven], 1997)

This usage of *hiki* is considered to indicate 'something not human'. Indeed, the people even go on to explicitly say 'she is like a monster'. It may be argued that the use of this *hiki* is triggered more by lexical collocation due to the later introduction of the word '*bakemono* (monster)' in the context. However, the word '*bakemono* (monster)' appears more than two sentences later than the instance of *hiki* concerned. As pointed out, it is assumed that the closer two words are to each other, the stronger the influence of the lexicon collocation is in this analysis. Thus, the choice of *hiki* is

assumed to be more because of its function to portray the woman's 'non human-like', 'less than human', and 'rough' behaviours.

Lastly, another example, in which *hiki* portrays the animal-like state of the referent in a negative light, is given. The referent here is not a third person or entity, but the speaker himself. The context concerns the essential nature of a human being. Before the example sentence, the speaker says 'what is the essential nature of a human being? That is being myself. Facing myself. In most cases, people feel scared to face themselves'. Then he utters the following sentence.

(4-12)

自分の中にもう<u>一匹</u>、得体の知れない、制御できない**自分**がいるのを知っているから

jibun no naka ni moo <u>ip-piki</u>, etai no shire-na-i, seigyo-deki-na-i **jibun** ga i-ru-no o shit-te i-ru kara

Because [I] know [that there is] <u>an</u> enigmatic, uncontrollable me in **myself**

(「横尾忠則 365 日の伝説 *Yokoo tadanori sanbyaku-rokujuu-go-nichi no densetsu*」[The 365-Day Legend of Tadanori Yokoo], 1995)

Thus, the speaker is focusing on the aspect of himself that is unknown even to himself, and describing it as if it was a different creature living inside himself. In order to emphasise the enigmatic nature of this 'me', the writer uses *hiki* rather than *nin*, even though it is still a part of himself. In this case, *hiki* is playing a role in focusing on a wild aspect of human beings not only in himself but in every human being, and portraying it in a negative light. By drawing on the extended semantic component 'wild', derived from the semi-core component 'natural', the speaker is effectively reinforcing his reference to the unknowable, uncontrollable, and thus mysterious parts

of human beings. This is one of the examples which show that the meaning of 'natural' is essential as a semi-core semantic component of *hiki*. Though being natural is not a necessary condition to be counted by *hiki* but is rather a potential meaning, 'natural' still needs to be considered a core meaning of *hiki* in order to understand how extended meanings, such as 'wild' in this example, emerge.The examples in this section have shown how *hiki* can be used to portray animal-like or insect-like states or behaviour of human referents, and have illustrated a variety of nuances: positive, neutral, and negative.

4.4.2. More Subtle Metaphorical Usages of *Hiki*

The previous subsection (4.4.1) has shown that *hiki* can be used metaphorically in order to express the referent's animal or insect-like features. In this subsection, an even more subjective use of *hiki* is discussed. This subjective usage can be achieved in various ways. As we have seen above (4.4.1), the semi-core semantic component 'natural' can be used in different ways, leading to both a positive meaning, 'wild', 'independent', or a neative meaning, 'rough'. While these meanings still convey a strong sense of likeness to a creature that could be counted by *hiki*, this same NC can be also used to express the speaker's subjective feelings towards the referent that are considerably more removed from its core and semi-core semantic components.

From this perspective, it is assumed that *hiki* has the potential to be used metaphorically in a similar way to lexical items. That is, it can be used both in ways that are fairly transparent and easy to interpret (animal/insect-like) and in ways that are more subtle and less closely connected to the literal meaning of the word. This issue will be discussed while taking up examples of firstly human referents (4.4.2.1) and then inanimate referents (4.4.2.2).

4.4.2.1. Human Beings

The extended semantic components of *hiki* identified in this analysis include 'unimportant' and 'unpleasant', which are mainly drawn directly from the semi-core component of 'less than human beings'. This semi-core component, in turn, is derived from the core components of 'non-human beings' and 'smaller than human beings'. These meanings can have a negative sense, so that *hiki* can be used to express the speaker's unpleasant feelings towards the referent, especially when it is used for human beings. When the negative feeling is very strong, *hiki* can be used to seriously downgrade or look down on the referent. On the other hand, *hiki* can express no more than a slightly unpleasant feeling towards something that is a nuisance or troublesome, in which case the speaker's negative feeling is comparatively weaker. In these cases, *hiki* can be used in a joking way. In the following, the usage of *hiki* used to seriously downgrade human referents is discussed (4.4.2.1.1), followed by the usage with a joking sense (4.4.2.1.2).

4.4.2.1.1. *Hiki* Used to Downgrade

This section presents three examples from the data in which *hiki* is used to help convey the speaker's negative feeling towards the human referents concerned. The first one is from a story, and the speaker is talking not about a specific person but about people in general. He says, 'even if I kill a hundred people, I have only one life to exchange for that'.

(4-13)

<u>百匹</u>殺したって、ひきかえる命はひとつだけ

<u>hya-ppiki</u> koro-shi-tat-te hikikae-ru inochi wa hitotsu dake

[Even if I] kill <u>a hundred</u> [people, I have] only one life to exchange [for that].

(「水滸伝 *Suikoden*」 [Water Margin], 1990)

It is notable here that the speaker is using *hiki* for people in general, people who personally have nothing to do with him. The speaker certainly knows that human beings are supposed to be counted by *nin* and he recognises that lives are generally thought to matter. However, by deliberately counting them with *hiki* he is showing his personal feeling that he does not care about people's lives. By using *hiki*, the speaker is indirectly telling us that he does not value human life at all; in fact, he thinks people are just the same as animals or insects so that he will not feel bad, even if he kills many of them.

Indeed, in the scene after this utterance, the speaker goes on to kill not only the target persons but also unrelated, harmless people, saying no more than 'good riddance'.

While example (4-13) is from a story which deals with a scene that is unlikely to happen in daily life, the next example describes a scene which could easily be observed in real life, although it is also from a story. One morning, the speaker seems to have met a child, who appears to have nowhere to go, and he lets the child wait for him while he goes out. When he comes back, he finds his girlfriend, the child, and a strange baby with them. He has no idea about the baby and refers to the baby using *hiki*.

(4-14)

だが、外階段の下で、朝の時以上の驚きに遭遇してしまった。**子供**がもう<u>一匹</u>増えて
いたからだ。

daga, soto-kaidan no shita de, asa no toki ijoo no odoroki ni sooguu-shi-te-shimat-ta.
kodomo ga moo <u>ip-piki</u> fue-te-i-ta kara-da

However, I encountered a surprise [even] greater than that of this morning under the
outside stairs. [It was] because [there was] <u>another</u> **child**.

<div align="right">

(「旦那さまとウェディングベル　Danna-sama to wedinguberu」

[Wedding Bells with a Husband], 2005)

</div>

Babies are physically much smaller than adult humans and they are a kind of
'*hiki*-sized' referent. However, they are still correctly counted by *nin* in general.[69]
Although *hiki* does have the extended semantic component 'cute', this is not relevant
here. To count babies using *hiki* is generally thought to be extremely negative and
would usually be unacceptable. From this understanding of the common usages of *hiki*
and *nin*, and from the context of this example, it can be assumed that the speaker
chooses to use *hiki* in order to express his concern that the baby is bringing additional
trouble to him. He has no relationship with the baby, so to him the baby is just one of
many unidentifiable babies. Thus, the baby's appearance is not something to welcome
but just a nuisance to him.

The final example in this section is slightly different from the previous two,
since in the previous examples ((4-13) and (4-14)), the speaker's personal feeling is
the main factor which evokes the choice of *hiki* for the human referents concerned. On
the other hand, the following sentences describe how the referents are regarded in
general in the society. The context is about *kabuki* actors. *Kabuki* is a Japanese

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[69] Not even human embryos are counted by *hiki*, but always by *nin*.

traditional play performed in a theatre, and these days is regarded as entertainment for the upper classes because it is so expensive to watch. However, at the time when *kabuki* had just emerged in the *Edo* period (1603-1868), it was for ordinary people and a *kabuki* actor was not a respected job at all (Shinoda, 2003, p. 89). At that time, *kabuki* actors were even despised, being called 'beggars by the riverside'. Therefore, they were counted as '*yakusha ip-piki* (actor 1-*hiki*)'. Among those *kabuki* actors, however, there was a very famous and popular one called Ichikawa Danjuuroo and, as shown in the example below, he was counted by *nin* (Shinoda, 2003, pp. 89-90).

(4-15)

江戸の儒者松崎慊堂は日記のなかで「芝居者はいわゆる役者なり。関所手形に**役者一匹**という、ただ**市川団十郎**はこの者**一人**という」と記している。

edo no jusha Matsuzaki Koodoo wa nikki no naka de 'shibaimono wa iwayuru yakusha-nari. sekisho-tegata ni **yakusha** ip-piki to i-u, tada **Ichikawa Danjuuroo** wa kono mono hito-ri to i-u' to shiru-shi-te-i-ru

In his diary, a Confucian Matsuzaki Koodoo in the Edo [era] wrote 'People who work at a theatre are so-called actors. [They are written as] an **actor** on their pass card for check-points, but **Ichikawa Danjuuroo** is called a man'.

(「私が生きたふたつの『日本』*Watashi ga ikita futatsu no nihon*」 [The Two 'Japans' I Have Lived In], 2003)

In this context, two levels in the social hierarchy are clearly contrasted by the use of the two different NCs, *hiki* and *nin*. It is also noteworthy that this distinct use of *hiki* and *nin* was made even on their official pass cards produced by the authorities. Since discrimination according to social positions, occupation, and gender was official and was never questioned at that time, this kind of use was possible (Sato, Takano, &

Toriumi, 1998, pp. 255-256). However, it would be totally unacceptable in contemporary Japanese society.

It has been so far illustrated that subjective and metaphorical usages of *hiki* for human referents can function in a purely negative way. In the following section, four examples, which show a different nuance, are taken up. In these examples, *hiki* is also used negatively, but the speaker's feeling towards the referent behind the usage is not necessarily negative at all. Rather, this kind of usage of *hiki* can be considered as a joke.

4.4.2.1.2. *Hiki* Used as a Joke

The examples shown in the previous section suggest that *hiki* tends to give a negative impression when it is used for human referents in this subtle, metaphorical way that does not make any transparent connection between the referent and animal/insect-like attributes. However, the actual nuance can vary depending on the context, in particular, the relationship between the speaker and the referent. In general, it is considered to be quite rude and can be offensive to use *hiki* when referring to a person. However, when the relationship between the speaker and the referent is very close and there is a certain trust between them, *hiki* can be used to tease the referent as a joke and is sometimes even used with affection.

In the first example (4-16), the referent is described as *aho* (shown in bold), which means 'idiot' or 'fool' in Japanese. This sentence seems to be uttered in a classroom where students are going to take a mathematics exam in the next class. Some students are trying to memorise as many formulas as possible just before the exam. When the speaker sees his friend cramming in this way, he says:

(4-16)

テストの５分前に復習してる**アホ**<u>一匹</u>だしね

tesuto no go-fun-mae ni fukushuu-shi-te-ru **aho** <u>ip-piki</u> da-shi-ne

[Here is] <u>a</u> **fool** [who] is reviewing 5 minutes before the exam.

<p align="right">(「Yahoo! ブログ <i>Yafuu burogu</i>」 [Yahoo! Blog], 2008)</p>

       The term *aho* is already making fun of the referent, the speaker's friend. In addition to that, by using not *nin*, but *hiki*, he is teasing his friend even more. However, it should be noted that this example is from a blog, and the tone of the style is quite casual and comical. Furthermore, the speaker writes that he, himself, found the exam hard as well. Thus, even though the utterance itself sounds quite harsh, it is considered that the speaker is not seriously looking down on his friend. Conversely, from the use of *hiki*, it can be assumed that they are close enough to each other to use *hiki* in this way as a joke, without delivering offence.

       In the second example below (4-17), the speaker is talking about his wife, her sister, and their mutual friend Suzuki. He is describing how lazy these three people are by using *hiki*. Though they are all adults, none of them are behaving as they are supposed to. The person called Suzuki seems to have been an overnight guest at the speaker's house, but neither the speaker's wife nor her sister got up to prepare breakfast for him, but instead just slept in along with Suzuki. The speaker is disappointed with how lazy the three of them are and uses *hiki* to express this feeling.

       However, his utterance does not sound serious from the tone. The word '*dame*' (wavy underlined), for example, is used in an informal way, about something that cannot be done or that is not good (*Shinmeikai Kokugo Jiten [New Clear-understanding Japanese Dictionary]*, 1995, p. 794). By using the word twice ('*damedame*'), the speaker makes the negative nuance 'not good' sound milder and

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slightly comical. Therefore, as in the previous example (4-16), the speaker is considered not to be seriously angry, but rather just slightly disappointed. Thus, it can be assumed that this use of *hiki* is not strongly downgrading the referents, but is considered to be a joke which can be made only in a close human relationship.

(4-17)

朝はなかなか起きないで、鈴木の朝ごはんも忘れてる。<u>ダメダメ</u>な嫁さん姉妹。鈴木もいつもよりグダグダ寝てるし、<u>ダメダメ三匹</u>だよ。

asa wa nakanaka oki-na-i-de, Suzuki no asa-gohan mo wasure-te-ru. <u>damedame</u>-na yome-san shimai. Suzuki mo itsumo-yori gudaguda ne-te-ru-shi, <u>damedame</u> <u>san-biki</u> da-yo

[They] did not wake up in the morning and have even forgotten [to prepare] breakfast for Suzuki. [My] hopeless wife [and her] sister. Suzuki is also lying down more lazily than usual; they are a lazy <u>three</u>some.

(「Yahoo! ブログ *Yafuu burogu*」 [Yahoo! Blog], 2008)

In order to understand the usage of *hiki* in this example, not only the linguistic context but also cultural knowledge is an essential factor. As noted, in Japanese society, when people reach a certain age, they are expected to behave as mature, responsible adults in society (Kim, 2017). This includes working to earn money, doing housework, being punctual, diligent and polite, and so on. If they do not behave in these ways, they are not regarded as a fully-fledged person and could be even despised. The three referents in the example above (4-17) are not teenagers but are expected to behave as adults, even though they are clearly not doing so. This must be a strong reason for the speaker's disappointment and has clearly been instrumental in evoking the use of *hiki*. This feature of Japanese culture is observed in the next example as well.

In the next example (4-18), the speaker is counting herself and her sister together using *hiki*.

(4-18)

家には私も入れて、まだ嫁にいってないのが<u>二匹</u>。

uchi ni wa watashi mo ire-te, mada yome ni it-te-na-i-no ga <u>ni-hiki</u>

In [our] house, [there are] <u>two</u>, including me, [who] have not gone to be brides yet.

<div align="right">(「Yahoo! ブログ <i>Yafuu burogu</i>」[Yahoo! Blog], 2008)</div>

This is quite an old-fasioned way of speaking, since Japanese society was more patriarchal a few decades ago and a girl was thought to be 'given' as a bride to her husband (Noro, 1988). In recent years it has been claimed that the women's position is equal to men's in the house as well as in the wider society. However, expressions such as 'going to be a bride', which comes from the idea that a girl leaves her original family and becomes a member of her husband's family when she marries, are still frequently heard even in contemporary society. Along with this idea, in a conservative Japanese worldview, girls are generally supposed to marry when they are still young (Amanuma, 1993; Noro, 1988). With that background knowledge, we understand that the speaker is feeling inferior because she and her sister are still unmarried. There is no clue whether the speaker is personally happy to be unmarried or not, but she at least recognises that people may think that she and he sister are not doing what they are supposed to do for their age, particularly as females in Japanese society. This cultural background and her feeling must have motivated her to use *hiki* to talk about herself and her sister ironically.

From the analysis of both (4-17) and (4-18), it has been shown that *hiki* is sometimes used with reference to adults who do not meet the expectations of others or society in some way. Because of this they are not regarded as a fully-fledged human beings, leading to the notion 'less than human beings'. This is one of semi-core semantic components of *hiki*, so can be a strong motivation to use *hiki* for these referents.

In the final example in this section, *hiki* is used to make a joke as well as showing the speaker's humility. The sentence is uttered by a mother, who is talking about two of her sons. Her sons have just been promoted in their *karate* exam and she is very relieved.

(4-19)

<u>二匹</u>ともなんとか昇級することが出来てホッとしました！

<u>ni-hiki</u> tomo nantoka shookyuu-suru koto ga deki-te hot-to shi-ma-shita

The <u>two</u> of them both somehow managed to get promoted, [so I am] relieved!

（「Yahoo! ブログ *Yafuu burogu*」 [Yahoo! Blog], 2008)

Interestingly, the sons did something that made their mother happy, but she is nevertheless using *hiki* to talk about them. It is obvious from the context that the mother is not really using *hiki* to downgrade her sons. In order to fully appreciate this usage, it should first be noted that while many in the West value independent individuals, Japanese tend to have a sense of the importance of interdependence. In other words, Japanese generally think of themselves as a part of a group or community (Markus & Kitayama, 1991). Furthermore, in Japanese culture, being humble is considered appropriate especially when talking about in-group members (Ono, 2002;

A. Yoshida, Ura, & Kurokawa, 2004). Since the speaker is talking about her own children, she is avoiding showing her happiness about their achievement in order not to appear to be showing off about them in front of others. It is first observed that she is trying to minimise self-praise by using the word '*nantoka*' (somehow). In addition, by using *hiki*, she is ostensibly expressing her feeling that they are still little, thereby reducing the significance of their achievements, although she must be very proud of them in her heart. Therefore, the speaker is not seriously downgrading the referents, but rather, she is using *hiki* as an affectionate joke. As a result, the sentence sounds slightly comical and is describing the fact of their promotion in a charming way.

It has been shown that, in cases where there is no sense in which a human referent is exhibiting animal-like or insect-like behaviours, *hiki* can be used quite subjectively and with more subtle metaphorical meaning than in many of the examples above. The speaker uses *hiki* to express their personal feeling towards the referent at the time of speech in a range of ways. This usage can be observed with both in positive and negative connotations, since *hiki* has semantic components with both of these senses. It has also been demonstrated that *hiki*, which may generally have a negative nuance when used for human referents, can be used positively or even with affection when it is uttered by a speaker with a close relationship to the referent. The examples introduced in this subsection have shown that when used metaphorically itself, *hiki* can play a similar role to that of a noun used metaphorically. Although understanding the speaker's intention in using *hiki* is not always as objectively clear or straightforward as with a lexical metaphor, the linguistic context, the cultural context, as well as the nature of the referent guide hearers/readers to understand the speaker's intention in this usage of *hiki*.

4.4.2.2. Inanimate Entities

In this subsection, it will be shown how *hiki* can be used metaphorically for inanimate referents, again with subtle and subjective meanings. In the first example below (4-20), *hiki* adds a primarily positive meaning to the referent, while in the case of the other two examples ((4-21) and (4-22)), the meaning added by *hiki* is somewhat more complicated. This will be discussed in relation to each example below.

Regarding the first example, though this sentence seems to be quite poetic, it is from a recipe for croissants, and it describes three croissants just as they come out of the oven.

(4-20)

<u>三匹</u>のクロアッサンは、それぞれが閉じた無限の宇宙を形成しながらも、開かれた関係の中ではじめて存在する

<u>san-biki</u> no kuroassan wa sorezore ga toji-ta mugen no uchuu o keisei-shi-nagara mo hira-ka-re-ta kankei no naka de hajimete sonzai-suru

<u>Three </u>croissants – each creating an infinite and closed universe, but at the same time, existing only in an open relationship.

(「空飛ぶフランスパン　*Soratobu furansupan*」[Flying French Bread], 1989)

Here the NC *hiki* is used for croissants, even though croissants are not animate, and are not even made to look like any animate being. From both the poetic expressions in this example, and from the use of *hiki*, it can be assumed that the speaker feels a strong affection towards the croissants. This is probably because the speaker has engaged in a long and time-consuming process—making the dough, letting it sit someplace warm to rise, rolling it, folding it with butter, cutting it, and finally making the shape of the croissants and baking them in the oven—making him feel as if he has

'brought up' the croissants. Secondly, watching the croissants rising in the oven may have affected the speaker to think in this way as well. Thus, the speaker is picking up the semantic components of 'living creatures', 'cute/adorable', and 'attracts affection' in order to upgrade the referent 'croissants' by counting them with *hiki*. This usage of *hiki* is animating the inanimate referents and conveying the speaker's special feeling towards them.

In the second example involving inanimate entities (4-21), the speaker is talking about a stand or a rack she has just purchased. She uses *hiki* for a Japanese thousand-yen note and says '*natsume san-biki* (natsume 3- *hiki*)'. *Natsume* is the family name of the famous author whose portrait is printed on the thousand-yen note, so the speaker means 'three thousand-yen notes', that is, three thousand yen.

(4-21)

オネダンは夏目三匹ぐらいで結構な大きさなのでオ気ニなんですが、..

o-nedan wa **natsume** san-biki gurai de kekkoo-na ookisa nanode okini nan-desu-ga..

The price was about three ***Natsume*** (thousand yen) and [this one is] quite big, so [it is my] favourite, but…

(「Yahoo! ブログ *Yafuu burogu*」[Yahoo! Blog], 2008)

In this case, the speaker is not really animating the notes, but rather uses *hiki* as a joke to mean that she thinks three thousands yen is not so expensive for the product. Among the extended semantic components of *hiki* is 'unimportant', which is originally drawn from the core and semi-core semantic components of 'non-human beings', 'small', and 'less than human beings'. The speaker in this case is focusing on this extended component of 'unimportant' to express her own sense that three thousand yen is not expensive for the stand. In addition to this, the use of *katakana* characters

in an irregular way (for *onedan* (price) and *okini* (favourite), highlighted by wavey underlines in the example), tells the reader that the blog is written very casually. Thus, the writer has probably made a deliberate mismatch between the noun (a person's name) and the NC (*hiki*), to make it sound funny.

In the final example in which inanimate entities appear with *hiki* used metaphorically and subjectively, the referents are characters in a famous Japanese anime, called 'Mobile Suit Gundam'. A Gundam is a type of robot in the anime and the speakers are talking about a project related to the TV version of this anime. While discussing ideas, one of the speakers suggests, 'How about having a lot of Gundams appear?'. Another speaker then responds:

(4-22)

いっぱい**ガンダム**ったって、十匹 も二十匹も出すわけにもいかない。５体ぐらいかね？

ippai **gandamu**t-tat-te, jup-piki mo nijup-piki mo dasu wake ni-mo i-ka-na-i. go-tai gurai ka-ne?

[Even if you] say a lot of **Gundams**, [we] cannot [make] ten or twenty [of them] appear. About five?

(「メバエ *Mebae*」 [Mebae], 2002)

Interestingly, Gundams are here counted with *hiki* when they appear with the numerals ten and twenty, and are counted with *tai* (an NC for human-shaped statues), when their number is five (double underlined). *Tai* is a prototypical NC for human-type robots, along with *dai* (the NC for machines) (Iida, 2004, p. 324). Thus, *hiki* is an irregular NC for these robots.

Concerning the usage of *hiki* here, it should first be noted that the speakers are both on the production side of the anime, so they definitely love Gundams. Therefore, it is assumed that the speakers are not actively downgrading the Gundams with *hiki*. However, on the other hand, no special affection towards Gundams is observed in this particular context. The possible reason for the usage of *hiki* in this situation can be guessed only from the difference in numbers: they are counted as ten-*hiki* and twenty-*hiki* in contrast to five-*tai*. By focusing on this difference, *hiki* seems to be used to indicate that Gundams will lose their individuality and inherent formidable nature, and be reduced to just a big group of identical things if there are so many of them. These meanings of 'having no individuality' and 'being in a big group' are considered to be nuances conveyed by *hiki*¸ and these nuances are presumably developed from the extended semantic component 'unimportant'. This choice of the NC *hiki* was probably made completely unconsciously. The speaker was just imagining a group of many Gundams, and that image would have motivated him to express the referent Gundams in this way.

4.5. Chapter Summary

This chapter has analysed the usage of the NC *hiki* with examples of 'atypical' referents, both human and inanimate. It has shown that the choice of *hiki* can be influenced not only by the observable characteristics of the referent but also firstly by lexical collocations and secondly by the speaker's metaphorical use of *hiki* itself. This metaphorical use of *hiki* may be related in a fairly straightforward way to the animal or insect-like state or behavior of the referent, or it may involve more subtle and subjective metaphorical meanings.

The analysis of the latter case in this chapter has demonstrated a considerable variety of usages of *hiki*. It has been claimed that since *hiki* has a number of semantic components, the speaker can choose *hiki* in a specific context in order to add specific

meanings to the referent by focusing on some of these components. Concerning the interpretation of these more subtle metaphorical uses of *hiki*, it has been pointed out that the listeners/readers need more clues to understand the intended meaning than when considering more straightforward metaphors, such as those where the core meanings of *hiki* are evoked, or those involving lexical items. Due to the NC's ambiguity, the reader needs to consider not only the linguistic context but also the cultural context, shared real-world knowledge, and the nature of the referent. This chapter has particularly highlighted some aspects of the Japanese cultural background behind some of the examples, which can be key to understanding certain uses of *hiki*.

While the analysis of these 'atypical' examples of *hiki* in the data has shown a considerable range of features and usages, it should be noted that *hiki* is an NC which can be used for entities only. There are basically two types of NC: NCs used for entities and those used for events, and Japanese has a significant number of NCs for entities while there are only a few for events. However, as mentioned previously (2.4.6), there are actually some NCs which can be used both for entities and events. The second target NC of this thesis, *hatsu*, is one of those, and its usages are analysed in the next chapter.

Chapter 5 *Hatsu* – Results and Analysis

In this chapter, the use of the second target NC *hatsu* is analysed. Firstly, the results of the quantitative data analysis are shown in 5.1, and this is followed by an overview of the usage of *hatsu*, including the semantic components of *hatsu* revealed by the quantitative analysis (5.2). The qualitative analyses are divided into two major sections: cases in which *hatsu* is used as an NC (5.3) and those in which it is not used as a true NC (5.4), even though semantic connections to its NC uses are clear. Section 5.3 consists of three parts: when referents of *hatsu* are 'events or actions' (5.3.1), when they are 'entities' (5.3.2), and atypical uses, i.e., when *hatsu* is used in extended ways (5.3.3). The samples in which *hatsu* is not used purely as an NC are discussed in two further sections: when *hatsu* is used adverbially (5.4.1) and idiomatically (5.4.2). The chapter closes with a summary in section 5.5.

5.1. Results of Quantitative Data Analysis: *Hatsu*

As described in the Method chapter (3.3.2.2.2), the usable data involving a set of the numeral 1 and the NC *hatsu* are grouped into five categories:

   (1) *hatsu* as an NC

      a. events and actions

      b. entities

      c. others (extended usages)

   (2) *hatsu* not purely as an NC

      a. adverbial use

      b. idiomatic use

There are a total of 1,236 samples in the data. The number of samples in each category is summarised in table 5.1, and the percentages of these categories are shown in a pie chart in figure 5.1 below.

Table. 5.1 The number of samples with *hatsu* in each category

Category	Number of samples
Events/Actions	625
Entities	89
Others (extended usages)	12
Adverbial Use	284
Idiomatic Use	226
Total	**1236**

Figure 5.1 The proportion of each category (*hatsu*)
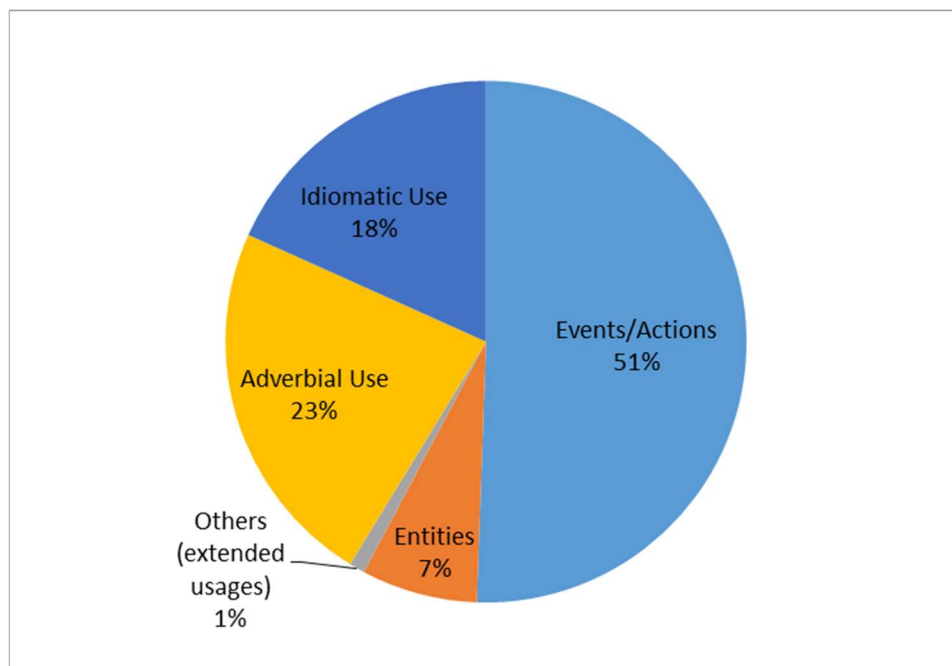
As shown in the pie chart (figure 5.1), the biggest category in the data is 'events/actions', which accounts for around half of all cases of the use of *hatsu*. On the other hand, the category of 'entities' takes up only 7%. The total of samples in which *hatsu* is used purely as an NC is 59%; this is actually quite a small proportion, given that *hatsu* is grammatically an NC. The total adverbial and idiomatic use, on the other hand, comes to 41%, a fairly large proportion. So we can see that *hatsu* is very frequently used adverbially and idiomatically when it is used with the numeral 1. Since they should be discussed separately, samples with *hatsu* used as an NC are analysed in 5.3 and adverbial usages and idiomatic usages are discussed in 5.4.

Concerning *hatsu*'s nature as an NC, it has been implicitly acknowledged in previous studies that *hatsu* can be used for entities as well as for events and actions (see 2.4.6). However, very little further analysis of these usages has previously been presented. Figure 5.2, given below, highlights the relative proportions of only these two categories in the data for this study, extracted from table 5.1. 88% of the samples used as a true NC (625 cases) have event/action referents and 12% (89 samples) have entity referents.

Figure 5.2 Ratio of events/actions and entities
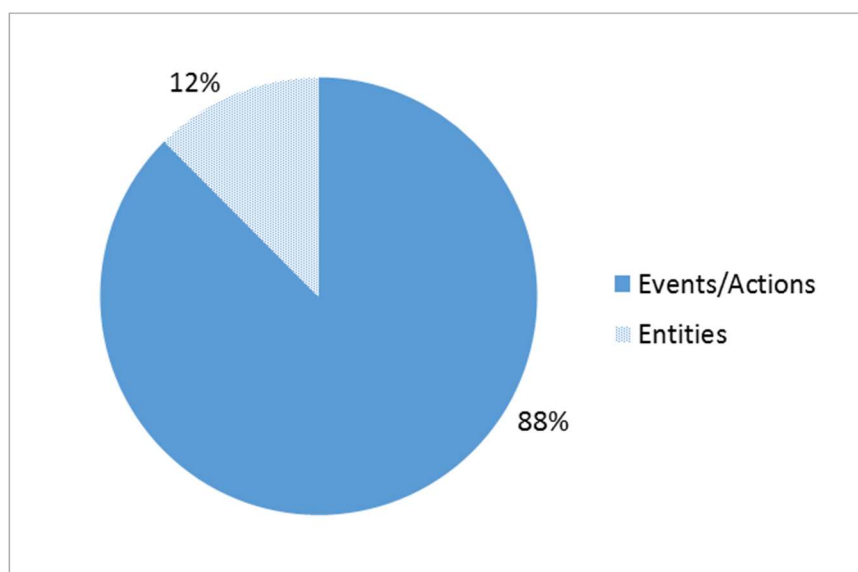
Based on the results of this quantitative analysis, it seems clear that the NC *hatsu* is mainly used for events and actions, an assumption which is in keeping with the meaning of the *kanji* character 発 *hatsu*.[70] The *kanji* character 発 *hatsu* has a range of meanings associated with actions, including 'shooting an arrow or gun', 'coming out', 'departing', and 'opening', among others (*Shinsen Kanwa Jiten [New Selection Dictionary of Classical Chinese Explained in Japanese]*, 1989, p. 705). The character 発 *hatsu* is thus frequently observed in words which express these types of actions and, for this reason, *hatsu* is considered to be closely associated with these actions. Thus, while some NCs such as *hon* are originally entity NCs and are used for some events in their extended usage, *hatsu* is considered to have stronger characteristics as an event NC that is also used for entities by extension in contemporary Japanese. Regardless of the 'origin' of direction of extension, the fact that the great majority of uses of *hatsu* involve an action/event suggests that the NC *hatsu* is probably more fundamentally associated with events/actions than with entities in the mind of speakers.

5.2. Semantic Components of *Hatsu*

The nature and use of the NC *hatsu* has not been investigated as deeply as other NCs that are used for both entities and events, such as *hon*, though it is also a commonly used NC (Downing, 1996, p. 55; Iida, 1999, p. 8). In previous studies, *hatsu* has been found to be used for events that contain an action of exploding, launching, shooting, or hitting, and for entities that are a part of these events such as bullets, bombs, and fireworks (Downing, 1996, p. 21; Iida, 2004, p. 377). In the Dictionary of Counting Expressions, definitions and typical referents of NC *hatsu* are given as listed below.

Definitions from the Dictionary of Counting Expressions (*hatsu*)

---

[70] For details about NCs used for entities and events, see 2.4.6.

1. *hatsu* **means shooting an arrow or gun, and is used for the number of shootings or bombs as an NC.**

a. bullets, bullet holes

b. gunshots and explosions (regardless of whether the bullet hits the target)

c. bombs, missiles, nuclear weapons

d. exploded bombs and mines (before explosion, *ko* or *hon* is used instead)

e. fireworks

2. Winning hits in sports

a. a hit, which leads to a score, in a baseball game

b. a shot at the goal which results in a score, in a soccer game

c. a punch, especially one which affects victory or defeat, in a boxing match

3. The number of jokes, sneezes, farts, ejaculations (slang)

(Iida, 2004, p. 377)

Analysis of the data used for the present study has confirmed these definitions to some extent. In addition, a greater variety of usages of *hatsu* is observed. Prototypical referents of *hatsu* are events and actions involving force and rapid motion. For example, a large number of referent events/actions which involve the notions of 'explosion' and 'emission', both literal and metaphorical, are found in the data. The data presented in section 5.3.1.1 shows that literally explosive events such as shooting and bombing are prototypical referents of *hatsu*, and from these referents the meaning components of 'explosive' and 'forceful' are drawn. It has also become apparent from the data that another type of prototypical referent involves metaphorically 'explosive' actions made by the human body, such as hitting, punching, and kicking. These types are discussed in section (5.3.1.2). The majority of these referents also involve 'visible

motion'. While the motion of a fired bullet is generally hard to see, the movement of actions with the human body can be visually observed. Furthermore, referents of *hatsu* can be 'powerful' without necessarily being 'forceful'. As examples of some other quite common usages show, power can be asserted not only through physical action, but also verbally, or even in a turn in a table game (see example (5-13) for a case of a verbal attack as a referent of *hatsu*). Here, the term 'powerful' is used in relation to an action that aims to make a change in a target, while 'forceful' is associated with the nature of the action. Thus, from these types of referents, the connotations of 'moving' and 'powerful' are drawn.

In sum, from these prototypical referents that have emerged from the data, four core semantic components are found:

(1) Explosive

(2) Forceful

(3) Powerful

(4) Moving/In motion

In addition to these events/actions, some concrete entities also appear in the data as referents of *hatsu*. These entities are generally those that are involved in the most common kinds of events/actions with force and power as described above, for example, projectiles and weapons. As in the case of referent events and actions, the notions of 'explosion' and 'emission' are included in the clear majority of referent entities, such as bullets, bombs and missiles (except in the case of atypical referents, such as an air conditioner and human beings, as introduced in 5.3.3).

In comparison to other NCs used only for events, such as *kai*, *hatsu* has a strong sense of 'one-off'. This extended meaning is considered to be derived from one

of its core meanings, 'explosive' as, typically, something can only explode once. In addition, it is observed that *hatsu* has or adds a meaning of 'having an impact', being 'influential', and being 'effective' in a large number of samples. The first of these meanings, 'having an impact', is considered to be derived from a number of prototypical actions, such as hitting and punching, which are clearly made with the intention of having an impact on the recipient in some way. All these extended meanings are assumed to be derived from two core semantic components: 'forceful' and 'powerful'. With these extended meanings of 'having an impact', 'influential', and 'effective', *hatsu* can be used to modify some actions even if they do not inherently involve force. For example, giving an injection is usually done quietly and silently. However, the data examined for this study show that *hatsu* is used for this action, or for the injection itself, in a few samples. This choice of *hatsu* does not necessarily mean that the injection is given very quickly or with force, but rather it is assumed to be emphasising the effectiveness of the injection (as shown in example (5-10) in section 5.3.1.3).

These core and extended semantic components are summarised in the diagram below (figure 5.3), which also illustrates the adverbial functions (discussed in 5.4.1). By analysing the data, it appears that *hatsu* is very commonly used adverbially, with the numeral 1 in most cases, in a variety of contexts. The adverbial functions observed in the present data are illustrated at the right of the diagram.

Figure 5.3 Semantic components of *hatsu*

Semantic Components of *Hatsu*
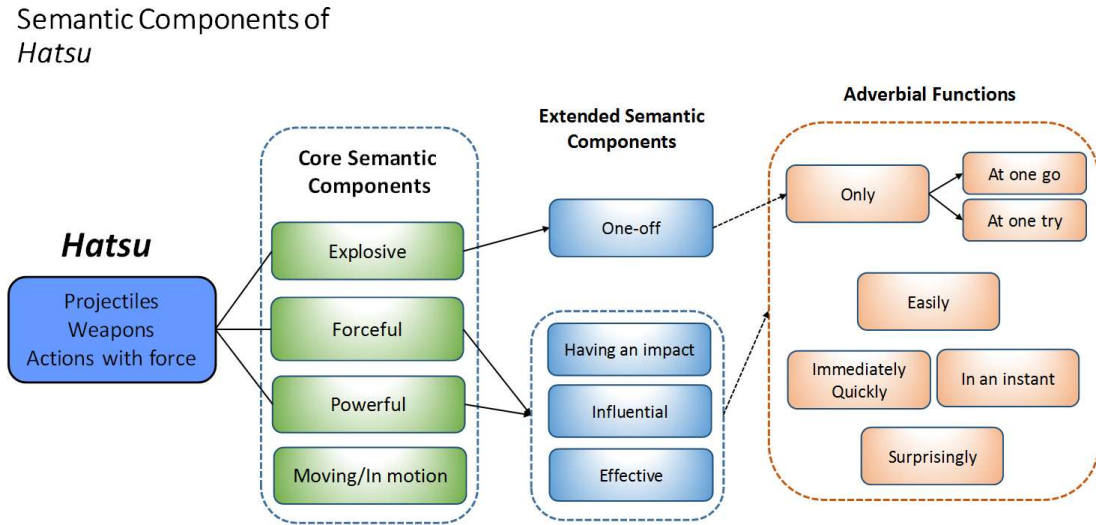
5.3. *Hatsu* used as an NC

In this section, the NC *hatsu* is examined and discussed from a qualitative and a semantic perspective. This means that the NC is closely analysed in each example with reference to its context and background. Thus, the focus is on how *hatsu* is employed in authentic examples from the data. Events and actions are discussed first (5.3.1), and then entities (5.3.2). In the last section we look at extended usages with atypical referents (5.3.3). In the first section, samples are divided into four groups. For this categorisation, the notions of '*hatsu*-evoking noun' and 'hatsu-evoking verb' play an important role. As explained in the method chapter (see 3.2.2.2.2), any nouns or verbs found in the data that were considered likely to have evoked the use of the NC *hatsu* are called '*hatsu*-evoking nouns/verbs'. As these nouns/verbs are closely related to the nature of referent events, these are used to facilitate the categorisation in the following section.

5.3.1. Events and Actions

As described above with evidence from the quantitative data analysis, the majority of referents of the NC *hatsu* are events and actions. The data examined in this study indicates that prototypical referents of *hatsu* are events or actions involving force and rapid movement, such as exploding and hitting.

In order to investigate examples with these referent events/actions, this study uses a model of 'source', 'path', and 'goal'. This model is designed particularly for this case study and serves to metaphorically represent the way in which the events/actions that are counted by *hatsu* extend from their 'source'—the origin of the action/event initiated by the subject—through their 'path'—the manner in which the action/event unfolds or the duration over which the action/event proceeds—towards their 'goal'—the target of the action. Samples with event/action referents were classified based on which of these three notions the event/action focuses on or primarily concerns. For example, when a bomb explodes, the event described by the verb 'to explode' is completed when something actually explodes, and the outcome, such as who/what is affected by the explosion or how much they were damaged, is not directly related to the meaning of the verb. Thus, this event is regarded as source-focused, and so classified into the 'source-focused' group, which is called Group A in this study (see also the diagram in figure 5.4 below). Events that are both source and path focused are in Group B, and those that are path and goal focused, in Group C. In addition to these groups, it was also found that there are some verbs which do not indicate a specific action at all, but rely on their context to specify the action. These cases are inherently different from those in other groups, and therefore classified separately into Group D, and analysed separately in section 5.3.1.4.

Figure 5.4 Model of source, path, and goal focus in a *hatsu* event
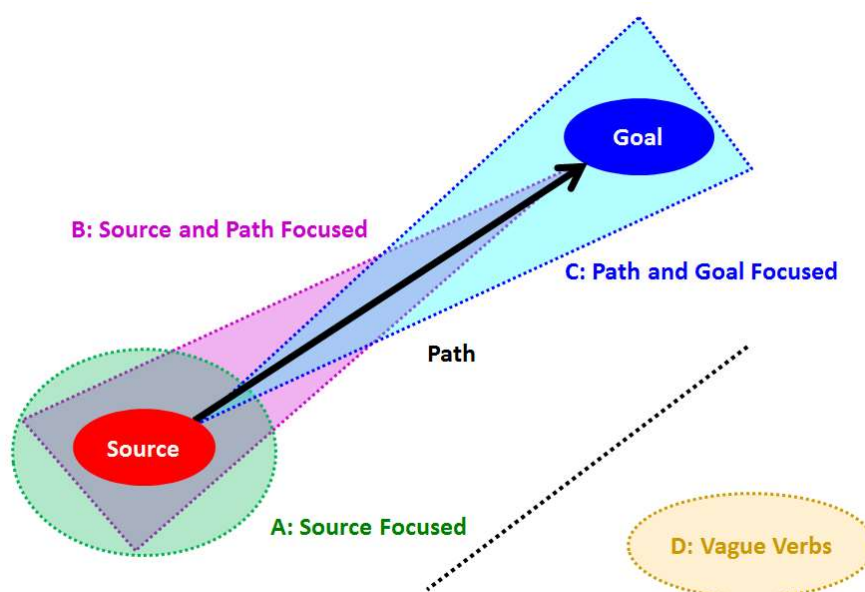
When the referent events/actions are completed simply by the agent taking the action, they are considered highly source-focused, so these kinds of samples are classified into Group A (coloured green in figure 5.4 above). For example, when one of the most frequently observed verbs in the data, '*utsu* 撃つ (shoot)', is used for a referent action, this '*utsu* (shooting)' action is completed when the trigger is pulled; where the bullet goes or whether or not it actually hits the target is not relevant to the fact that the action described by this verb has taken place. Thus, in this case, the verb concerns only the 'source' of the motion involved, but not its path or result (goal). On the other hand, when the noun/verb concerns not only the source but also the path up to the goal, these samples are classified into Group B (purple). For instance, samples with *naguru* 殴る (to punch) and *keru* 蹴る (to kick) belong to this category. When somebody punches or kicks a person or an object, not only the action itself, but its relation to the goal is also concerned. In this group, events/actions do aim to 'connect' with the target or goal, and are made with the intent of having some impact on that target or goal. This intention of the agent is included in the meaning of the

events/actions described by the noun/verb, but the actual result caused by the events/actions is still not strongly in focus. In other words, the nature of the action is to reach the goal, but not necessarily to penetrate the goal. This means that the goal may be affected by the action, but any changes made to the goal by the action are not part of the meaning of the noun/verb itself. The majority of referents in Group B are attacking actions using part of the human body, such as punching and hitting, and similar types of actions used in sport, for example, hitting in a baseball game and kicking in a soccer match.

Before proceeding to Group C, it is important to briefly note that the term 'path', used when referring to Group B, does not refer to the manner in which the events/actions is performed. As we will see below, in all groups (A, B, C, and D), *hatsu* either adds information about manner or complements that information, already given lexically in the noun/verb that is used to express the action or event. Thus, the term 'path', as it is used here, refers to the nature of the action proceeding up to and 'connecting' with the goal.

Next, Group C (blue) is more strongly goal focused than Group B, but still concerns the path as well. For example, when a sample has a verb such as '*uchi-korosu* 撃ち殺す (shoot to death)' and '*uchi-komu* 撃ち込む (fire into)', these samples are categorised into Group C, since these verb both indicate the clear result caused by the event 'shooting'. Thus, events/actions in group C focus on the path and also on change the goal. Almost all referent events/actions in Group C are related to attacking actions and their result, such as shooting (someone) to death or blowing (something) up by bombing.

The discussion above has introduced three notions used in the model (source, path, and goal) and explained what each group (A, B, and C) involves. However, it must be noted here that these categories are not always clearly distinguished; there are sometimes overlaps of meaning between these categories. For instance, one of

extended semantic components 'having impact', is observed in an event categorised into Group A as well as B (see 5.3.1.1. and 5.3.1.2 below).

Lastly, Group D (yellow) is essentially different from the other three groups, so it is displayed separately in the diagram in figure 5.4. As briefly mentioned above, there are some verbs found in the data which do not specify a particular action. For example, the light verbs *yaru* やる (to do), *kimeru* きめる (lit: to decide), and *ateru* 当てる (lit: to hit) are regarded as vague verbs when used with *hatsu*, since these verbs tend not to indicate any specific action alone in this context, but instead rely heavily on context. Samples with these vague verbs are first checked to determine whether the action is specified in the context, and if the type of the action is clear, the sample is classified (into Groups A, B, or C) according to the nature of the action. On the other hand, there are some examples left where the action is not very clear even with the help of the context. For instance, *kimeru* (lit: to decide) can be used to portray some attacking action in certain contexts. However, it is sometimes impossible to know if it is punching, kicking, or another attacking action. The same verb *kimeru* (lit: to decide) can also be used to mean 'be successful / make an impact', and for this usage, again, it is often not clearly articulated, but the speaker/writer only vaguely implies doing something which leads to a big success. Samples with these verbs used vaguely are classified into Group D.

The numbers of samples in each category are summarised in the table and the pie chart below and samples are analysed in the order of these categories.

Table 5.2 The number of samples in each category (events/actions)

Category	Number of samples
Group A Source focused	191
Group B Source and Path focused	240
Group C Goal and Path focused	145
group D Vague verbs	49
Total	**625**

Figure 5.5 The proportion of each category (events/actions)
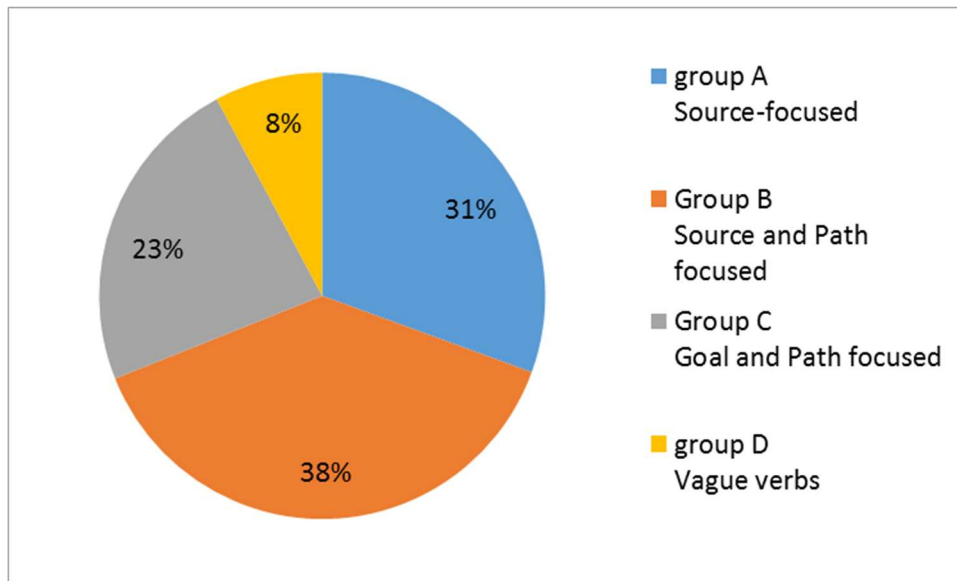
As the pie chart in figure 5.5 shows, group B is the biggest category with 240 samples (38%), and group A (31%) and C (23%) follow. The combined total of Groups A and B, which are the more source-focused, is 69%, and group C, which is rather goal-focused, is 23%. These proportions indicate that *hatsu* is used more for source-focused events/actions, though the proportion of samples with goal-focused

events/actions is not insignificant. From this data, it is assumed that *hatsu* is compatible with events/actions that highlight the source as well as events/actions that highlight the goal. Furthermore, the fact that the largest single category contains those that make some reference not only to the source but also to the path suggests that meaning components that relate to the way in which an action/event unfolds are highly relevant. This could be related to the common use of *hatsu* adverbially (see 5.4.1).

5.3.1.1. Group A: Source Focused

In the samples in Group A, *hatsu*-evoking nouns/verbs are used to indicate the referent events/actions are source-focused, and the most commonly occurring nouns/verbs are listed below. All of these nouns and verbs refer to events or actions that can be thought of as 'explosive' and involving 'force'. The most frequent referent events/actions, such as shooting, emitting a loud sound (mostly gunfire), and bombing, consist of an explosive mechanism with something potentially powerful packed into an enclosed space, which is released by a trigger and followed by some action involving rapid movement with force. While the majority of actions are related to attacking, some physiological phenomena such as farting, sneezing, and ejaculation are also classified into this category. This is because these phenomena are thought of as involving something akin to explosion.

Hatsu-evoking nouns referring to events/actions:

- shooting, bombing: *happoo* 発砲 (shooting), *juugeki* 銃撃 (shooting), *bakugeki* 爆撃 (bombing)

- physiological phenomena: *onara* おなら (farting), *kushami* くしゃみ (sneezing), *shasei* 射精 (ejaculation)

Hatsu-evoking nouns metonymically referring to events/actions:

- a part of an event/action, a weapon: *hanabi* 花火 (fireworks), *kenjuu* 拳銃 (hand-gun), *raifuru* ライフル (rifle), *tama/dangan* 弾／弾丸 (bullet), *gyorai* 魚雷 (torpedo)

- the emission of a loud sound: *juusee* 銃声 (sound of gunfire), *bakuhatsu-on* 爆撃音 (sound of bombing)

Hatsu-evoking verbs referring to events/actions:

- shoot, emit, launch, bomb: *utsu* 撃つ (to shoot), *hassha-suru* 発射する (to shoot), *hanatsu* 放つ (to emit/release)

Among these referents, it appears that most are related to attacking actions, except for fireworks and physiological phenomena. It should also be noted that there are some nouns that are frequently used metonymically to describe these attacking events/actions. For example, *juu* 銃 (gun) and *juusee* 銃声 (the sound of gunfire) are frequently observed being used to clearly indicate the action of 'shooting'.

In the following, two examples with the most common referents counted by *hatsu*, shooting and launching, are shown, followed by an example featuring metonymical usage indicating the action of 'shooting'. The last example illustrates a physiological phenomenon counted by *hatsu*.

The first example is from a book, and this particular scene is set at the end of World War II. *Hatsu* is used to count the referent action 'shooting'.

(5-1)

若草山の方から二機のＰ五十一が現われて橋の上すれすれに通過したんだ。…一発も射たずに行ったけれど、あの時はあわてたな。

Wakakusayama no hoo kara ni-ki no pii-gojuu-ichi ga araware-te hashi no ue suresure ni tsuuka-shi-ta-n-da. …ip-patsu mo **u-ta-**zu-ni it-ta keredo, ano-toki wa awate-ta-na.

Two P51s appeared from the direction of Mt. Wakakusayama [and] passed near the surface of the bridge….Though [they] went without **shooting** even once, [I] panicked.

(「蟹の町 *Kani no machi*」[A Town of Crabs], 1990)

At the time of this scene, a man was living near the historically important city of Kyoto. The American army was avoiding bombing the area, so the man did not often see any hostile action. However, one day he saw two enemy planes and was very startled, as he was not accustomed to that kind of situation. *Hatsu* is used to count the action of shooting, and even though the planes did not actually open fire, the use of *hatsu* conveys the man's dread of the expected event. Though it might be possible to use *kai*, a general classifier used for events, in this sentence, it would sound more like calm depiction of the situation, without the clear indication of the speaker's terror that is added by the use of *hatsu*.

As mentioned previously, along with 'shooting', 'launching' has been also considered to be a typical referent of *hatsu* in previous studies. The next example is from an internet forum, and has fireworks as its literal referent.

(5-2)

ここらで<u>一発</u>**花火**を**ぶちあげて**くださいよ。

koko-ra de <u>ip-patsu</u> **hanabi** o **buchiage-te** kudasa-i-yo

Please **set off** some **fireworks** <u>once</u> around here!

(「Yahoo! 知恵袋 *Yafuu chiebukuro*」 [Yahoo! Answers], 2005)

Though it seems that the speaker is asking somebody to launch a firework, this is not about actual fireworks; the speaker is talking metaphorically about a power game in the sumo wrestling community.[71] The speaker expects one of the committee members to take action to gain more political power in the community, and says 'please set off some fireworks <u>once</u>'. This example has both a *hatsu*-evoking noun and a *hatsu*-evoking verb: *hanabi* 花火 (firework, in bold) and *buchiageru* ぶちあげる (launch, in bold and underlined). Fireworks are usually first launched and then explode in the sky, and the elements of 'launching (or emitting)' and 'exploding' are very commonly found in the referents of *hatsu*. Thus, the fact that fireworks are a prototypical referent of *hatsu* supports the core semantic components of *hatsu* claimed in this study: 'explosive' and 'forceful'.

Although the actual referent in this example is not a firework but a political action, the speaker uses the metaphor to mean 'do something which has an impact and surprises others'. The NC *hatsu* in this case is most likely to have been chosen simply due to the collocation, *hatsu* being the most appropriate NC for the launching of fireworks. However, because prototypical referents of *hatsu* include meanings such as 'having an impact' or 'surprising', as in this example, it can be assumed that the NC

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[71] Sumo is Japanese traditional full-contact wrestling.

hatsu conveys these meanings in this case as well, and thus works to support the metaphor.

The next example also has a prototypical referent action, 'shooting'; this is a case in which a *hatsu*-evoking noun is used metonymically to refer to an action.

(5-3)

…サラエボで<u>一発</u>の**銃声**が鳴り響き、それはヨーロッパ中を巻き込む戦火に拡大していった。

…Saraebo de <u>ip-patsu</u> no **juusee** ga na-ri-hibi-ki, sore wa yooroppa-juu o makiko-mu senka ni kakudai-shi-te-it-ta …**the sound of** <u>one</u> **shot** resounded in Sarajevo, [and] that expanded to the fires of war [that] involved all Europe.

<div align="right">

(「誰にもわかるアインシュタインのすべて *Darenimo wakaru ainshutain no subete*」 [All About Einstein That Anybody Can Understand], 1998)

</div>

This sample describes the scene of the assassination in Sarajevo that triggered the First World War. Although the literal referent is a noun, *juusee* 銃声 (sound of gunfire), what the word actually refers to is not just the sound but the fact that a gun was fired, an action that killed the Crown Prince of Austria and his wife and led to war.

In the data for this category, there are broadly two patterns of metonyms observed: a noun indicating a weapon used in the event concerned, such as a gun or a bullet, and a noun indicating the sound produced by the event. In the latter case, the sound of gunfire or the sound of explosions are found in a number of samples.

It is notable that *hatsu* plays an important role when it is used to count an action for which a noun is used metonymically. In some cases, the context may provide the reader with enough information about the action to fully understand the metonym. However, *hatsu* is sometimes essential to make the meaning of the metonym clear. For

instance, there is an example in which a part of human body—an open hand—appears without a verb indicating the nature of the action involved. However, *hatsu* serves to complete the meaning by adding crucial elements, such as 'forceful' and 'moving/in motion', so that the hearer is able to know that forceful movement, namely, hitting somebody, occurred (see example (5-7) in 5.3.1.2 for this use). For this reason, in most samples in which *hatsu*-evoking words are used metonymically, *hatsu* cannot be replaced with any other NC, such as the general event NC *kai*, as *hatsu* is complementing the word to support an intended meaning in a specific context.

In the next example below, a sneeze is the referent counted by *hatsu*. Sneezing itself does not necessarily involve a visibly violent movement, nor does the person who sneezes actually explode. However, the notion that something powerful is enclosed in a small space and then released is the same as for the other main referents in this category.

In the Dictionary of Counting Expressions (Iida, 2004, p. 81), sneezes are listed as counted by a general event NC, either *kai* or *do*, with a note that *hatsu* is sometimes used in partnership with an action that is unusually sudden or violent. This example from the data used for this study is one such case.

(5-4)

思わず大きな元気なくしゃみ、一発、二発続けて出た。

omo-wa-zu, ooki-na genki-na **kushami**, ip-patsu, ni-hatsu tsuduke-te de-ta

In spite of myself, a big, vigorous **sneeze** came out once, and then twice.

(「浮橋 *Ukihashi*」 [Floating Bridge], 2001)

Physiological phenomena, such as sneezing, farting and ejaculating, are generally counted by *kai* (Iida, 2004, pp. 42, 81), but it is observed that *hatsu* is also often used for these events in the data. When *hatsu* is chosen over other event NCs, there is a focus on the sudden, violent or unexpected manner or effect of the physiological phenomena. With other event NCs such as *kai* and *do*, only the fact that something happened is reported, but how it actually occurred is not in focus. On the other hand, with *hatsu*, information on the manner of the phenomenon, for example how loud it was or to what extent people were surprised or affected by it, are included.

Four examples have been introduced in this section showing that *hatsu* has strong connotations with the notions of 'explosive' and 'forceful'. It has also been shown that *hatsu* plays an important role in some cases where a metonym is used to describe the referent event/action. In addition, one example with a firework referent shows that *hatsu* is able to provide meanings of 'having an impact' and 'surprising'. This 'impact' is related more to the path than the source, and this is discussed more deeply in the next section (5.3.1.2).

5.3.1.2. Group B: Source and Path Focused

The *hatsu*-evoking nouns/verbs in this category concern the source as well as the path. Strictly speaking, these nouns/verbs are still source focused, but the subsequent path is also included in the meaning, mainly because the events/actions are made with intent to affect the goal, and involve motion away from the source and towards the goal. The actions are aimed at reaching the goal and have some impact on the target. However, essential in distinguishing Group B from Group C is that the actions in this group do not penetrate the goal nor change the target (actions which change the goal will be discussed in 5.3.1.3). Most of the events/actions in this category feature a moving object, such as a ball or a punching fist, so the physical movement is more salient than

in the case of Group A; that is, the notion of motion is more in focus. Once again, the most common referents counted by *hatsu* in this category are attacking actions, such as hitting and punching. These actions are taken in order to affect the goal in some way, so the meaning of 'having an impact' is also applied. Explosive events/actions are not included in Group B, as there is no 'goal-directed' path to speak of after an explosion. As in the case of Group A, some nouns which are used metonymically are found in Group B. For example, a part of the human body (e.g., a fist or an open hand) is often used to mean an action involving that part, such as punching or slapping. The most common *hatsu*-evoking nouns/verbs of this type are listed below.

Hatsu-evoking nouns referring to events/actions:
- punching, exchanging of blows, kicking: *panchi* パンチ (punching), *dageki* 打撃 (blow), *naguri-ai* 殴り合い (exchanging blows), *keri* 蹴り (kicking)
- hitting (in a baseball game), homeruns, kicks in soccer: *hitto* ヒット (hit), *hoomuran* ホームラン (homerun), *nagashi-uchi* 流し打ち (a hit to the opposite field), *keri* 蹴り (a kick in soccer)
- anger: *kaminari* カミナリ (anger or roar of anger/lit: thunderbolt)

Hatsu-evoking nouns metonymically referring to events/actions:
 - punching, slapping: *hirate* 平手 (open hand), *kobushi* 拳 (fist)

Hatsu-evoking verbs referring to events/actions:
- hit, punch, slap, kick: *utsu* 打つ (to hit), *naguru* 殴る (to punch), *dotsuku* ど突く (to jab), *keru* 蹴る (to kick)

Although attacking actions are the most common referents, there are also a quite few samples in which the actions counted by *hatsu* occur in sports, such as hitting

in baseball and kicking in soccer. Even though the purpose for which these actions are made is clearly different from that of literal attacking actions, the nature of the actions is similar in terms of their focus on the source and path of the movement concerned, and they are often thought of as metaphorically attacking. Therefore, these are classified in this group together.

In addition, there are some samples which do not have *hatsu*-evoking nouns/verbs, but are classified into the present category due to the nature of the action. Frequently observed actions of this kind are listed below.

Events and actions described without *hatsu*-evoking nouns/verbs in the samples:
- playing a hand in table games: in mahjong 麻雀 (a tile-based game), *go* 碁 (a Japanese traditional game played with black and white stones)
- giving someone harsh words: telling off, complaining
- taking exams

One instance of this type is shown in example (5-8) below.

The first two examples are from a blog about a combat sports match the blogger has just watched, and illustrate the prototypical use of *hatsu* for attacking actions: punching.

(5-5)

あの前に出る姿には感動もしましたが<u>一発</u>の心配もあり恐かったですね。

ano mae ni de-ru sugata ni wa kandoo mo shi-ma-shi-ta-ga <u>ip-patsu</u> no shinpai mo a-ri kowa-kat-ta desu-ne

Though [I was] impressed [by his] forward attitude, [I was] scared [as there is a] concern of [him getting] <u>one</u> [punch] as well.

(「Yahoo! ブログ *Yafuu burogu*」 [Yahoo! Blog], 2008)

The poster says that he was impressed by a fighter who had a very positive attitude during the match, but at the same time, he was scared that the fighter could have received a punch from the opponent due to the fighter's non-defensive stance. Though the referent is not mentioned in this sentence, the noun *panchi* パンチ (punch) appears in the broader context. Interestingly, there is another sentence in the same passage in which another NC, *tsu* (general NC for both concrete objects and abstract things such as thoughts), is used for a punch. It serves as an informative comparison of different NC usages, and is shown below.

(5-6)

何でもない**パンチ**一つでも疲れきっている時に貰う**パンチ**は致命傷になり得ますからね。

nan-demo-na-i **panchi** hito-tsu demo tsukare-kit-te-i-ru-toki ni mora-u **panchi** wa chimeeshoo ni nari-e-masu-kara-ne

Even one ordinary **punch** can result in a fatal wound [if you] get that **punch** when [you are] exhausted.

Though the referent action, *panchi* (to punch), is the same in both sentences, there are a couple of likely reasons for the different choice of NC within the same passage. Firstly, in the first example, there is no referent clearly mentioned in the sentence itself, but only in the broader context. The readers know what the speaker is talking about from the context; however, if a general NC such as *tsu* were used, the sentence would be very vague. In order to make the numeral plus NC phrase work well anaphorically without explicit mention of exactly what is being counted, the most descriptive NC is required. *Hatsu* brings to mind the violence of a punch through the embedded notions of 'explosion' and 'force'. This is considered to be the strongest

reason why *hatsu* appears in the first example. The unexpected and effective nature of the hypothetical punch is also relevant. The speaker is talking about a punch that might take its recipient off-guard and have a devastating effect. The punch would have been unpredictable, and would come as a 'surprise' to the fighter as well as to the audience. In contrast, in the second example, the point that the speaker is trying to make focuses on the potential result of a hypothetical punch, not the punch itself. In this statement, as opposed to the first, the speaker does not wish to emphasise the power of the punch; to the contrary, by saying 'even one ordinary punch' he is deliberately downplaying the strength of the punch required to potentially fell an exhausted opponent, and his choice of the NC *tsu* reflects this.

The referent in the next example (5-7) is similar to punching: slapping. In this example, the noun *hirate*, which literally means 'an open hand', is used metonymically.

(5-7)

平手一発で骨髄に徹するものがある。

hirate ip-patsu-de kotsuzui ni tes-su-ru mono ga a-ru

One slapping (lit: **an open hand**) can reach the bone marrow.

（「帝国陸軍の教育と機構　*Teikoku rikugun no kyooiku to kikoo*」
[Education and Organisation of the Imperial Army], 2003)

Without the numeral and classifier *hatsu* here, the meaning of the sentence would be quite ambiguous. However, with *ip-patsu*, the noun *hirate* (an open hand) is immediately recognised as a metonym; we can understand that the speaker is not talking about a hand as an entity, but rather the action of slapping with an open hand.

The next example (5-8) is different from the previous three in terms of its referent. The noun used is *kaminari*, which literally means thunderbolt. However, this

word is also often used to mean an angry outburst or violent exclamation (*Shinmeikai Kokugo Jiten [New Clear-understanding Japanese Dictionary]*, 1995, p. 240). When the word *kaminari* is used literally to mean thunderbolt, it is matched with the NC *hon*, or *suji* (Iida, 2004, p. 62).[72] In the Dictionary of Counting Expressions, *kaminari* in any non-literal sense is not listed. It appears in a non-literal sense in this example:

(5-8)

キャディ佐野木の**カミナリ**一発！

kyadhii Sanoki no **kaminari** ip-patsu

<u>An</u> **outburst** from caddy Sanoki! (lit: <u>A</u> **thunderbolt** of caddy Sanoki!)

(「GOLF DIGEST」, 2001)

This sample is from an article in a golf magazine concerning a caddy, called Sanoki, and how well he has been supporting his player. It describes how he yelled on behalf of his player, as his partner. It is assumed that *hatsu* is used because the action of 'yelling' was very loud and sudden, so that it made the writer imagine something surprising, and was clearly intended to have an impact. The word *kaminari* is clearly used metaphorically, and the NC *hatsu* is not chosen simply according to the collocation (*hon* or *suji*), but to fully reflect the nature of the action. This is one usage which shows that *hatsu* can convey the meaning of 'having an impact' and 'surprising'.

In this subsection, we are looking at examples with referents which involve not only the source but also the path. The main feature of this group is that unlike those

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[72] *Hon* is used for long and thin things, and *suji* for something long and thin that does not have a clear shape and which appears on and off in a line, such as a wisp of smoke or a crack in a wall (Iida, 2004, p. 357).

in Group A, these events/actions are taken with a clear intention to affect the goal. Thus, these referents usually include the meaning of 'having an impact'. In addition to that, while the trajectory of referents in Group A are comparatively invisible, that of referent actions in the present category are more visible. For instance, from Group A, when a gun is fired, or something explodes, or physiological phenomena happen, it is difficult to visually follow the trajectory. On the other hand, referents in the present group are mostly directly related to the human body (e.g., hitting, kicking, and punching), so it is easier to witness the trajectory involved due to the lower speed of the action. Thus, the fact that it includes the meaning of 'moving/in motion' stands out as well.

5.3.1.3. Group C: Path and Goal Focused

Groups A and B are rather source focused, whereas Group C focuses on the goal as well as the preceding path. Compared to Groups A and B, which do not concern the result or outcome of the events/actions at all, the result caused by the *hatsu*-related events/actions is very clear in the samples in this category. In other words, these events/actions indicate that the goal of the action is fully achieved or the recipient was actually affected or changed in some way. For example, '*utsu* 撃つ (to shoot)', which is classified into Group A, expresses the action of shooting only. While the action 'shooting' is completed when the gun is fired, without necessarily confirming whether the bullet actually hit the target or not, events/actions in the present category convey information about the outcome in relation to the recipient or the goal of the action as well. In the data used for this study, no *hatsu*-evoking nouns occurred in Group C, and quite a few compound verbs appear. Compound words are, in general, defined as formed by joining two or more words to become a single word (Fromkin et al., 2012, p. 84). In this category, verbs, which are made by combining a main verb (e.g., *utsu*

撃つ to shoot) and another word indicating the result of that verb (e.g., *korosu* 殺す
(to kill)), are frequently observed. *Hatsu*-evoking verbs in this category are listed
below.

<u>*Hatsu*-evoking verbs referring to events/actions:</u>
- shoot to death, shoot into, hit the mark: *uchi-korosu* 撃ち殺す (shoot to death),
inuku 射抜く and *uchi-komu* 撃ち込む (shoot into), *chokugeki-suru* 直撃する and
meichuu-suru 命中する (hit the mark)
- blow up, sink (a ship): *fukitobasu* 吹き飛ばす and *futtobasu* 吹っ飛ばす (blow up,
blow away), *gekichin-suru* 撃沈する (sink a ship)
- drive into, strike in: *uchi-komu* 打ち込む (drive into), *tatakitsukeru* 叩きつける
(beat into, strike against)
- have sex: *yaru* やる (lit: to do)

 Uchikorosu 'shoot to death' and *fukitobasu* 'blow up, blow away' express not
only the source of 'shooting' and 'bombing', but also the result of these actions. Thus,
all these referents contain the meaning of 'influential'. These results are also likely to
be what the agent intended. Therefore, the meaning of 'effective' is also drawn from
the referents in this group.

 In addition, while other verbs describe attacking actions, in the last line of the
list there is one vague verb: *yaru* (lit: to do).[73] This verb is used for a variety of actions,
so it is a kind of vague verb. However, from the data, it appeared that when the verb

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[73] The standard verb meaning 'to do' in Japanese is '*suru*'. The alternative *yaru* is a more casual word
that generally cannot be used in official or formal contexts. Also, it should be noted that *suru* and *yaru*
are not always interchangeable. For example, we cannot make a compound word with a noun coupled
with *yaru* in the way we can with *suru*. While 発砲する *happoo-<u>suru</u>* (to shoot) is commonly used, *発
砲やる *happoo-<u>yaru</u>* is not acceptable.

yaru is used with the NC *hatsu*, it nearly always means 'have sex'. Since the action is specified by virtue of the co-occurring *hatsu*, and having sex affects the recipient, these samples are classified into the present category. There are indeed 20 samples with a set of '1-*hatsu*' and *yaru*, which together mean having sex (see example (5-11) for one of these samples). In the following, three examples are shown.

The first example (5-9) is from a story in which one character has just shot a large snake and killed it. The verb is a compound composed of two verbs: *utsu* (to shoot) and *korosu* (to kill).

(5-9)

この一発で大蛇を**撃ち殺す**と…都合のいい場所を探していた。

kono <u>ip-patsu</u>-de daija o **uchi-koro-su**-to... tsugoo no ii basho o saga-shi-te-i-ta

After **shooting** the large snake **dead** with this <u>one</u> [shot]…[he] was looking for a good place [to kill another monster].

(「悪魔物語；運命の卵 *Akuma-monogatari; unmei-no-tamago*」
[Story of Demon; Egg of Destiny], 2003)

While the first component of the compound verb, *utsu* (to shoot), which by itself would be categorised into Group A, concerns the action of shooting only, the second component, *korosu* (to kill), gives very clear information regarding how the target of the action—the snake—was affected by the action. The snake was *killed* by the action, and the death of the snake is a constituent element for the event described to be fully realised. Therefore, the focus is mainly on the change that happened as a result of the action, although the nature of the action ('to shoot') is also included in the meaning of the compound verb.

The next example (5-10) is from a magazine, and is written by a man who has had an injection, called a 'garlic injection', which he claims has helped him avoid getting drunk. This injection actually does not contain anything extracted from real garlic, but the name is due to the smell. These injections are popular among people who believe that it removes fatigue with only one shot.

(5-10)

次は徹夜明けにでも<u>一発</u>、**打ち込まれ**てみようと固く決意！

tsugi wa tetsuya-ake ni demo <u>ip-patsu</u>, **uchiko-mare**-te mi-yoo to kata-ku ketsui

[I] firmly decided [that] next time [I] will **get** <u>one</u> [a garlic injection] **jabbed** [right] in [to me] after staying up all night or the like!

（「MORE」, 2004)

For injections, it is generally thought that the appropriate NCs are *hon* or *too* (Iida, 2004, p. 187).[74] *Kai* is also considered to be an appropriate NC to use when the action 'giving' is more focused, such as when talking with your doctor about the number of times one should get an injection. However, *hatsu* is used in this example. The action of 'getting an injection' does not really evoke the core meanings of *hatsu*, as it is an action without explosive power or undue force; in fact, it is supposed to be done quietly and slowly.[75] Yet, injections have a purpose, to affect our body in some

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[74] *Hon* is used for long and thin objects. *Too* 筒 is originally a unit for an ampule, and used as a technical NC by experts for both objects 'injection' and actions 'to inject' (Iida, 2004, p. 187).

[75] It was pointed out by a reader that an injection could be thought of as conducted in an explosive manner since the fluid spreads from a small cylinder into the human body. Yet, in actual usage, *hatsu* is not a standard NC for giving/getting injections. This is one instance of its use suggests that 'force' is, indeed, a core component of *hatsu*.

way, and this is considered to be the motivation that triggers *hatsu* here. The speaker is surprised that the injection worked so well that he did not get drunk after getting it, so he thought he should get another one after working all night, as he is now confident that it will help him a lot. This thought is also expressed through the use of the passive verb '*uchikomareru*'. *Uchikomu* literally means 'drive in', but he does not mean he wants the needle to penetrate deeply in. Instead, he is metaphorically expressing that the injection is so effective that he can feel the effect going right into his body.

The last example of this category is a sample with the vague verb '*yaru* (lit: to do)', meaning having sex. As briefly mentioned previously, *yaru* is frequently used to mean 'to have sex (with)', and *hatsu* is often associated with *yaru* in the context. The following example is one of these cases.

(5-11)

誰も咲のことを「一発やりたい」なんて思わない。

dare mo Saki no koto o 'ip-patsu **ya-ri-**ta-i' nan-te omo-wa-na-i

Nobody ever thinks of Saki [that they] want to **give** [her] <u>one</u> (lit: **do** <u>one</u>).

(「シュガーレス・ラヴ *Shugaaresu rabu*」[Sugarless Love], 1997)

The girl described here is beautiful, smart, charming, friendly, and even good at sports, so naturally she is very popular. Though she is very attractive to boys, this sentence indicates that 'nobody ever thinks that they want to have sex with her'. The writer goes on to explain that because she is so dignified, boys do not tend to think of her as a sexual object but rather look up to her as an ideal bride.

Though no word for 'sex' appears anywhere at all in the context and *yaru* is a vague verb, the indication is clear from the use of the NC *hatsu*. Though the

dysphemistic use of the verb *yaru* is primarily responsible, the NC *hatsu* solidifies the meaning. *Hatsu* is sometimes thought to have a sexual or dirty meaning, and the reason is assumed because *hatsu* adds the notion of 'explosion' in order to imply ejaculation. As the data shows, the '1-*hatsu*' phrase is commonly used to mean 'having sex' and is almost idiomatic in use. Perhaps because of this, *hatsu* has come to be regarded as having a dirty or unsophisticated sense.

  As illustrated in the first two examples (5-9 and 5-10) above, some referents of *hatsu*, while clearly portraying the kind of event/action involved, focus strongly on the goal and how it is affected or changed as a result of the action. Thus, they include the meanings of 'influential' and 'effective'. In the last example (5-11), it has been shown that *hatsu* can be used to support the context to specify the meaning of a vague verb. This example also indicates the possible evidence for why *hatsu* is generally thought to have an unsophisticated, dirty sense. While the referent action by the vague verb *yaru* is specified thanks to its appearance with *hatsu* in the samples in this category, the next category looks at verbs which are significantly more vague concerning the nature of the events or actions involved.

5.3.1.4. Group D: Vague Verbs

As introduced in section 5.3.1, Group D is quite different from Groups A, B, and C. Samples in this category have a vague verb, and the action is not entirely specified contextually or otherwise. Most samples in this category involve an aggressive action (e.g., something like punching, scolding), and some verbs are used dysphemistically. For example, when punching somebody, instead of simply stating the action, unusual verbs are occasionally used to make it sound rougher (see examples (5-12) and (5-13) for this kind of usage). There are, however, a few verbs that are used in a positive sense. For example, in certain contexts, *kimeru* 決める/極める (lit: decide or get something

done) and *ateru* 当てる (lit: hit) can indicate that something is successful. The referent actions in Group D are classified into three groups, and all the verbs referring to the actions in the samples are listed below.

Hatsu-evoking verbs referring to events/actions:

1. Saying or doing something unpleasant or harmful to someone else
– *mimau* 見舞う (lit: 'to visit'; also 'to inflict something on someone' v.t.)*, o-mimai-suru* お見舞いする (humble honorific form of *mimau*)
– *kamasu* かます (lit: 'to make someone bite something', 'to inflict (e.g. a blow, a shock, damage') v.t.)*, buchi-kamasu* ぶちかます (modified from a compound of *butsu* ぶ(打)つ 'to hit/strike' and *kamasu* かます 'to make someone bite something'; more dysphemistic than *kamasu*)
– *kureru* くれる (lit: 'to give (to me)'; also 'to give something negative or harmful to someone' v.t.)*, kurete yaru* くれてやる (same as *kureru* but with auxiliary verb *yaru* (meaning 'to give to someone else (not me)'))
– *kurawaseru* くらわせる (causative form of *kurau* くらう 'eat' (archaic), lit: 'to make someone eat something', i.e. do something unpleasant or harmful to someone v.t.), *kurawasu* くらわす (shortened causative form of *kurawaseru,* lit: 'to make someone eat something')[76]

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[76] The verb *mimau,* often in the humble form *o-mimai-suru*, has another meaning 'to visit (somebody who is sick)', but in the data for this study, all instances of this word are used to mean 'to say/do something unpleasant or harmful to someone else'. This is similar to the (slightly archaic) use of the verb 'to visit' in English to mean 'to inflict something unpleasant on someone', as in 'The Lord *visited* ten plagues upon the Egyptians'.
The verb *kamasu* literally means 'to make someone eat something', but is commonly used to mean 'inflict a blow', akin to the English expression 'give someone a knuckle sandwich'.

2. Receiving something unpleasant or harmful

– *kurau* くらう (lit: 'to eat' (archaic); also 'to get something unpleasant or harmful done to one' v.t.)

3. Getting something done

– *ateru* 当てる (lit: 'to hit' v.t.), *ataru* (lit: 'to get hit' v.i.)

– *kimeru* 決める/極める (lit: to decide; also 'to perform (an action)' v.t.), *kimaru* 決まる/極まる (lit: to decide; also: 'an action is performed' v.i.)

Three examples are introduced in this section: one from each group. The first example (5-12) is from a piece of hardboiled fiction and in this scene, a young man is trying to take an old man, who is in a critical condition, to hospital. The old man has been refusing to go to hospital when the young man tells the old man that if he doesn't stop resisting he will force him to go.

(5-12)

いい加減にしないと、<u>一発</u>**食らわして**病院に担いでいくぞ。

ii-kagen-ni shi-na-i-to, <u>ip-patsu</u> **kurawa-shi-te** byooin ni katsu-i-de i-ku-zo

Unless [you] cut it out, [I will] **give** [you] <u>one</u> [and] take [you] to hospital.

(「罅・街の詩 *Hibi・Machi no uta*」 [Crack・Poems of the City], 2001)

In the case of the verb *kamasu*, historically, this is probably derived from the causative form of *kamu* 'bite', which is *kamaseru* 'make someone bite', shorted to *kamasu*. However, in current usage, this verb is rarely used with this literal causative meaning, and is nearly always used figuratively, as in the translations given.

Similarly, *kureru* can mean '(somebody) gives me something' in a neutral sense. However, in all samples collected from the data, this word is used to mean 'to give something unpleasant or harmful' in a negative sense.

Here, *hatsu* is connected to the action *kurawasu* (lit: 'to make someone eat something'), which can also mean do something harmful to someone or attack them. From the context, it is fairly clear that the verb *kurawasu* means hitting the old man to make him shut up, and *hatsu* is counting the number of punches.

In this case it should also be noted that without '1-*hatsu*', the sentence would sound quite odd. The verb *kurawasu* means only 'giving something unpleasant or harmful', and no action at all is specified. However, in the context, *hatsu* confirms some kind of attacking action, presumably punching in this case. The fact that the verb *kurawasu* originates from the verb *kuu* 食う (to eat), a transitive verb, might be another reason the sentence could sound somehow incomplete without an object. Therefore, this '1-*hatsu*' is considered to be used not just as a modifier, but to anaphorically mean 'a punch' as well. This anaphoric use is possible because a punch or punching is a prototypical referent of *hatsu*.

In addition, as mentioned above, the verb *kurawasu* is used dysphemistically in this example, as it gives a rougher impression. In the data, it is apparent that these 'rough' verbs used for attacking actions are often associated with *hatsu*.

In the next example (5-13), *hatsu* is used for the action of 'telling off', and a similar dysphemism is observed.

(5-13)

旦那さんが別れたいといっている場合に、私は別れないわよと<u>一発</u>かまして、もう少しお金を積んだら別れてあげてもよいわよ、と……

danna-san ga wakare-ta-i to it-te-i-ru baai ni, watashi wa wakare-na-i-wa-yo to <u>ip-patsu</u> **kama-shi-te**, moo-sukoshi o-kane o tsu-nda-ra wakare-te-age-te-mo yo-i-wa-yo, to…

In a case in which [the] husband says [he] wants to break up, [the wife can] **tell** [him] **off** [saying] 'I will not break up', [and say] 'I could break up if you pay [me] more money'…

(「離婚の作法 *Rikon no sahoo*」 [How to Divorce], 2003)

This example is about divorce and *hatsu* is used for an action described by the verb *kamasu* かます (to inflict (e.g. a blow, a shock, damage))'. In this case, the inclusion of the speech complementiser *to* (say 'that') indicates that *kamasu* means 'telling him off', by saying that she is not going to divorce him so that ultimately he will have to pay her more money. The referent of *hatsu* is clearly a verbal attack. Words are usually counted by the NC *koto* 言, whose kanji character actually means 'word'. But in this sentence, the referent 'words' is not specified, and the focus is more on how powerful and effective the verbal attack is. In addition, since *kamasu* is also a transitive verb, the phrase '1-*hatsu*' is assumed to function anaphorically in this example as well.

While the first two examples are about attacks, the next example is about a big success, and involves the verb *ateru* 当てる (lit: 'to hit').

(5-14)

来年は音楽で<u>一発</u>**当て**られたらいいな。

rainen wa ongaku de <u>ip-patsu</u> **ate-ra**re-ta-ra i-i-na

It would be great if [I] was able to **make** <u>a</u> [big] **splash** in music next year.[77]

(「ボーイズ『B』アンビシャス！ *Booizu 'bii' anbishasu*」
[Boys 'B' ambitious!], 2004)

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[77] The translation 'hit' may initially seem more appropriate here than 'splash'. However, the English word 'hit' in the context of music has a fairly precise meaning (as in 'a hit recording'). This sentence in Japanese does not have quite such a precise sense of exactly what the nature of the success will be, only that it will make a significant difference to the musician's career.

This sample is from a book about the author's friend, who is a musician. The musician has not produced any hit songs yet, and has been in a financially hard situation. The musician says to the author, 'I have to do something to change the situation next year'. Then the author translates this utterance and says 'his utterance does not mean he is going to get a normal, stable job to make money, but it would be great if he were able to make a big hit in music'. *Hatsu* is used to refer to the event of 'making a hit'. Even without *ip-patsu*, the sentence would still make sense. However, *ip-patsu* gives a boost to the sense of success. It implies that the success is big and sudden and effective enough to change the situation. Also, because the verb *ateru* 'hit' is a transitive verb, *ip-patsu* is considered to work anaphorically in the role of an object and makes the sentence sound syntactically more natural and smooth.

It has been shown with these vague verbs that *hatsu* both describes the referent events/actions more clearly, and imbues the referent with extra meaning – meaning that can clearly be related to or derived from the core semantic components identified for *hatsu*.

In this section, examples with referent events/actions of *hatsu* have been examined. The samples were first classified into groups based on the focus of the events/actions. From the analysis, it is confirmed that *hatsu* has a strong meaning of 'explosive' as its core sense as claimed in the previous studies (Iida, 1999, pp. 249-252; 2004, p. 377). In addition to that, three core meanings of 'forceful', 'powerful', and 'moving/in motion' are also observed in a number of samples. On the other hand, though *hatsu* may seem to focus on the source of events/actions, it has also appeared that 'having an impact' on the goal is found as one of the most common extended meanings. Examples in the last group (D) showed that *hatsu* is often used with a verb whose meaning is vague, and *hatsu* supports the verb in the context to specify the action described by such verbs.

5.3.2. Entities

The previous section analysed examples with referent events/actions. Although events and actions are considered to be the main referents of *hatsu*, there are still a considerable number of samples with an entity found in the data.

It should be noted at the outset that 'referent entities' in this section specifically refers to tangible entities which are directly counted by the NC *hatsu*, as its referent. As described in each subsection in 5.3.1, some entities are used metonymically in sentences involving *hatsu*. For example, even when a noun meaning gun, which refers to a tangible entity, seems to be syntactically counted by the phrase '1-*hatsu*', what the *hatsu* is counting is not the object—the number of guns—but rather the action of shooting (see 5.3.1.1 for an example)[78]. In this case, the gun is used metonymically, so it is not actually a direct referent of *hatsu* from a pragmatic perspective. There are indeed over a hundred samples in which a tangible entity is used together with 1-*hatsu*, collected from the data. However, this category excludes these samples when nouns are used metonymically, and focuses only on tangible entities that are actually referents of *hatsu*. As mentioned in 5.1, there are 89 samples (12%) in the data with an entity referent of this type.

Hatsu's entity referents found in the present data are all projectiles that are fired as the result of an explosion, and most of them are weapons of this kind, such as bullets, bombs, missiles, and torpedos. In particular, bullets account for a big proportion of these referent entities. Tangible entity referents found in the data happen to be these referents only, but other types of projectiles such as arrows can be normally counted by *hatsu* as well (Iida, 2004). For these entities, *hatsu* is the most appropriate NC, in other words, they are prototypical referents of *hatsu*, along with the events and actions discussed in 5.3.1.

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[78] Guns have a specific NC: *choo* (Iida, 2004, p. 137).

In the following, three samples are shown to illustrate how *hatsu* is actually used with a tangible entity referent. As explained above, *hatsu* is fundamentally considered to be used for events, and it is assumed that these entities may have started being counted by *hatsu* as a part of an event, and the usage has become a frozen, fixed use. Therefore, entities like bullets and missiles can be counted by *hatsu* even when they are just left or stored, without being used. All three examples have referent entities which share a similar nature in terms of being a weapon and being able to be fired with explosive force: a bullet, a missile, and an atomic missile. In the first example (5-15), the entity referent is a part of a vivid action. On the other hand, the referent in the second example (5-16) has not actually been used yet. The last example (5-17) illustrates a case in which the weapon concerned, an atomic missile, is not even treated as a weapon but instead as a static object. These examples will demonstrate that *hatsu* is used for these entities not only when they are a part of the prototypical event/action counted by *hatsu*, but also when the relation between those events/actions and the entity concerned is not evident in the particular context.

The first sample is from a blog and *hatsu* is used for a bullet that has hypothetically just been shot in the scene described.

(5-15)

このため華々しく活動する一方で、<u>敵弾</u><u>一発</u>を浴びると撃墜され、敵に自殺装置といわれた。

kono-tame hanabanashi-ku katsudoo-suru ippoo-de **tekidan** <u>ip-patsu</u> o abi-ru-to gekitsui-sare, teki ni jisatsu-soochi to i-ware-ta

While [they] did act brilliantly because of this, [they] got shot down if [they] took (just) <u>one</u> **enemy bullet**, [so it was] called a suicide machine by the enemy.

(「Yahoo! ブログ *Yafuu burogu*」[Yahoo! Blog], 2008)

This sentence is from a blog posting about a particular type of plane, called the Zero fighter, which was used a lot by the Japanese air force during the Second World War. The speaker analyses the planes and says that these planes sacrificed safety to gain high-performance, because it was considered normal to sacrifice soldiers' lives in the Japanese army. Therefore, they worked brilliantly, but on the other hand, they got shot down with just one bullet. In this sentence, *hatsu* is directly counting the referent *tekidan* 敵弾 (an 'enemy bullet'). This is very typical use of *hatsu* and there are a number of samples in which bullets are counted by *hatsu* in a similar way. For this example, it is considered that the bullet in this context was actually 'shot', and so it contains several of the core semantic components of *hatsu*, such as 'explosive', 'forceful', and 'moving'. In other words, the bullet is not a static object, but an object forming a part of an event of 'shooting'. There is not only no doubt that *hatsu* is the best NC for this referent, but it is hard to imagine it being replaced with any other NC, even the general NC *ko*, in this case.

While the referent is a part of a lively event in example (5-15), in the next example, no event has even taken place; nevertheless *hatsu* is still the perfectly appropriate and correct NC for counting the entity missile. There are two tokens of *hatsu* in the example sentence: dozens of Chinese missiles (*suujup-patsu* 数十発), and one American missile (*ip-patsu* 一発).

(5-16)

だがその<u>数十発</u>の**ミサイル**を全部合わせても、アメリカの原子力潜水艦の**ミサイル**
<u>一発</u>に及ばない。

daga sono <u>suujup-patsu </u>no **misairu** o zenbu awase-te-mo, amerika no genshiryoku-sensuikan no **misairu** <u>ip-patsu</u> ni oyo-ba-na-i

But even if faced with <u>dozens</u> of **missiles** together, [it] will not be beyond <u>one</u> **missile** from an American nuclear-powered submarine.

This is from a book about the global political situation at the time. This context particularly concerns the military power of China and the U.S.A, and is comparing the military power of these two countries. The author asserts that the power of dozens of Chinese missiles cannot go beyond the power of only one American missile. The direct referents of *hatsu* are the missiles, and *hatsu* is used twice to mention the number of each country's missiles to be compared: 'dozens' for China (double underlined) and 'one' for U.S.A (single underlined). The speaker is emphasising the superior power of the American army by giving the example that just 'one' missile is as strong as dozens of Chinese ones.

The point the present example is showing is that the speaker is talking about a missile, not as a static object, but rather in terms of its physical power. In the speaker's mind, the referent missile is not an object which is meant to be stored forever, but one that has the potential to be used in the real world, even though it has not been used yet. Thus, the focus of the speaker is on the missile's potential power. This means that what *hatsu* is counting in this sample is not an action 'shooting a missile' but an entity 'a missile', into which its potential power is projected. This use is one of a number of examples in which *hatsu* is used for these *typical* entity referents even though they are not actually involved in a real event. In this case, as in the previous one, even the general NC for entities *ko* cannot replace *hatsu* because the purpose for which the entity is made and its potential power requires the use of the NC *hatsu*.

The next example (5-17) shows, however, that these projectile entities are counted by *hatsu* even when they are totally removed from a context in which they are involved in a moving event. This illustrates that the requirement to use *hatsu* for these

entities does not depend on how the referent looks physically or how it is used practically, but rather depends only on its potential purpose and power.

(5-17)

ミュータントたちはこの一発の核ミサイルを神殿に奉り、「平和の兵器」として崇拝している。

myuutanto-tachi wa kono ip-patsu no **kaku-misairu** o shinden ni matsu-ri, 'heiwa no heiki' to shi-te suuhai-shi-te-i-ru

Mutants enshrine this one **atomic missile** in the shrine [and] worship [it] as a 'weapon of peace'.

(「アメリカ SF 映画の系譜 *Amerika esuefu eiga no keifu*」
[Genealogy of American SF movies], 2005)

This is a piece of commentary on a science-fiction movie, and describes a scene in the movie. In this example, the referent of *hatsu* is an atomic missile. The atomic missile concerned is still recognised as a weapon, as it is called 'weapon of peace', but it is placed in a shrine as an object of worship. It seems that the atomic missile is no longer supposed to be used at all, but is rather an object of faith. However, it is still counted by *hatsu*.[79] Although this *hatsu* could be replaced with a general NC *ko*, it would sound a bit unrefined or even childish. As mentioned previously, it is common that one noun can take different NCs depending on its shape or purpose. In this case, *ko* is probably the only possible alternative NC, and because *ko* is a general NC, when a more specific NC is applicable the specific NC is preferred (Matsumoto, 1993). Thus the general NC would be inappropriate in this sentence. This is evidence

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[79] For idols in a shrine or statues, there is a particular NC *tai* 体 and gods are counted by *hashira* 柱.

that *hatsu* is still the best NC for this referent atomic missile, and that *hatsu* is the standard NC for these referents, regardless of whether they are put to use or not.

From these examples, it is assumed that *hatsu* has come to be used for this kind of fired projectile in most situations originally because the entities concerned are generally thought of as an element of an event involving explosive propulsion and force. Since these projectile entities then became typical referents of *hatsu*, even when they lose their original purpose or the possibility that they might be used, they still take *hatsu* as their 'normal' NC, as illustrated in the last example.

5.3.3. Extended Usages of *Hatsu*

As explained in the Method chapter (see 3.3.2.2.2.), samples without any *hatsu*-evoking nouns/verbs were re-categorised based on the nature of the referent. If such a sample had any prototypical referent, it was examined to see whether it was an event/action or an entity. After examining all the prototypical referents, it appeared that all of them are indeed 'events/actions' and not 'entities'. For this procedure, it should be particularly noted that *hatsu* can take a large variety of referents, with a special tendency to take events and actions, as shown in the previous section (see 5.1). Thus, the term 'prototypical' is used in a broader sense than when it is used for *hiki*. Therefore, the majority of events/actions which are counted by *hatsu* in the category of 'others (tentative)' could be included in one of the four groups (A to D) introduced in section 5.1. However, after checking and classifying the samples, there are still 12 samples left, which are considered to be 'atypical' referents of *hatsu*. These are the samples discussed as extended usages of *hatsu* in this section.

Before moving to the analysis, there is one noteworthy feature of *hatsu* that emerged during the procedure. There were 180 samples which were initially in the

group of 'others (tentative)' and re-classified into the events/actions category.[80] These samples do not have any *hatsu*-evoking word, but their referents were clear from the context, and so were able to be re-classified. Based on this fact, it is considered that the phrase '1-*hatsu*' is commonly and frequently used anaphorically. It has been already claimed that a numeral and an NC together can be used anaphorically in Japanese (see 2.4.1.2), and the present data has confirmed that this is applicable not only for entity NCs but also for *hatsu* when it is used for events/actions.

On the other hand, although the referent in each of the 12 samples classified into this 'others (extended usages)' category is also clear from the context, they are atypical referents of *hatsu*, and often the prototypical referent of another NC. From the examples, it was shown that, as with the first target NC *hiki*, when being matched with atypical referents, *hatsu* is also adding an extra, personal meaning to the referent in the context. Thus, like *hiki*, *hatsu* can be used to modify the meaning of the referent. In addition, unlike *hiki*, *hatsu* has another characteristic: the '1-*hatsu*' phrase is frequently used adverbially (see 5.4.1 for the details of the adverbial use particularly table 5.3 (shown in 5.4.1) for the range of its adverbial meanings). In the examples shown below, it is also observed that '1-*hatsu*' can add an adverbial meaning even when it is used as an NC in the sentence. Therefore, it is considered that the speaker can deliberately choose *hatsu* for atypical referents in order to add a subjective meaning to the referent by emphasising some of its semantic components (just as with *hiki*), and/or to add an adverbial meaning to the referent or to a whole sentence.

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[80] A variety of referents was found in the 180 samples, but there are two particularly big groups: one describing a hitting or swinging action in sports, especially in baseball games (61 samples), and one referring to a hand in table games such as Mah-jong and Go, which are both originally from China and have been widely played in Japan for a long time. Mah-jong is a tile-based game and Go is played with black and white stones as playing pieces.

This section looks at three examples with an atypical referent of *hatsu* to investigate why *hatsu* is chosen and how it is functioning in these unusual cases. Referents in the three examples are fertiliser (normally counted by *fukuro* (bag) or by the specialised term *kamasu*), an air conditioner (normally counted by *dai* (for bulky objects and machines)), and a human being (normally counted by *nin*).[81]

The first example sentence below is from a blog about cultivating, and this sentence is specifically about fertiliser for strawberries.

(5-18)

…イチゴの根は濃度の高い肥料にきわめて弱いので、根から離れたところに**元肥一発**をまき、追肥を行わない栽培がよい…

…ichigo no ne wa noodo no taka-i hiryoo ni kiwame-te yowa-i node, ne kara hanare-ta tokoro ni **motohi** ip-patsu o ma-ki, tsuihi o okona-wa-na-i saibai ga yo-i…

…since the roots of strawberries are very easily affected by dense **fertiliser**, good cultivation (for strawberries) is to spread one initial dose of fertiliser far from the roots [and] not to carry out subsequent fertilisation afterwards…

(「Yahoo! ブログ *Yafuu burogu*」 [Yahoo! Blog], 2008)

Fertiliser in general does not have a specific NC in common parlance but is probably most commonly counted with the quantifier '*fukuro* (bag)'. However, in this context, *hatsu* is used to count fertiliser. There are three possible reasons for this choice of NC. Firstly, it could well be that *hatsu* is appropriate because of the movement of 'spreading' fertiliser. In this sentence, *ip-patsu* is followed by a verb '*maku* (to spread)', which may be a factor that triggers *hatsu* since spreading is an action which scatters something originally confined in one place, a movement that is reminiscent of one of

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[81] *Kamasu* 叺 is a unit used to count fertiliser in the industry, but is rarely used in daily conversation.

hatsu's core meanings 'explosive'. Secondly, *hatsu* is playing a role to enliven the situation in this scene. As the speaker loves looking after strawberries, he must be feeling energetic and excited about 'feeding' his strawberries. The use of *hatsu* makes the action sound more vivid and cheerful compared to the use of some other unit word or NC such as *fukuro* (a bag(ful)) or *kai* (a general NC for actions and events). Lastly, this *hatsu* also seems to be carrying one of the semantic components commonly associated with it, 'one-off'. In the context, the speaker is recommending not to add any fertiliser after the first dose, so it is the first and last fertiliser to be given to the strawberries. Since *hatsu* is used for one-off actions typified by explosions, it is assumed that the speaker consciously or unconsciously chose *hatsu* to express that feature. Among these reasons, the first one is related specifically to the action 'to spread', but the other two involve a use of *hatsu* that is adverbially related to the whole sentence.

The second example (5-19) is from an internet forum where people can ask and answer any kind of questions anonymously; in this case an air conditioner is the referent. One person asks what heating appliances people have in their children's room, and one poster responded '*eakon ip-patsu desu* (aircon 1-CL is)'.

(5-19)

Q: 子供部屋の暖房器具は、なんですか？

A: エアコン一発です。

Q: kodomo-beya no danboo-kigu wa, nan-desu-ka?

A: **eakon** ip-patsu desu

Q: What heating appliance [do you have] in [your] children's room?

A: One **air conditioner**.

(「Yahoo! 知恵袋 *Yafuu chiebukuro*」 [Yahoo! Answers], 2005)

Electric appliances such as air conditioners are usually counted by *dai* (Iida, 2004, p. 58). However, it should be noted that if the sentence had *dai* instead of *hatsu*, as in 'aircon *ichi-**dai** desu*', it would sound a bit odd. The reason for this oddness is that the sentence sounds somehow incomplete. If the speaker has one reverse cycle air conditioner only, the sentence would need an adverb to mean 'only' such as '-*nomi*' or '-*dake*' after the NC *dai*. Without an adverb, it would be assumed that the responder will go on to mention some other appliances in the children's room. This is possibly because the referent, the air conditioner, is indefinite, i.e. the speaker cannot assume that the listener can identify the referent (see 2.4.1.2), so enumerating the referent implies that the number is emphasised. However, having one air conditioner in one room is not at all unusual. Thus, the use of the NC -*dai* rather than -*hatsu* would be quite odd. If the speaker has only an air conditioner, then simply saying 'eakon desu', without an NC, would sound more natural than using the NC -*dai*. On the other hand, using *hatsu* serves not only to allow explicit reference to the number, but also conveys the adverbial meaning 'only', which is derived from the extended semantic component 'one-off'. Thus, this sentence is acceptable even without any adverb, and simlutaneously serves to emphasise the number of the referent. Moreover, it can be assumed that *hatsu* in this context adds the adverbial meaning not just of 'only' but also of 'effective' or 'powerful'. Therefore, as a whole sentence, it means 'I have only one air conditioner that is so powerful that no other appliances are needed'.

The last example given below is from a blog, which is about horse racing.

(5-20)

「伏兵一発」三浦騎手 に注目です。

'**fukuhei** ip-patsu' Miura-kishu ni chuumoku desu

[We should pay] attention to Jockey Miura, 'an **ambushman**'.

The speaker uses the word *fukuhei* (ambushman) to describe a jockey, called Miura, who the speaker is expecting to ride an upset winner. In general, human beings and also words which indicate the positions or roles of human beings are counted by the dedicated NC *nin*. Though *fukuhei* would normally be one of those cases, *hatsu* is used instead in this sentence. From the choice of the word *fukuhei* (ambushman, a soldier who is good at surprise attacks), the jockey Miura is not portrayed as invincible, nor particularly prominent, but it is clear that the speaker nevertheless believes in Miura's potential power. Thus, it is considered that the speaker chose *hatsu* instead of *nin* to add some of the metaphorical meanings conveyed by *hatsu*. Strictly speaking, by pairing *hatsu* and the referent jockey, the speaker injects the meaning of 'potential power' carried by the semantic components 'powerful' and 'having an impact'. From both these meanings and from the context, it is assumed that the speaker is expecting the jockey to surprise the audience, even including himself. This 'surprising' is one of *hatsu*'s possible adverbial meanings, as will be shown in the next section (5.4).

In this section, we have looked at three examples which show how the NC *hatsu* can be used for atypical referents. By being matched with an atypical referent, *hatsu* is adding extra meaning to the referent. These are cases in which the semantic components of the NC are used to modify the meaning of the referent. In addition to this, these examples have shown the possibility that an NC can also work adverbially across the whole sentence when it is used for an atypical referent. While the examples in this section still contain a noun that can be regarded as the referent of *hatsu*, the following section will introduce the use of *hatsu* where it has almost completely lost the role of an NC and is used almost entirely adverbially.

5.4. *Hatsu* Used not as an NC

As explained in the results of quantitative data analysis (see 5.1), when *hatsu* is used with the numeral 1, the combination is quite frequently used adverbially and idiomatically. For instance, if something is broken, but was fixed quickly by some special method or expert help, we could say '*ip-patsu-de naotta* (1-hatsu-INSTR got.fixed)', means '[This one] got fixed quickly/easily'. In this sentence, an adverbial phrase consisting of '1-*hatsu*' and the instrumental particle '-*de*' is used to mean 'quickly' or 'easily'. '1-*hatsu*' is used also in a range of idiomatic expressions, such as '*ip-patsu-ya*' (lit: one-NC dealer), which means something similar to 'a one-hit wonder' in English, and '*ip-patsu gyakuten* (lit: one-CL upset win)', which means 'turning the tables at a single stroke'.

In terms of proportions, the adverbial use accounts for 23% and the idiomatic use for 18% of the total number of samples with '1-*hatsu*' in the data. These samples were categorised into 'adverbial use' and 'idiomatic use' in the method chapter (see 3.3.2.2.2), since *hatsu* is not used as an NC in these cases. Based on these categorisations, they are examined separately in the sections below.

5.4.1. Adverbial Usages of *Hatsu*

In the data, the adverbial use of *hatsu* is observed in 284 samples (23% of the samples of '1-*hatsu*' in the data). In the adverbial use, there are two important characteristics to be noted. First, a set of the numeral 1 and *hatsu* is very frequently combined with the particle '*de*' and used in the phrase '1-*hatsu-de* 一発で (*ip-patsu-de*)' (see 3.3.2.2.2.). Second, when the phrase '1-*hatsu*-(*de)*' is used adverbially, the phrase usually has multiple senses. That is, the phrase '1-*hatsu*-(*de)*' usually expresses not only one but a number of different meanings at the same time. As explained in the method chapter (3.3.2.2.2), samples were tested to see if any adverb or adverbial

phrase could replace the '1-*hatsu*(-*de*)' phrase in each sample. This does not mean, of course, that the phrase '1-*hatsu*(-*de*)' has exactly the same meaning as this alternative adverb or adverbial phrase. However, it helps to confirm the basic or strongest sense of '1-*hatsu*(-*de*)' that emerges in the context.

After testing, samples were categorised into groups depending on the predominant meaning of the phrase in that context. One thing which should be noted here is that the instrumental particle '-*de*' itself can add the meaning of 'limitation', for example, when it is used with a phrase expressing the duration of time, or number or quantity. For instance, '*ichi-jikan hanasu* 一時間話す (one-hour talk)' means 'talk <u>for</u> an hour' but '*ichi-jikan-**de** hanasu* 一時間で話す (one-hour-**de** talk)' means 'talk <u>in</u> an hour' (i.e. complete the talk within the limit of an hour). Thus, great attention is required when figuring out the adverbial meaning of '*hatsu*', as both the numeral 1 and the particle -*de* can independently express the meaning of 'limited' or 'only'. In the analysis, close attention was always paid not to assume that this kind of meaning comes from only *hatsu* without considering these other factors.

Samples were divided into groups, summarised in the table below. However, as explained above, the boundary between each group can be quite vague. This division into the groups is simply for the purpose of analysis. In the table, samples are divided broadly into three groups, and the first group has two sub-groups under it.

Table 5.3. The number of samples with adverbial use

Basic / Strongest Meanings	Number of Samples
Immediately/Quickly/ In an instant	109
Only	37
At one time	110
Common phrase: 'Here we go? This is it!'	28
Total	**284**

The '1-*hatsu*(-*de*)' phrase in samples in the first group, highlighted with light blue, can all be replaced with commonly used adverbs. The samples in this group are divided into two sub-groups depending on the meaning of the replaceable adverbs: 'immediately/quickly/in an instant' and 'only'. The second group, highlighted in purple, includes samples whose '1-*hatsu*-(*de*)' phrase means 'at one time'. This pattern is slightly different from the first group since the '1-*hatsu*-(*de*)' phrase is replaceable with a phrase with the classifier used for events: *kai*. That is, the '1-***hatsu***(-*de*)' phrase can be replaced with '1-***kai***(-*de*)'. The third group, highlighted yellow, demonstrates a different pattern from the other two groups because the '*ip-patsu*' phrase is considered to be used as a part of a common phrase, more commonly realised as '*koko-wa hito-tsu* (lit: here is one)' or '*koko-wa chotto* (lit: here is a little bit)' and meaning 'Here we go! This is it!'.

In the following, 5.4.1.1 picks up two examples in which '1-*hatsu*(-*de*)' has the primary meaning of 'immediately/quickly/in an instant' and the next two sections look at instances in which it has the meaning of 'only' (in 5.4.1.2) and 'at one time' (in 5.4.1.3). Then, section 5.4.1.4 shows a case in which a variety of meanings are

expressed equally well. This is followed by the last section, which discusses samples in which '*ip-patsu*' is used in a common phrase meaning 'Here we go! Let's do it!' (5.4.1.5).

5.4.1.1. Immediately/Quickly/In an instant

As shown in the table (5.3) above, '1-*hatsu*(-*de*)' is very frequently used adverbially to mean 'immediately', 'quickly', and 'in an instant'. This section picks up two examples in which these meanings stand out over other meanings in the '1-*hatsu*(-*de*)' phrase (See Appendix C for more examples).

The first example below (5-21) is from a book written by a Japanese actor and this part is about a TV program in which he appeared. The original title of the TV program was the same as a very famous Japanese novel called '*ningen-shikkaku* 人間失格 (No Longer Human)', whose original Japanese title literally means 'disqualification [as a] human being'. The bereaved family of the author complained about the TV program title. For this reason, the makers of the program decided to insert a punctuation mark—referred to in Japanese as a 'middle spot'—into the title, between *ningen* 人間 'human being' and *shikkaku* 失格 'disqualification', so that it would appear different from the title of the novel.

(5-21)

放送を見てもろたら一発で分かるけど、「人間」と「失格」の間に小さなチョボを入れた。

hoosoo o mi-te-moro-ta-ra ip-patsu-de waka-ru-kedo, 'ningen' to 'shikkaku' no aida ni chiisa-na chobo o ire-ta

[You will] immediately understand if [you] watch the broadcast, [we] inserted [a] small middle spot between 'human' and 'disqualification'.

The actor says 'if you have a look at the actual broadcast, you will *immediately* see that there is a small middle spot'. In this sentence, '1-*hatsu-de*' is not counting anything. The combination '1-*hatsu*' is followed by the particle –*de* and forms an adverbial phrase. In this context, the phrase is thus understood to be used adverbially, to mean 'immediately', with the additional senses of 'easily', or 'at one go'. In addition, it might also be possible to translate each step more precisely, such as 'if you give *only* a glimpse, you will *immediately* know…'. However, what the speaker is insisting on is that 'the middle spot in the title is so obvious that everybody can immediately recognise it'. Therefore, the meaning of 'immediately' is considered to stand out among other meanings in this context.

The next example (5-22) is from a story, and this particular scene includes two instances of '1-*hatsu*-(*de*)', which are single-underlined and double-underlined below. In this scene, the main character comes across a drunk man, who picks a fight with him. The first two sentences are uttered by the drunk man and the last sentence is part of the narration.

(5-22)

お前のような馬にたかった蚤みたいにちっぽけな奴は、<u>一発</u>で黙らせてやるよ。この<u>一発</u>でなあ。男は節くれだった**拳**を、万次郎の鼻先へつきつけた。

omae-no yoo-na uma ni takat-ta nomi mitai ni chippoke-na yatsu wa, <u>ip-patsu-de</u> dama-rase-te ya-ru-yo. kono <u>ip-patsu</u>-de-naa. otoko wa fushikure-dat-ta **kobushi** o, manjiroo no hana-saki e tsuki-tsuke-ta.

'[I] will make a guy like you, who is like a tiny flea swarming on horses, shut up <u>immediately</u> [lit: by one-CL]! With this <u>one</u> [lit: one-CL]!' The man put [his] gnarled **fist** to the tip of Manjiroo's nose.

Of the two instances of *hatsu* in this example, only the first single-underlined *hatsu* is an adverbial use. As a form of '1-*hatsu-de*', the phrase means 'immediately', as in 'I can shut you up immediately'. Also, as far as the drunk man is concerned, it can be understood to indicate that he can make the main character shut up 'easily'. On the other hand, the second double-underlined *hatsu* is used as an NC. Though this is also followed by the particle –*de*, this –*de* means 'by' independently, not as part of an adverbial expression, and *hatsu* is counting the action of punching. The word *kobushi* 拳 (a fist) appears explicitly in the following sentence, and works metonymically to indicate that the drunk man is referring to an action of punching. Thus, this '1-*hatsu*' is used anaphorically to mean 'one punch'.

This example shows well how *hatsu* can be used as an NC as well as adverbially, since both usages are seen adjacent to one other in a single context. Additionally, combination of these two different uses of *hatsu*, makes the sentences sound like a word play: 'I can shut you up "1-*hatsu-de* (immediately)" by "1-*hatsu-de* (by one punch)"'. This play on words actually makes the whole utterance sound quite refined in spite of the character's evident roughness.

The meanings discussed in this section are considered to be derived mainly from the core semantic component of *hatsu* 'powerful' and from one of its extended semantic components 'influential' (see Figure 5.3). If something in the context is powerful and influential, the goal can be achieved in a short time: immediately, quickly, or in an instant. In addition, though these are not listed in the table, some other adverbial meanings can be also interpreted from the phrase, such as 'easily' (see examples (5-21) and (5-22)). These also relate to meaning components of *hatsu* such as 'only' (see also examples (5-21) and (5-22)).

5.4.1.2. Only

In the data, there are 37 samples whose '1-*hatsu*(-*de*)' phrase has a strong sense of 'only'.[82] In this section, first example (5-23) illustrates that '1-*hatsu-de*' is used to predominantly mean 'only'. Then one more example, (5-24), in which the '1-*hatsu-de*' phrase is used to mean 'powerful' or 'effectual' together with 'only', follows (see Appendix C for more examples).

The first example is from a rather old book about Enka, a Japanese traditional style ballad. The speaker is one of many well-known Enka singers and is saying that he aims to sell ten million records. At the time of this speech, his total record sales were around 4,365,000. He said 'if it goes at this pace, I will need six or seven more years to reach my goal', and then utters the example sentence below.

(5-23)

畜生、一発で五百万なんて童謡まがいの歌もあるのになあ。

chikushoo, ip-patsu-de go-hyaku-man-nante dooyoo magai-no uta mo aru-noni-naa

Damn it, there [are] songs [which are] like nursery songs [that have sold] five million in one go [lit: by one] though.

(「演歌の虫 *Enka-no mushi* 」[Enka-worm], 1985)

The speaker complains that there are some Enka songs which are not very good quality but have still sold very well. He shows his contempt for these Enka songs by saying they are 'like nursery songs'. On the one hand, his total accumulated sales still come to less than five million. On the other hand, some of these 'nursery song-

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[82] Adverbs used for the test for this group are *soredake-de* (just with that) or *nomi* (only/alone). These two adverbs both mainly mean 'with (something) only'.

like Enka' recordings have sold five million by themselves, and '1-*hatsu-de*' is used to express this meaning. Thus, this '1-*hatsu*' is kind of counting the number of releases or CDs, which are usually counted by another NC, *kyoku* 曲. However, particularly because he mentioned that 'even after accumulating all of my sales, it is still less than five million', it is considered that the '1-*hatsu*' phrase is emphasising the adverbial meaning of 'only' to refer to the release of one nursery-like song that can sell well, contrary to his case.

The next example (5-24) is from a fishing book and this excerpt is particularly about seasickness. The speaker has been talking about somebody who used to get seasick all the time, but has grown accustomed to being on the ship now. It is not because he found a brilliant solution, but he just started loving fishing so much that he became fine on the ship. After stating this, the speaker utters the example sentence.

(5-24)

考えてみれば「**これ**<u>一発で</u>船酔いは癒る」というクスリははっきりいって、ない。

kangae-te-mi-re-ba '**kore** <u>ip-patsu-de</u> funayoi wa i-ru' to i-u kusuri wa hakkiri it-te, na-i

If [you] think about [it], [there] is no such medicine [about which we can] clearly say '[you will] recover from seasickness [if you take] <u>one</u> [of] **these**'.

（「モリさんの釣果でごちそう *Mori-san-no chooka-de gochisoo* 」
[Feast with Caught Fish by Mr. Mori], 2002)

Syntactically, '1-*hatsu*' seems to be used for ***kore*** (this), so it looks like the *hatsu* phrase is counting the '*kore* (this)' as an NC. However, attention should be paid to the fact that what *kore* indicates is not at all clear in this context. The sentence has a word *kusuri*, which literally means 'medicine', so it is translated to 'medicine' in the

accompanying literal translation above. However, the point is that the word *kusuri* is actually written in *katakana*. If it were written in *kanji* (薬 *kusuri*) or *hiragana* (くすり *kusuri*), it would be very clear that the word *kusuri* indicates some actual medicine.[83] But since it is written in *katakana*, it can metaphorically mean anything which will or is likely to 'take affect or work well like medicine', so any technique or method which can potentially work for seasickness can be included.

Based on these considerations, one possibility is that *hatsu* is used in this context because it can be flexibly used for a wider variety of entities or actions than other NCs whose referents are more restricted by semantic criteria. However, in this case, it is assumed that this *hatsu* together with the numeral 1 and the particle *–de* is used more adverbially. In this particular context, what the referent is does not matter at all. Rather, the sense of '*only* this one' is more in focus because the speaker is talking about the immediate effectiveness of a remedy, whatever it is, without the need for further intervention. Therefore the phrase '1-*hatsu-de*' here is considered to be used adverbially to mean 'only'. In addition to that, this '1-*hatsu-de*' is assumed to be conveying the meaning of 'immediately' and 'effectual' or 'powerful' as well. Thus as a phrase, it contains the sense of 'it is so effectual and works so immediately that you need only this one to overcome seasickness'.

The sense of 'only' discussed in this section is considered to be extracted mainly from an extended semantic component of *hatsu*, 'one-off'. In addition, the component 'influential', again, may lead to an adverbial meaning of 'only', since if something is influential or strong enough, it needs nothing else to achieve the goal.

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[83] *Hiragana* is a phonetic lettering system and the most basic of the three Japanese writing systems. *Katakana* is also a phonetic lettering system that is normally used for loanwords. When a native Japanese word such as *kusuri* here is written in *katakana*, it is a sign to tell the reader that the writer means something different from its literal meaning.

5.4.1.3. At One Time

As mentioned in the introduction to this section (5.4.1), there are 110 samples in which the '1-*hatsu*(-*de*)' phrase can be replaced with '1-*kai*(-*de*)'. *Kai* is the most general classifier used for events and actions, and characterised as being used for repeated actions. Thus, the adverbialised phrase '1-*kai-de*' can be literally translated to 'at one time'. However, from the analysis, it emerged that when the phrase '1-*hatsu*(-*de*)' is used, it has a stronger sense of 'only one (something)' or 'no more than one time'. Two samples are examined below.

The first example (5-25) is from an internet forum.

(5-25)

検索すると<u>一発で</u>その単語の意味がヒットする検索エンジン、方法などはありませんか。

kensaku-suru-to <u>ip-patsu-de</u> sono tango no imi ga hitto-suru kensaku-enjin, hoohoo nado wa a-ri-masen-ka

If [I] search, isn't [there] any search engine [or] way [that] hits the meaning [of] the word in <u>(just) one go</u>?

(「Yahoo! 知恵袋 *Yafuu chiebukuro*」 [Yahoo! Answers], 2005)

In this context, the phrase '1-*hatsu-de*' functions not just to count the number of searches, but to emphasise the idea of '*only one*' search here, since that is the crucial point the poster of this comment cares about. It could be possible to replace *hatsu* with *kai* and make '1-*kai-de*' in this case, and it would still mean 'at one go' because the '1-*kai-de*' phrase can also mean 'only' from the combination of the numeral 1 and the particle '-*de*' (see 5.4.1). However, if '1-*kai-de*' were used, it would lose the strong sense of 'only' when compared to *hatsu*. The most important thing for the poster in

this context is that he wants to get the result by searching no more than one time and without doing anything else, therefore *hatsu* is used to particularly emphasise this meaning.

The next example (5-26) is quite similar to the last one. This instance is from the same internet forum, and is about a practical test in a driving school. The poster is asking whether people were able to pass the practical test of driving a log bridge and slalom that are both usually set in the practice field.

(5-26)

みなさんは<u>一発で</u>一本橋やスラロームをクリアできましたか？

mina-san wa <u>ip-patsu-de</u> ip-pon-bashi ya suraroomu o kuria deki-mashi-ta-ka

Did everybody clear the log bridge and slalom <u>at one go</u>?

(「Yahoo! 知恵袋 *Yafuu chiebukuro*」[Yahoo! Answers], 2005)

As in example (5-25), this '1-*hatsu-de*' can be replaced with '1-*kai-de*' to mean 'at one go'. However, with *hatsu*, it is again emphasising the sense of '*only* at one go'.

In both samples, the actions concerned can be repeated. The performer can do the same action, searching or taking the test, until they achieve a goal. That is assumed to be the reason why '1-*kai-de*' and '1-*hatsu-de*' are interchangeable in these samples. However, with *hatsu* than *kai*, the phrase gains a stronger sense of 'no more than one time', as *hatsu* has a strong meaning of 'one-off' derived from one of the core semantic component, 'explosive'.

5.4.1.4. Multiple Meanings

Although the previous three sections illustrate examples in which one or two meanings particularly stand out, when '1-*hatsu-de*' is used, the phrase can be generally interpreted to convey not only one, but a number of different meanings, as explained in the introduction section (5.4.1). This section picks up one of the cases in which multiple meanings are equally expressed.

In example (5-27) below, the phrase '1-*hatsu-de*' has an adverbial meaning of not only 'immediately' but also quite a strong sense of 'easily' as well as 'only' and 'surprisingly'. This is from an internet forum and this post is about the cord of a vacuum cleaner. It happens quite often that pushing the rewind switch does not work properly and the cord stops winding up in the middle. This post explains a life hack to solve this problem, and the example sentence follows.

(5-27)

あとは、通常のコード取り込みスイッチを押せば<u>一発で</u>コードが巻き取れます。

ato wa, tsuujoo no koodo-torikomi-suicchi o o-se-ba, <u>ip-patsu-de</u> koodo ga makito-re-masu

Then, if [you] push the normal cord rewind switch, [you] can <u>straightaway/easily</u> wind up the cord.

(「Yahoo! 知恵袋 *Yafuu chiebukuro*」 [Yahoo! Answers], 2005)

After explaining the trick, the poster says '[after doing this], you can wind up the cord at one go'. Therefore this '1-*hatsu*' can be assumed to be counting the action of pushing the button. However, based on the previous context, it also means 'without being stopped', 'without pushing the button again', and 'smoothly'. Since people often

have problems with the cord-winding apparatus, the '1-*hatsu-de*' phrase is emphasising how much more quickly and easily the action can be done using this life hack. In addition to that, the '1-*hatsu-de*' can convey an adverbial meaning of 'surprisingly', as a lot of people have been in the same trouble without any good solution, so the life hack may provide a pleasant surprise.

5.4.1.5. *Hatsu* Used in a Common Phrase

In this section, samples in which *hatsu* is used in a common phrase are focused on. The common phrase concerned is generally expressed as '*koko-wa <u>hito-tsu</u>* (lit: here is one)' or '*koko-wa <u>chotto</u>* (lit: here is a little bit)', both of which are used in a similar way. Literally, the underlined part '*hito-tsu*' means 'one-general NC' and '*chotto*' means 'a little bit', and these two phrases are both often used when you start doing something or think of doing something new, rather like the expressions 'Here we go!' or 'Right! This is it!' in English. [84] In the data, there are 28 samples in which '*ip-patsu*' is used in the position of '*hito-tsu*' or '*chotto*' in this phrase. It is considered that the '1-*hatsu*' phrase functions to give a greater sense of 'boost' to the motivation to start something new, compared to the original phrase. One example is given to see the actual usage.

This sample is from a book and in this scene the speaker is talking about publishing his work. He sends a manuscript to a publisher, and is told that they will support him, but he has to pay around half of the publishing costs. Although it is quite a lot of money, he decides to take this opportunity, and utters the example sentence. In

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[84] These phrases are also used to make a request, such as *koko-wa hito-tsu go-kanben-kudasai* (Please forgive [me]). However, in the data used for the present study, all phrases which employ *ip-patsu* are used in the first meaning shown in the main context.

this context, the speaker utters this common phrase when making the big decision. The whole phrase is single-underlined and the *ip-patsu* part is double-underlined.

(5-28)

…ここは一発人生に対して大博打を打つ覚悟で自分に投資することに決断した。

…koko-wa ip-patsu jinsee ni tai-shi-te oo-bakuchi o u-tsu kakugo de jibun ni tooshi-suru koto ni ketsudan-shi-ta

…here now, [I] have decided to invest in myself, [by] being ready [to] play for high stakes for [my] life.

(「何だ可んだ *Nandakanda* 」[Something or other], 2003)

In this context, it would be totally acceptable to have the original form of the phrase '*koko-wa hito-tsu*' in the same position in this context. Considering the difference made by the use of *hatsu* in the phrase, it is assumed that the *hatsu* is closely related in the sentence to the word 大博打 *oo-bakuchi*, which means a 'big gamble'. In this context, the person is not yet sure if he will make money by the publication or just lose a lot of money, so he uses the word 'gambling'. In general, when you gamble, you normally have a choice to do it or not, but once you place your bet, you cannot go back. It is assumed that *hatsu* is supporting this sense that you can choose to let it go or not, but once you do, you cannot control it afterward; this characteristic is exactly the same as in the case of typical referents of *hatsu* such as bombing, shooting, and punching. We can decide to bomb, shoot or punch, but cannot stop it after the events/action starts, and cannot recover the damage after the event/action is completed either. Therefore, if it was the original phrase '*koko-wa hito-tsu*', the utterance would sound more moderate and calm. On the other hand, with *hatsu*, it gives a sense that the speaker makes really a big decision that he cannot take back. This is just one example,

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but in other samples found in the data, it is observed that '*koko-wa ip-patsu*' tends to be used when the speaker is facing a sink or swim situation, or preparing for a big opportunity.

In this section, examples with '1-*hatsu*(-*de*)' used adverbially have been examined. The phrase is commonly used in a variety of scenes and contexts in Japanese. The analyses have been presented separately above based on the predominant meaning expressed by the phrase in each case. However, an important point to note is that the '1-*hatsu*(-*de*)' phrase usually expresses not only one but several meanings at the same time.

In the examples discussed, it is apparent that '1-*hatsu*(-*de*)' used adverbially can bear a variety of meanings such as 'in a short time (e.g., immediately)', 'only' and 'at one go/no more than one time'. Although these are assumed to be the main meanings, a number of other meanings, such as 'easily' (see example (5-21) and (5-22)) and 'surprisingly' (see example (5-27)), are also occasionally observed. Thus, though *hatsu* is not used purely as an NC in these usages, there are clear semantic connections between the semantic components of *hatsu* and these adverbial phrases.

In addition to these meanings, it has also become apparent that '1-*hatsu*(-*de*)' can be used to add a metaphorical meaning 'once you start, you cannot go back or take it back', when it is used in a context where a big decision has to be made. The origin of this metaphorical use is assumed to come from a core semantic component of *hatsu* 'explosive'. In the analysis, example (5-28) illustrates the expression of this metaphorical meaning.

5.4.2. Idiomatic Usages

In the data, there are 226 samples which have an idiomatic phrase including '1-*hatsu*' (18% of the samples of '1-*hatsu*' in the data). In analysing these idiomatic uses, a

syntactic test was used as explained in the Method Chapter (3.3.2.2.2). These idiomatic usages are categorised into two types. One is classical idioms with 1-*hatsu* that have been used for a long time and are usually found in the dictionary, such as *ip-patsu gyakuten* 一発逆転 (lit: one-CL upset win) 'turning the tables at a single stroke' and *ip-patsu shoobu* 一発勝負 (lit: one-CL game) 'a make-or-break game'. The other type involves phrases with 1-*hatsu* that have emerged in recent years and spread broadly enough to become recognised as common phrases such as *ip-patsu kensaku* 一発検索 (lit: one-CL search) and *ip-patsu gookaku* 一発合格 (lit: one-CL pass/success). In the following sub-sections, firstly classical idioms (5.4.2.1) and secondly novel common phrases with 1-*hatsu* (5.4.2.2) are examined.

5.4.2.1. Classical Idioms (*ip-patsu-ya* 一発屋)

There are quite a few classical idioms which include '1-*hatsu*' and which are used commonly in daily life. For instance, *ip-patsu gyakuten* 一発逆転 (lit: one-CL upset win) 'turning the tables at a single stroke' is used when an unexpected victory is made in sports, and the term can also apply to daily activities. Specifically, the idiom is used when a brilliant idea or a nimble action makes a bad situation dramatically better at one stroke. In this idiom, '1-*hatsu*' indicates those ideas or actions; *hatsu* is used to add the meaning of something being so 'powerful' or 'effective' that it can change the situation. *Ip-patsu shoobu* 一発勝負 (lit: one-CL game) 'a make-or-break game' is used when you have only one chance to get something done. Thus, it is assumed that *hatsu* here is particularly adding the meaning of '*only* one time' since the situation resulting from the opportunity can be either good or bad, unlike in the case of *ip-patsu gyakuten* 一発逆転.

In addition to these, another classic idiom is introduced in context below. The idiom is '*ip-patsu-ya* 一発屋' (lit: one-CL dealer), and it is quite similar to the term 'one-hit wonder' in English. This idiom is commonly used particularly for musicians

or comedians/comediennes who become popular for a short time with only one song or one performance and soon fade into obscurity. In the data, there are 38 samples with this idiom, and one of these, example (5-29), is shown below.

In the example, a poster in an internet forum talks about a novice singer. This singer achieved top sales of the week with her song, but the poster does not believe she will have ongoing popularity. The poster thinks the singer does not look attractive and even appeared to be lip-synching in a music program on TV. Thus, the poster calls the singer '*i-ppatsu-ya*' (a one-hit wonder).

(5-29)

顔もイマイチな？私もじっくり見たけどロパクっぽい気がしたし、<u>一発屋</u>で終わりそうな気がした。

kao mo imaichi-na? watashi mo jikkuri mi-ta-kedo kuchipaku-ppoi ki ga shi-ta-shi, <u>ip-patsu-ya</u>-de owa-ri-soo-na ki ga shi-ta

[Her] face is also not very good? Though I also closely looked at [her, I] felt like [it was] a lip-synch, [and I] felt [that she] will end up being a <u>one-hit wonder</u>.

(「Yahoo! 知恵袋 *Yafuu chiebukuro* 」[Yahoo! Answers], 2005)

In this idiom, '1-*hatsu*' is giving a strong sense of 'impact' or 'powerful' but also only 'one-off'. Even though '*ip-patsu-ya*' is usually not used in a positive sense, it is still admitting that the person has at least once achieved something influential and became popular. Therefore, the power and influence of the 'something that made the person famous and popular' is expressed by *hatsu*. At the same time, *hatsu* also gives a meaning of 'one-off only (in that the person will not remain popular)'

5.4.2.2. Novel Common Phrase (*ip-patsu taijoo* 一発退場)

In the data, there are a number of additional idiomatic phrases with 1-*hatsu* found, such as *ip-patsu ookee* 一発 OK (lit: one-CL okay) 'the go-ahead at one go'*, ip-patsu shiken* 一発試験 (lit: one-CL exam) 'a make-or-break exam' or 'an exam-only assessment'.) Among these idiomatic phrases, as in the case of the classic idioms mentioned above, the '1-*hatsu*' part is primarily playing a role to mean 'at one go' and 'only'. For instance, *ip-patsu ookee* 一発 OK usually means that somebody tries something and gets approval *at one go*, and *ip-patsu shiken* 一発試験 means that you have *only* one chance to take a test, or *only* one test to achieve something, such as a course of study which does not have any assignments or class performance but only a final exam.

The example taken up in the following has an idiomatic phrase *ip-patsu taijoo* 一発退場 (lit: one-CL leaving) 'a no-second-chance dismissal'. This phrase is often used in a sports match when somebody commits a violation and is made to leave the game as a penalty. In the example, a soccer player was made to leave the pitch due to one such violation.

(5-30)

ベルギー戦の後半８分、譚選手がセバスティアン・ポコニョーリ選手の局部を故意に蹴ったことで、一発退場。

berugii-sen no koohan hap-pun, Tan-senshu ga Sebasutian-Pokonyoori-senshu no kyokubu o koi-ni ket-ta koto de, ip-patsu taijoo.

[At] eight minutes into the latter half of the game against Belgium, Tan was ordered off the field [lit: one-*hatsu* leaving] for kicking Sébastien Pocognoli's private parts on purpose.

(「Yahoo! ブログ *Yafuu burogu* 」 [Yahoo! Blog], 2008)

In this idiomatic phrase *ip-patsu taijoo* 一発退場, *hatsu* is considered to be expressing at least two meanings: 'influential' and 'only'. Strictly speaking, this '1-*hatsu*' seems to be working in two ways. Firstly, the action itself, which is so influential that it was regarded as foul play and triggered the penalty, is modified by '1-*hatsu*'. For this use, the phrase conveys the meaning of 'influential', or more specifically befitting in this scene, 'critical'. Secondly, '1-*hatsu*' is also assumed to adverbially mean 'only'. The action is so critical that it causes the heavy penalty of leaving the game for that reason and for no other.

In this section, the classical and newly emerged idiomatic uses have been analysed. It has been shown that '1-*hatsu*' is working in these in a similar way to its function in adverbial usages. That is, *hatsu* is modifying the action or situation concerned in the idiomatic phrase, with various of its semantic components activated in each context. Since *hatsu* can originally take a variety of events/actions as its referent, '1-*hatsu*' can be easily combined with another word, such as *kensaku* (search) and *gookaku* (pass) as explained in the introduction, to make an idiomatic phrase. When used for events/actions, *hatsu* is not simply counting the number of times the event occurred, but describes the nature of the referent to some extent, so it is frequently employed in idioms which involve those meanings.

5.5. Chapter Summary

This chapter has examined the usages of *hatsu* in both cases in which *hatsu* is used as an NC and in which it is not used as an NC.

When used as an NC, it is first confirmed from the quantitative results that *hatsu* is used for events and actions a lot more frequently than for entities. In previous studies, *hatsu* has not been investigated as thoroughly as some other NCs. The present

analysis has revealed that *hatsu,* like *hiki*, has a range of semantic components. Around the core meaning 'explosive', *hatsu* has semantic components which are closely related to vivid actions such as 'forceful' and 'having an impact'. Section 5.3.1 focused on examining prototypical referent events/actions whose nature is clear, and confirmed that *hatsu* can be used for types of actions whose focus is on the source and the goal of the action, and that sometimes the path is also included. Section 5.3.1 also picked up some examples in which a verb modifying the referent action is vague. These examples have illustrated that the context plays a role in specifying the nature of the action, but that *hatsu* works to support the context and provide some information concerning the nature of the action itself. It is also found that these vague verbs are generally rough-sounding or used to mean sex (with the light verb *yaru* (to do)), and used as dysphemisms. Thus, these verbs and usages are assumed to cause *hatsu* to have dirty or sexual connotations. However, conversely, it has been shown that these connotations are essentially independent from *hatsu*, so it can be assumed that *hatsu* itself does not inherently have these kinds of meanings.

The data has also shown that entities such as bullets and bombs that are part of an event that is a prototypical referent of *hatsu*, take *hatsu* as the most appropriate NC as well, even when they are completely lacking any sense of movement or of the original purposes of *hatsu*.

After investigating the prototypical and less prototypical referents of *hatsu*, samples with atypical referents of *hatsu* were also examined. These samples have shown that *hatsu* can be used to add an extra meaning to the referent concerned in the same way as *hiki*, as demonstrated in chapter 4. By pairing *hatsu* and a referent whose usual NC is not *hatsu*, the speaker can express his/her subjective meaning metaphorically.

In addition to these findings, compared to *hiki*, *hatsu* has been shown to have another interesting characteristic: that it is frequently used adverbially and

idiomatically when used together with the numeral 1. The data have shown that '1-*hatsu*(*-de*)' can add a variety of adverbial meanings to the sentence. From the usages examined, it is evident that these adverbial phrases employing *hatsu* are more closely associated with actions/events rather than entities. In addition, when the phrase '1-*hatsu*' is used in an idiom, it is observed that one or two specific semantic components of *hatsu* appear in each case, and that '1-*hatsu*' is clearly employed to express those meanings.

Chapter 6   Conclusion

As outlined in the Introduction, this study concerns the meaning of Japanese NCs and their actual usages in terms of the referents they co-occur with. In the typological literature, as well as in previous studies of Japanese, the focus is almost entirely on NCs that take entities as their referents and on the characteristic that NCs are generally matched with a noun based on semantic criteria such as the animacy, the physical characteristics, or the function of that referent. This study investigates what factors account for extension in the range of referents of an NC beyond cases in which these kinds of objectively observable characteristics are evident.

Two case studies have been undertaken, taking the NCs *hiki* and *hatsu* as targets for detailed investigation, using data from the Balanced Corpus of Contemporary Written Japanese. The study employs the theoretical framework of Prototype Theory, along with the theories of metaphor and metonymy.

The results of the two case studies, including both quantitative and qualitative data analysis, have been presented in chapters 4 and 5. Quantitative analysis has played a major role in identifying the prototypical, less-prototypical, and atypical referents of each NC, and the qualitative analysis of numerous examples, each in its original context, has revealed the meanings carried by the NC across the contexts in which it appears.

In this thesis, these meanings constitute key notions throughout the analyses and are referred to as 'semantic components'. Among these semantic components, those which form the central sense of the NC are termed 'core' semantic components and 'semi-core' semantic components, while more extended meanings are termed 'extended' semantic components. These semantic components and their connections are summarised in a diagram for each target NC, shown in (4.2) for *hiki* and (5.2) for *hatsu*. The diagrams are shown again below.

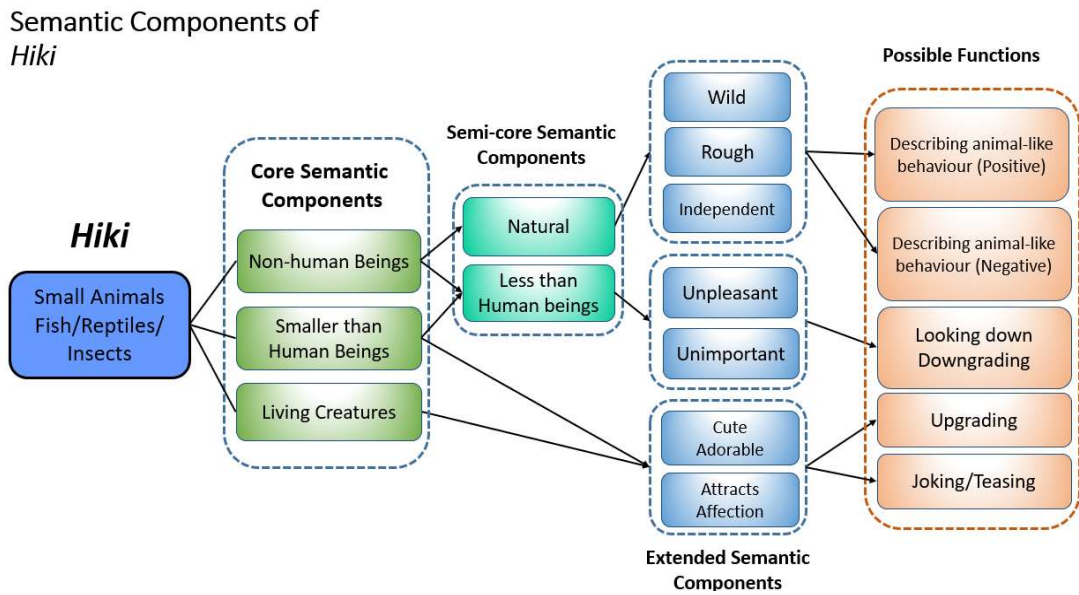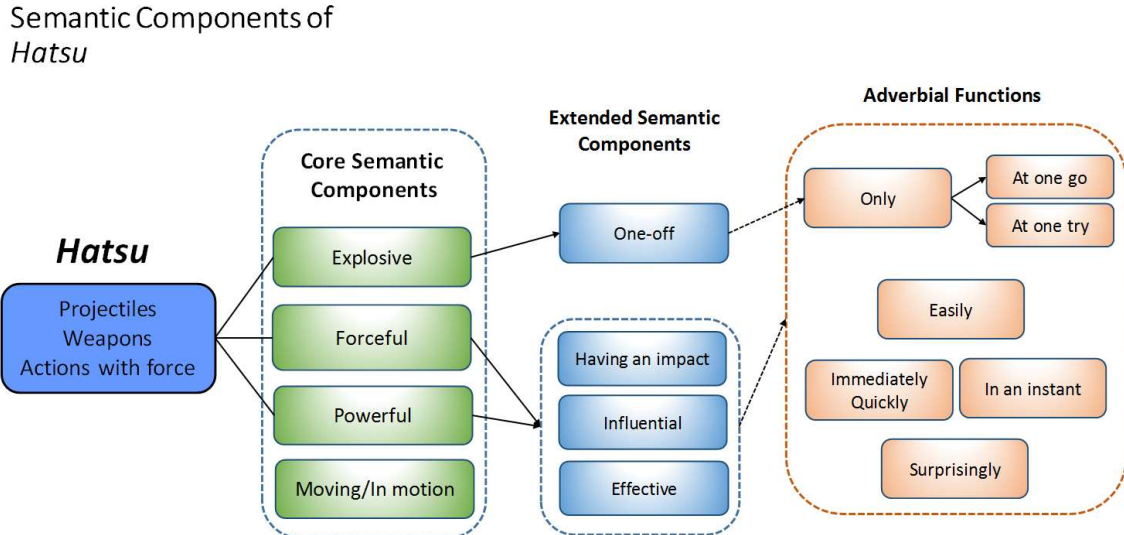**Figure 4.2 Semantic components of *hiki***

Semantic Components of
Hiki

Figure 5.3 Semantic components of *hatsu*

Semantic Components of
Hatsu

Based on the findings from the two case studies, this study claims that in Japanese, the range of referents of a single NC can be extended in two dimensions beyond cases in which these kinds of objectively observable characteristics are evident. These are the dimension of the typicality of referents and that of the categories to

which referents belong (the categories of either entities or events). In all cases of extension, there is a non-literal connection between an NC and its referent in a specific context. The particular non-literal devices identified in the case studies in this research are metaphor and metonymy. These devices play a role in making either a metaphorical or metonymical connection between an NC and a noun in the context in which it appears, and allow the range of referents to be extended both within and across the two dimensions. The details of this claim, discussed in the relevant sections of this thesis (1.2), are summarised below.

First, when the meaning of an NC is extended within the dimension of typicality, there are two levels of extension that can occur. An extension can be made from prototypical referents to less prototypical referents. It is important to note that not all 'less prototypical' uses involve the phenomenon here termed 'extension'; some referents of an NC are considered 'correct' referents of that NC based entirely on their objectively observable characteristics, but are nevertheless regarded as less prototypical simply because they are not commonly talked about (e.g., the NC *hiki* used for microorganisms). However, there are other less prototypical referents whose meanings are actually extended from prototypical meanings (e.g., *hiki* used for soft toys). In these cases, some semi-core or extended semantic components are activated (e.g., the extended semantic component 'cute/adorable' for soft toys, extended from the core semantic components 'living cretures' and 'smaller than human beings'). In this way, a metaphorical connection between a noun 'soft toy' and the NC *hiki* is established. In addition, the use of an NC can be extended from prototypical/less prototypical referents to atypical referents. For instance, pastries are not alive and do not even look like any animate being, so on the basis of their objectively observable characteristics they do not have a *hiki*-like nature at all. However, *hiki* can be used as a vehicle of metaphor to let the speaker add subjective meanings, conveyed by the semantic components of *hiki*, such as 'living creatures' and 'cute/adorable'.

Second, extension of meanings can cross between the category of entities and that of events. For example, the NC *hon* is considered to be fundamentally used for entities, but is also used for events in its extended usages. This study has shown the possibility that the use of the NC *hatsu* works in the opposite way: that it is fundamentally used for events and its use is extended to entities. In the data examined, *hatsu* particularly showed metonymical extensions. For example, bullets are an entity that is a part of the event 'shooting'. Thus, it is assumed that there is a metonymical connection between the noun 'bullet' and the NC *hatsu*. In this way, this study has confirmed observations by previous scholars, particularly Lakoff (1987) and Matsumoto (1993) that the extension of the range of referent of NCs can occur across the categories (entities and events). Furthermore, it has also shed light on the possibility that the direction of the extension is not restricted from entities to events, but can happen bidirectionally between the categories.

It has also become evident through this investigation that the extension of meaning of Japanese NCs can happen not only within one dimension (either typicality or categories (entities and events)), but also across these dimensions. For instance, the second case study has shown that *hatsu*, which is considered to be used fundamentally for events, can be atypically used for an entity whose nature has nothing in common with the semantic components of *hatsu*, such as an air conditioner. This means that *hatsu* is used first by crossing between the categories (entities and events), and second by extending its usage to an atypical referent.

Having summarised the key findings above, in the following section, the answers to the research questions are presented (6.1). This is followed by a recognition of the limitations of this study and some brief remarks on the implications for future study (6.2).

6.1. Summary: Key Findings Regarding the Research Questions

This study has set one major research question, which concerns what factors account for the extension of the range of referents of a single NC. Though the nature of referents of some NCs has been examined in previous studies, the major focus has been on observable characteristics of 'correct' referents, such as their inherent features or physical characteristics. The range of referents beyond cases in which these observable characteristics, are evident has barely been considered.

This major research question was addressed from two aspects: (1) the typicality of referents of a single NC, and (2) the categories (entities and events) to which the referent of an NC can belong. The specific questions that are directly answered in this study are shown again here.

Research questions

(1) a. What are the conditions in which an NC can be matched with an atypical referent?

b. What factors account for this atypical matching of a referent with an NC?

(2) When an NC can be used for referents that belong to both the category of entities and the category of events/actions, is it always the case that entity uses are the most basic, and that event uses are extended from them?

The focus of research question (1) is on atypical matchings of a noun and an NC, which are generally regarded as grammatically 'incorrect', but actually observed in a not insignificant number of actual usages. Therefore, the conditions in which these atypical matchings can happen and the factors that account for these atypical

matchings were examined, mainly in the first case study with *hiki*. The aim of research question (2) is to investigate the direction of extension of meanings in Japanese NCs. In Japanese, there are NCs which can be used both for entities and events, and it is generally thought that meanings are extended from concrete to abstract. The second case study with *hatsu* was conducted to test this assumption regarding the direction of this type of extension in the range of referents.

In order to achieve these goals, this study examined two target NCs: *hiki* (for comparatively small animate beings) and *hatsu* (for explosive or hitting events/actions, and related entities), by analysing corpus data using both a quantitative and a qualitative approach. As explained in the summary above, typicality of referents found in the data are revealed mainly from the quantitative analysis, and semantic components of each NC are identified mainly from the qualitative analysis of actual examples.

Some of the semantic components identified for both target NCs have already been mentioned in previous studies (Downing, 1996; Iida, 1999, 2004). However, in these previous studies, either the meanings claimed were limited to the necessary and sufficient criteria to be counted by the NC, or the possible referents were simply listed. The significance of identifying semantic components of an NC is firstly that it can illuminate not only necessary and sufficient criteria, but also extended meanings, which may only emerge depending on the occurrence of a referent in a particular context.

Regarding these extended meanings, although they are actually commonly utilised by Japanese speakers, that use is mostly unconscious, and they have not been of deep concern to researchers in the past. Through the analysis, most of these extended meanings of an NC appear to be extended meanings drawn from its core semantic components. This means that these extended meanings are used more subjectively than core semantic components, which convey the central sense of the NC. It should be

noted, however, that though these extended meanings are potential, and thus not necessarily part of the meaning of the NC in all cases in which it occurs, that does not necessarily mean that they are less important than core meanings. Depending on the context, these extended meanings can be focused on by the speaker and, in that case, they constitute a component of the meaning of the NC in that context. By summarising all semantic components of an NC together and displaying connections between them in a diagram, Figures (4.2) and (5.3) illustrate not only conceptually but also visually that NCs are never semantically empty, but can modify the meaning of the referent they refer to in a variety of ways. These semantic components have become key notions and the foundation of the greater part of the analysis in this thesis.

Research question (1-a) asks in which conditions an atypical matching of a noun and an NC occurs. The analysis has revealed that there are three conditions independent from the observable characteristics of the referent in which this occurs. In the first case, the referent is referred to by a common phrase or an idiom in a metaphorical way. When a common phrase containing both a noun and an NC is used, even when that noun is substituted by a different noun, the NC remains as in the original phrase without being influenced by the actual referent of the replacement noun. In the second case, the referent is referred to by a noun that is used as a vehicle of metaphor, and the NC is chosen based not on the actual referent but according to the noun, in order to support the metaphorical meanings conveyed by that noun. In the third case, the NC itself is used as metaphor, and modifies the meaning of the referent concerned in the specific context. Through the analysis, it was observed that metaphor is involved in all these cases.

Next, the factors which account for these atypical matchings were examined in response to research question (1-b). The key finding here is that all the factors involve metaphor in some way. In previous studies, it has been claimed that NCs are generally considered to be chosen on the basis of semantic criteria (Aikhenvald, 2000;

Allan, 1977; Iida, 1999), which means that NCs are matched to not a noun, but a referent. However, when metaphor is involved in the three conditions explained above, NCs are indeed chosen not according to the referent but according to the metaphor involved. For instance, as shown in (4.3.1), when an idiom '*ip-piki ookami* (one-CL(small animate beings) wolf) 'a lone wolf'' is used with the noun '*ningen* (human beings)' instead of the original noun '*ookami* (wolf)', the phrase would not be '*hito-ri ningen* (one-CL(human beings) human) being)', but '*ip-piki ningen* (one-CL(small animate beings) human being), literally 'a lone human being''. The idiom itself is commonly used for human beings to metaphorically modify somebody who likes to be alone like a wolf. In order to keep the metaphorical meaning carried by this common phrase, the NC remains as in the original. In this case, the whole phrase modifies the referent metaphorically.

Next, in a case when a noun is used as metaphor, it was observed that the NC was chosen according to the noun in order to support the noun in expressing the metaphorical meaning. For example, as shown in (4.3.2), when a noun '*mitsubachi* (honeybee)' is used as metaphor to modify human referents, the NC *hiki* is chosen according to not the referent 'human beings' but the noun 'honeybee'.

Lastly, the study has thrown light on the point that NCs themselves can be used as the vehicle of metaphor, and this can be a strong motivation for a speaker to match an NC with a totally atypical referent. In order to understand this factor, the semantic components presented right above play an important role. Since each NC has a number of semantic components, the speaker can focus on one or more of those semantic components in order to emphasise a particular aspect of meaning, depending on the context and the referent concerned. For instance, when *hiki* is used for human beings, it can express both positive meanings with the semantic components of 'cute/adorable' and negative meanings by focusing on the semantic components of 'unpleasant' or 'unimportant'. *Hatsu* also shows the same options regarding the focus

of the speaker: by being matched with an atypical referent such as an aircon (as introduced in 5.3.3), it can emphasise the referent's 'powerfulness' and 'effectiveness'. It thus appears that nouns are not always matched with the most 'appropriate' or 'correct' NC, but can be intentionally matched with an atypical NC. By simply pairing a grammatically 'incorrect' NC with a referent, the speaker can inject his/her subjective meanings or attitude to the referent in a creative way in the specific context.

The analysis has also revealed that in the all cases shown above, in order to interpret these metaphorical meanings injected by the speaker, not only a good knowledge of Japanese language, but also the contextual information, social conventions, and cultural knowledge may be required.

Regarding research question (2), the second case study with the NC *hatsu* has shown that *hatsu* seems to be fundamentally used more for abstract events, and that its appearance with concrete entities should be considered an extended usage. It was observed that the proportion of event referents of *hatsu* is around seven times that of entity referents in the data analysed in the present study. In addition to that, it appeared that *hatsu* is used for a greater variety of events, while entities are limited to particular referents which are a part of events counted by *hatsu* (except for atypical usages). Since this study has not examined historical evidence, it cannot be claimed that *hatsu* was 'originally' used for events. However, the findings have provided evidence that the main referents of *hatsu* are events rather than entities. Although this is only one case study, it still contributes a piece of evidence regarding extension of meanings. Specifically, whereas it has been generally considered that meanings are extended from concrete to abstract, the analysis of the case study with *hatsu* has shown that abstract events can be basic and the meanings can be extended to the concrete entities in a case of the Japanese NC system at least.

This study has investigated the meaning of Japanese NCs by particularly highlighting how the range of referents of a single NC can be extended. On the basis

of the findings, it appears that a non-literal connection between an NC and its referent can activate the extension of referents in certain conditions. This study identified two main non-literal devices: metaphor and metonymy. With these devices, extension of referents can happen in the dimensions of typicality and categories (entities and events), and even across these dimensions.

6.2. Future Study

In this thesis, the research questions set in the Introduction have been addressed through both quantitative and qualitative analysis of the authentic data extracted from the corpus. Although the present study has responded to these questions to some extent, there are some important limitations of this research, and also some issues to be addressed that have emerged through the study. This section recognises these limitations and further issues as implications for further research.

Concerning the limitations, first, the present study has used a balanced, written corpus, which means that the data used in this study were collected from a variety of written genres. This feature means that the findings of this study are fairly widely applicable. However, conversely, this study did not analyse the tendency of actual usages in each particular genre. For instance, it could be possibly assumed that since an atypical matching of a noun and an NC is generally regarded as grammatically 'incorrect', these usages might be seen in a casual context such as blogs and internet posts, but not in formal contexts such as newspapers and business documents. It will be worth examining how these atypical matchings and metaphorical uses differ from genre to genre.[85] Regarding the data, it should also be noted that, the present study

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[85] I am grateful to Professor Chihiro Kinoshita Thomson at University of New South Wales for pointing this out at the JSAA conference in 2017.

has looked at written data only (see 3.1). In order to make the findings more applicable, it will be essential to examine spoken data as well at some point in future research.

Second, in relation to the applicability of the results, this study examined only two NCs. In particular, as mentioned previously, the characteristic of some NCs, that they are used to count the number of both entities and events/actions, has not been investigated deeply in previous studies. Though *hatsu* has demonstrated interesting features, these cannot be simply assumed to apply to other NCs. Therefore, other NCs which have the same characteristic need be investigated as well in future study.

Through the present research, one critical issue has emerged, as raised in 2.4.6. It has been explained that in Japanese, there are classifiers and NCs which can be used for events represented not only by a noun, but also by a verb. From a typological point of view, NC systems, including Japanese NCs, are regarded as noun classification systems. Thus, strictly speaking, these classifiers and NCs could be excluded from the group of NCs and treated separately, since they do not always function to classify nouns. However, on the other hand, it has appeared that these classifiers and NCs have a lot common with typical NCs. Since word classes are not easy to define, they were sometimes treated as NCs in the past studies without making the difference clear. Also in this thesis, they have been temporarily treated as NCs in a broad sense, while acknowledging the particular characteristic noted. However, it should not be ignored that they are different from typical NCs. Thus, these classifiers and NCs require close examination in future research.

As shown in the literature review and analyses, this study opens up many more questions for further investigation. In particular, the classifiers used for events represented by a verb, and NCs which are used for events, require significant further research.

Data Source

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Appendix A: Retrieval Formulas

Hiki

[Retrieval Formula: *Hiki* and numeral 1]

キー: 語彙素 = "匹" AND 前方共起: 語彙素 = "一" ON 1 WORDS FROM キー WITH

OPTIONS unit="1" AND tglWords="50" AND limitToSelfSentence="0" AND endOfLine="CRLF" AND tglKugiri="" AND encoding="UTF-8" AND tglFixVariable="2"

[Retrieval Formula: *Hiki* and numeral 2]

キー: 語彙素 = "匹" AND 前方共起: 語彙素 = "二" ON 1 WORDS FROM キー WITH

OPTIONS unit="1" AND tglWords="50" AND limitToSelfSentence="0" AND endOfLine="CRLF" AND tglKugiri="" AND encoding="UTF-8" AND tglFixVariable="2"

[Retrieval Formula: *Hiki* and numeral 3]

キー: 語彙素 = "匹" AND 前方共起: 語彙素 = "三" ON 1 WORDS FROM キー WITH

OPTIONS unit="1" AND tglWords="50" AND limitToSelfSentence="0" AND endOfLine="CRLF" AND tglKugiri="" AND encoding="UTF-8" AND tglFixVariable="2"

[Retrieval Formula: *Hiki* and numeral 10]

キー: 語彙素 = "匹" AND 前方共起: 語彙素 = "十" ON 1 WORDS FROM キー WITH

OPTIONS unit="1" AND tglWords="50" AND limitToSelfSentence="0" AND endOfLine="CRLF" AND tglKugiri="" AND encoding="UTF-8" AND tglFixVariable="2"

[Retrieval Formula: *Hiki* and numeral 100]

キー: 語彙素 = "匹" AND 前方共起: 語彙素 = "百" ON 1 WORDS FROM キー WITH

OPTIONS unit="1" AND tglWords="50" AND limitToSelfSentence="0" AND endOfLine="CRLF" AND tglKugiri="" AND encoding="UTF-8" AND tglFixVariable="2"

[Retrieval Formula: *Hiki* and numeral 1000]

キー: 語彙素 = "匹" AND 前方共起: 語彙素 = "千" ON 1 WORDS FROM キー WITH

OPTIONS unit="1" AND tglWords="50" AND limitToSelfSentence="0" AND endOfLine="CRLF" AND tglKugiri="" AND encoding="UTF-8" AND tglFixVariable="2"

[Retrieval Formula: *Hiki* and numeral 10000]

キー: 語彙素 ＝ "匹" AND 前方共起: 語彙素 ＝ "万" ON 1 WORDS FROM キー WITH

OPTIONS unit="1" AND tglWords="50" AND limitToSelfSentence="0" AND endOfLine="CRLF" AND tglKugiri="" AND encoding="UTF-8" AND tglFixVariable="2"

Hatsu

[Retrieval Formula: *Hatsu* and numeral 1]
キー: 語彙素 ＝ "発" AND 前方共起: 語彙素 ＝ "一" ON 1 WORDS FROM キー WITH OPTIONS unit="1" AND tglBunKugiri="#" AND tglWords="50" AND limitToSelfSentence="1" AND tglKugiri="" AND endOfLine="CRLF" AND encoding="UTF-16LE" AND tglFixVariable="2"

[Retrieval Formula: *Hatsu* and numeral 2]
キー: 語彙素 ＝ "発" AND 前方共起: 語彙素 ＝ "二" ON 1 WORDS FROM キー WITH OPTIONS unit="1" AND tglBunKugiri="#" AND tglWords="50" AND limitToSelfSentence="1" AND tglKugiri="" AND endOfLine="CRLF" AND encoding="UTF-16LE" AND tglFixVariable="2"

[Retrieval Formula: *Hatsu* and numeral 3]

キー: 語彙素 ＝ "発" AND 前方共起: 語彙素 ＝ "三" ON 1 WORDS FROM キー WITH

OPTIONS unit="1" AND tglBunKugiri="#" AND tglWords="50" AND limitToSelfSentence="1" AND tglKugiri="" AND endOfLine="CRLF" AND encoding="UTF-16LE" AND tglFixVariable="2"

[Retrieval Formula: *Hatsu* and numeral 10]

キー: 語彙素="発" AND 前方共起: 語彙素="十" ON 1 WORDS FROM キー WITH OPTIONS

tglKugiri="" AND tglBunKugiri="" AND limitToSelfSentence="1" AND tglFixVariable="2" AND tglWords="50" AND unit="1" AND encoding="UTF-16LE" AND endOfLine="CRLF"

[Retrieval Formula: *Hatsu* and numeral 100]

キー: 語彙素="発" AND 前方共起: 語彙素="百" ON 1 WORDS FROM キー WITH OPTIONS

tglKugiri="" AND tglBunKugiri="" AND limitToSelfSentence="1" AND tglFixVariable="2" AND tglWords="50" AND unit="1" AND encoding="UTF-16LE" AND endOfLine="CRLF"

[Retrieval Formula: *Hatsu* and numeral 1000]

キー: 語彙素="発" AND 前方共起: 語彙素="千" ON 1 WORDS FROM キー WITH OPTIONS

tglKugiri="" AND tglBunKugiri="" AND limitToSelfSentence="1" AND tglFixVariable="2" AND tglWords="50" AND unit="1" AND encoding="UTF-16LE" AND endOfLine="CRLF"

[Retrieval Formula: *Hatsu* and numeral 10000]

キー: 語彙素="発" AND 前方共起: 語彙素="万" ON 1 WORDS FROM キー WITH OPTIONS

tglKugiri="" AND tglBunKugiri="" AND limitToSelfSentence="1" AND tglFixVariable="2" AND tglWords="50" AND unit="1" AND encoding="UTF-16LE" AND endOfLine="CRLF"

Appendix B: Screenshots of the BCCWJ website

[The top page of the BCCWJ website]

[The searching form used in the study]

[Example of the result page]

Appendix C: Examples of '1-*hatsu*(-*de*)' used adverbially

['1-*hatsu*(-*de*)' used adverbially with the primary meaning of 'immediate / quickly / in an instant]

(C-1)

<u>一発</u>でゴキブリをしとめるコツを伝授しよう。

<u>ip-patsu-de</u> gokiburi o shitome-ru kotsu o denju shi-yo-o

[I will] teach [you] a trick to kill cockroaches <u>in one hit</u>.

> (「その道のプロが教える『裏ワザ』読本 *sonomichi no puro ga oshieru 'urawaza'*
> *tokuhon*」 [A Book of 'Tricks' the Proffesionals Teach], 2003)

(C-2)

ブラインドを<u>一発</u>できれいに掃除できる方法ってありますか。

buraindo o <u>ip-patsu-de</u> kirei-ni sooji-deki-ru hoohoot-te ari-masu-ka

[Is] there [any] way [that] [one] can clean blinds <u>in an instant</u>?

> (「Yahoo! 知恵袋 *Yafuu chiebukuro*」 [Yahoo! Answers], 2005)

(C-3)

トリップメーターを見ていたら<u>一発</u>でばれますね。

torippu-meetaa o mi-te-i-ta-ra <u>ip-patsu-de</u> bare-masu-ne

[If he] checks the trip meter, he [will] find out <u>immediately</u>.

(「Yahoo! 知恵袋 *Yafuu chiebukuro*」 [Yahoo! Answers], 2005)(C-4)

(C-4)

近所の酒屋さんでしょ。タウンページで調べたら<u>一発</u>だと思いますが。

kinjo no sakaya-san de-sho. taunpeeji de shirabe-ta-ra <u>ip-patsu</u>-da-to omo-i-masu-ga

Bottle shops near you right? [I] think [you can find one] <u>in an instant</u> [if you] check the Town Page (a telephone directory produced by NTT).

<div align="right">(「Yahoo! 知恵袋 <i>Yafuu chiebukuro</i>」[Yahoo! Answers], 2005)</div>

(C-5)

おれに聞きにくれば、<u>一発で</u>教えてやる。

ore ni ki-ki-ni-ku-reba, <u>ip-patsu-de</u> oshie-te-ya-ru

[If you] come and ask me, [I will] tell you <u>in an instant</u>.

<div align="right">(「『東京漫才』列伝 <i>'Tokyoo manzai' retsuden</i>」</div>

<div align="right">[A Biography of 'Tokoy Comic Dialogue'], 2002)</div>

['1-<i>hatsu</i>(-<i>de</i>)' used adverbially to mainly mean 'only]

(C-6)

2003 年の恋愛は、不景気でお金がなくて、センス<u>一発</u>の勝負になりそうで、…

nisensan-nen no renai wa, fukeeki de o-kane ga naku-te, sensu <u>ip-patsu</u> no shoobu ni nari-soo-de…

[It] seems [that in the pursute of] love in the 2003 economic crisis, [for boys] without money, it will likely become a contest of <u>just</u> good sense [to attract girls]…

<div align="right">(「an・an」, 2003)</div>

(C-7)

メロディー<u>一発で</u>勝負するナンバーも非常に素晴らしい。

merodhii <u>ip-patsu-de</u> shoobu-suru nanbaa mo hijoo ni subarashii

The number [that] compete <u>only</u> on melody is also fabulous.

<div align="right">(「Yahoo! ブログ <i>Yafuu burogu</i>」[Yahoo! Blog], 2008)</div>

(C-8)

この一発で、機嫌がたちまち直ったのですから、くるみも単純です。

kono ip-patsu-de kigen ga tachimachi naot-ta-no-desu-kara, Kurumi mo tanjun-desu

Kurumi is so simple-minded that [she] gets back in good mood just with that [flattery].

(「死体は走るよ国際列車 *Shitai wa hashiruyo kokusai ressha*」
[Corpses are Running; International Train], 1987)

(C-9)

一国の総理が下半身スキャンダル一発で簡単に屠られてしまう社会というのは、なんとも不思議。

ikkoku no soori ga kahanshin sukyandaru ip-patsu-de hofu-rare-te-shimau shakai to-iu-no wa, nantomo fushigi

A society [in which] the prime minister of a country can lose their position due to only one sex scandal is indeed weird.

(「ハンパな人生論より極道に学べ *Hanpa na jinsee-ron yori gokudoo ni m anabe*」[Learn from Gangsters rather than Odd Life Theories], 2002)

(C-10)

…標的の近くにある程度まとわりついてからボタン一発でバックをとれたり…

…hyooteki no chikaku ni a-ru-teido matowaritsu-i-te-kara botan ip-patsu-de bakku o tore-ta-ri…

… after following the target for a while, [a battle plane] can take out the back [of the target] by just [pushing] a button …

(「Yahoo! ブログ *Yafuu burogu*」[Yahoo! Blog], 2008)

['1-*hatsu*(*-de*)' used adverbially with the primary meaning of 'at one time (1-*kai-de*)']

(C-11)

出掛けた地名等も、最近一発で覚えることがおおくなってきている。

dekake-ta chimee-nado mo, saikin ip-patsu-de oboeru koto ga oo-ku nat-te ki-te i-ru

[The number of times that I] remember the name of places [I] visited at once [has] increased too.

<div align="right">(「Yahoo! ブログ <i>Yafuu burogu</i>」 [Yahoo! Blog], 2008)</div>

(C-12)

…せっせと勉強した。おかげで一発で合格したが、…

…sesse-to benkyoo-shi-ta. okage-de ip-patsu-de gookaku-shi-ta-ga,…

…[I] studied hard. [I] passed [the exam] in one go, thanks to that, …

<div align="right">(「Yahoo! ブログ <i>Yafuu burogu</i>」 [Yahoo! Blog], 2008)</div>

(C-13)

先に開けていたナオミさんが一発でオスカルを引き、私にプレッシャーをかけてきます。

saki-ni ake-te-i-ta naomi-san ga ip-patsu-de osukaru o hiki, watashi ni puresshaa o kake-te-ki-masu

Naomi was opening [a pack of cards] before [me and] picked up (a premiere card) Oscar in one go, [so it] put me under pressure (to pick up popular cards).

<div align="right">(「Yahoo! ブログ <i>Yafuu burogu</i>」 [Yahoo! Blog], 2008)</div>

(C-14)

試しにエンジンをかけてみると、なんと<u>一発で</u>始動したのには驚いた。

tameshi-ni enjin o kake-te-mi-ru-to, nanto <u>ip-patsu-de</u> shidoo-shi-ta no ni-wa odoro-i-ta

[I] was surprised that [when I] tried starting the engine, [it] unexpectedly started working <u>in one go</u>.

<div align="right">(「ラジコンマガジン　<i>Rajikon magajin</i>」[RC Magazine], 2002)</div>

(C-15)

私は SL 時代を中心に、決定的なところを<u>一発で</u>しとめる撮影に執念をもやしてきた。

watashi wa esueru-jidai o chuushin-ni, kettei-teki-na tokoro o <u>ip-patsu-de</u> shitome-ru satsuee ni huunen o moya-shi-te-ki-ta

With a focus mainly on the time of the Steam Locomotive, [I] have set my heart on catching the best shot [of a train] <u>in one go</u>.

<div align="right">(「鉄道写真 <i>Tetsudoo shashin</i>」[Railway Photos], 2002)</div>