

# Form and function of reduplicated nouns in Japanese

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## Abstract

This study investigates the form and function of reduplication in nouns in Japanese. Three main areas were investigated: meaning, morphosyntactic behavior, and register. The study was conducted with informants participating in meetings which were audio recorded. The informants were asked to describe a number of reduplicated nouns belonging to three categories: concrete nouns, abstract nouns, and nouns relating to time. A number of pseudo forms were also included to see if similar patterns could be observed in nouns that did not belong to the regular lexicon. The results were analyzed for possible patterns relating to meaning, morphosyntactic behavior, and register across the three noun categories. Primarily two patterns were observed: 1. the reduplicated forms of concrete nouns tended to have a meaning of plurality and maintain their noun status, and 2. the reduplicated forms of nouns relating to time tended to acquire a sensation of extended time and frequency, and change word class into adverbs. These patterns were not observed as strongly among the pseudo forms. In addition to these patterns, other phenomena were observed among the reduplicated nouns that could not be categorized as belonging to specific patterns and should be investigated in further studies.

**Keywords:** Form, function, Japanese, meaning, noun, reduplication

## Sammanfattning

I denna studie undersöks form och betydelse inom reduplikation av substantiv i japanska. Tre huvudområden undersöktes: betydelse, morfosyntaktisk form och samtalsregister. Studien genomfördes med informanter som deltog i ljudinspelade möten. Informanterna ombads beskriva ett antal reduplicerade substantiv i tre specifika kategorier: konkreta substantiv, abstrakta substantiv och substantiv som relaterade till tid. Ett antal pseudoformer inkluderades för att se om liknande mönster kunde observeras i ord som inte tillhörde det vanliga ordförrådet. Resultaten analyserades i syfte att finna mönster relaterade till betydelse, morfosyntaktisk form och samtalsregister över de tre kategorierna av substantiv. Två huvudsakliga mönster observerades: 1. de reduplicerade formerna av konkreta substantiv uppvisade en sorts mångfald och fortsatte att vara substantiv, och 2. de reduplicerade formerna av substantiv som relaterade till tid fick en betydelse av utdragen tid och frekvens och övergick till att bli adverb. Utöver dessa mönster observerades andra fenomen bland de reduplicerade substantiven som dock inte kunde placeras i särskilda mönster utan som bör undersökas i kommande studier.

**Nyckelord:** Betydelse, form, funktion, japanska, reduplikation, substantiv

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# Introduction

Reduplication is a process where a part of a word, or the entire word, is repeated in order to achieve a new meaning or grammatical effect. Some of the most common usages for reduplication are to create a plural form of a singular noun, to give an adjective a more intense meaning, or to make a verb continuous. Reduplication can also be used for grammatical purposes, for example to create a certain tense or aspect in a sentence. The form and function of reduplication are widespread in the world's languages and include a lot of variation and diversity. In some languages, reduplication is very productive and is an integral part of the grammar and lexicon. In others, it is not very productive or in some cases almost non-existent.

Reduplication is however not an easy phenomenon to study. Their functions differ a lot between languages, and although some primary functions have been identified, there are several examples where reduplication shows unexpected behavior, and where the link between the non-reduplicated form and the reduplicated form can be slightly difficult to identify. There is also a problem with the classification of reduplication. With the huge variety of forms and methods of constructing reduplication in different languages, reduplication can have many shapes, and it is not always clear what is reduplication and what is not. The relative scarcity of some forms of reduplication in the Indo European languages might also have contributed to that this phenomenon has not been given a lot of attention in linguistic research.

In the Japanese language, reduplication can occur across all word classes and there is a big inventory of reduplicated words. For example, there are not only reduplicated nouns, adjectives, and verbs, but also reduplicated numerals, pronouns, and adverbs. In addition to this, there are words with reduplicative like structure which are used for expressing emotions, states of mind or even miming sounds. With such an inventory, the question arises what forms and functions these words can and cannot have, and if there are any basic rules and patterns that can be identified among these words. It is for example of interest to study if a noun referring to a concrete object will have the same properties as a noun referring to an abstract phenomenon, or whether reduplication is a productive phenomenon in Japanese or not.

In this study, informants will be interviewed and will be asked to describe various reduplicated nouns in Japanese. The recorded material will then be transcribed and analyzed to see if any patterns in form and function can be identified, whether reduplication seems to be productive in the language or not, and whether any other observations, for example pragmatic use, can be found. The results will then be compared to findings in other languages of the world.

# 1. Background

## 1.1. Definition and types of reduplication

Reduplication is a morphological process that involves repeating phonological material that is either a word, or part of a word, stem, or root, to achieve a new grammatical or semantic function (Rubino 2005:1), and where the repeated material is directly derivable from the uninflected or underived base form (Hurch 2005:1). The base form of the reduplicated word is called **simplex** or the **simplex form**, and the added material is called **reduplicant** (Hurch 2005:2). Examples of reduplication in the English language are words like *fifty-fifty* and *so-so*. The words *fifty* and *so* are the simplex forms. These words are then fully repeated by adding a reduplicant of identical phonetic material.

The distinction between reduplication and repetition is not perfectly clear. The two terms overlap somewhat, and have sometimes been used interchangeably in linguistic research. Repetition is sometimes seen as a more pragmatic phenomenon, where words or concepts are repeated for emotional emphasis (Nadarajan 2005:40), whereas reduplication is seen as more of a true morphological process where various wordhood criteria, such as prosodic or phonological ones, may be applied.

Two major types of reduplication can be found in the languages of the world: **full reduplication** and **partial reduplication** (Rubino 2005:11). These two types are distinguished by the size of the reduplicant. Full reduplication occurs when the entire word, stem or root is fully repeated (for example, in *fifty-fifty*). A language that makes frequent use of full reduplication is the Austronesian language Tausug, spoken in the Philippines (Rubino 2005:11):

- (1)
- |              |            |
|--------------|------------|
| dayang       | ‘madam’    |
| dayangdayang | ‘princess’ |

Partial reduplication is when only a part of the word, stem or root is being repeated. There are many types of partial reduplication, and words can be created with partial reduplication in several different ways, for example by repeating a part of the beginning, end, or inside of the simplex form, or by other means such as consonant gemination or vowel lengthening (Rubino 2005:11). Ilocano, an Austronesian language spoken in the Philippines, has various word formations created using partial reduplication. Some examples are *agbasbása* ‘reading’, where a part of the stem (*bas*) has been repeated, and *ubbing* ‘children’, where the bilabial consonant in *ubing* ‘child’ has been lengthened (Rubino 2005:12):

- (2)
- |           |            |
|-----------|------------|
| agabása   | ‘read’     |
| agbasbása | ‘reading’  |
| ubing     | ‘child’    |
| ubbing    | ‘children’ |

In addition to full and partial reduplication, there is a distinction between **simple reduplication** and **complex reduplication** (Rubino 2005:15). Simple reduplication is when a word is reduplicated and no phonemes in the reduplicant are changed or added, for example in the English *so-so*. Complex reduplication is when a phonological change appears within the reduplicant, for example a vowel or consonant change. Complex reduplication occurs in languages like Indonesian (Rubino 2005:16):

- (3)            *tjoreng*            ‘scratch’  
                 *tjorengmoreng* ‘full of scratches’

The added element *moreng* does not exist independently in the language and differs from *tjoreng* only by the phonemic change in the syllable *tjo* to *mo* (Rubino 2005:16).

Finally, there is no guarantee that the reduplicated form will maintain the same morphosyntactic properties as its simplex form. Some reduplicated forms have a different word class when compared to their simplex forms (Nian et al. 2012:68).

## 1.2. Reduplication in the world’s languages and classification concerns

Reduplication is used in many languages of the world across many language families. The process of reduplication is sometimes an integral part of a language’s word formation strategies. However, there are some indications that reduplication is not used as frequently in the Indo-European languages as in many of the languages belonging to other language families (Hurch 2005:1). For example, in English, the process of reduplication does not seem to be a crucial part of word formation, and while there are certainly examples of reduplicated words that are formed using full repetition (e.g. *fifty-fifty* and *so-so*) and reduplicated words that are formed by changing or adding a few syllables (e.g. *wishy-washy*, *itsy-bitsy*), the inventory of these words seems to be less extensive, and many of the reduplicated words have a more restricted function than in other languages. For example, words like *wishy-washy* and *itsy-bitsy* are used to express a more childlike and comical tone. This is in contrast to some other languages, where reduplication is part of major grammatical operations, such as creating plural forms of nouns, or changing the aspect of a verb. Interestingly, while reduplication may be a less common phenomenon in Indo-European languages, several of the world’s creole languages that are based on Indo-European languages make frequent use of reduplication (Rubino 2005:23).

With English having been somewhat privileged in morphological research (Scalise & Bisetto 2009:37), and with reduplication seemingly being a less common phenomenon in many Indo-European languages, it could be assumed that the phenomenon of reduplication, and its form and functions in the world’s languages, have not been given as much attention as other grammatical processes. However, over the years, attention has been given to this field, with researchers comparing reduplicative word constructions in various languages over the world, trying to identify a typology and describe the semantic effects and grammatical usage.

However, when observing and classifying words created using reduplication, there are some problems. One of these is how to define the newly constructed word. Can, and should, the reduplicated form be considered a regular compound word or should words formed using reduplication be considered a separate category that should be studied in its own right? In a semantic, morphological or syntactic study, should a word like *fifty-fifty* be considered a compound word with equal status to an ordinary compound word like *apple juice*? Questions like these have resulted in reduplicative compounds sometimes being ignored in research of word compounds, where attention is rather given to words constructed from two separate nouns, an adjective and a noun, or a noun and an adjective (Scalise & Bisetto 2009:37). Furthermore, defining a word compound is in itself a difficult task. A very basic definition that is sometimes used is that a word compound can be described as a word being made up of two independent words (Bauer 2009:343). Such a definition causes some problems for words created by reduplication. Can each instance of *fifty* in *fifty-fifty* be considered independent? More questions arise with the

discussion of headedness – a common form of analysis in compounding. In a word like *flagpole*, the element *pole* is the head because it is the most important element out of the two, since a *flagpole* is a type of pole and not a type of flag (Bauer 2009:348). This point of view causes yet another problem for reduplicative constructions, since in a construction like *fifty-fifty*, it is impossible to identify which element is the head and which is the modifier. Finally, in several languages, words created using reduplication do follow similar grammatical and phonological rules as compounds composed of two or more individual elements, meaning they seem to belong, at least in some respects, to the class of ordinary word compounds.

## 1.3. The function of reduplication in the world's languages

The results of cross-linguistic studies of the possible functions of reduplication have not always been simple and clear-cut, and there have been findings in several languages that show seemingly random semantic effects. However, some arguments have been made that there are a few main functions of reduplication that can be identified, and also a few areas where reduplication seems to not be as frequent as in other areas. Thomas Stoltz (2007:320) points out that there have not yet been any convincing examples of reduplication being used to mark grammatical distinctions such as gender, person, or case, but that reduplication often seems to be used for various semantic functions, often related to semantic augmentation. As reported by Stoltz, some of the main functions of reduplication that have been identified are to express **number**, **intensification**, **totality**, and **extended time & frequency**.

### 1.3.1. Number

A common function of reduplication is to make a number on nouns, very often a straightforward singular-plural distinction. For example, in Indonesian, reduplication is a common way of creating plural words, with pairs such as *orang* 'person' and *orang-orang* 'persons' (Stoltz 2007:323).

### 1.3.2. Intensification

Reduplication can also be used to express intensification of adjectival and adverbial meanings (Stoltz 2007:322). In Welsh, the adjective *bach* 'small' can be reduplicated into *bach bach* 'very small', and in the same way, the adjective *gyflym* 'speedy' can be reduplicated into *gyflym gyflym* 'very quickly'. The simplex forms are in themselves enough to express the meaning of something small or something fast, but if a speaker wishes to emphasize that an object is very small or that something is done very quickly, the reduplicated form would be used (Stoltz 2007:332).

### 1.3.3. Totality

A third function of reduplication is totality. In Hindi, the nouns have clearly marked singular and plural forms. Yet, full reduplication of either the singular and plural form can be used to express new meanings of totality (Stoltz 2007:324). An example of this is the word pair *baccaa* 'child' and *bacce* 'children'. Both the singular *baccaa* and the plural *bacce* can be reduplicated to express new meaning. *Baccaa* 'child' can be reduplicated into *baccaa baccaa* 'every child', and *bacce* 'children' can be reduplicated into *bacce bacce* 'only the children', adding a meaning of totality to the reduplicated forms compared to their simplex forms (Stoltz 2007:325).



#### 1.3.4. Time & frequency

Finally, reduplication can be used to express a difference in time & frequency, where the reduplicated form often (but not always) expresses something being done frequently or more often, or where the reduplicated form expresses that something is being done continuously or for a longer period of time. In West-Greenlandic, the verb *muluguni* ‘stay away’ can be reduplicated into *muluguni muluguni* ‘stay away for a long time’, and in Maltese, the verb *niezel* ‘descend’ can be reduplicated into *niezel niezel* ‘continuously descending’ (Stoltz 2007:330).

#### 1.3.5. Exceptions

Despite the patterns have been found, there are a lot of instances in the world’s languages where these patterns do not hold. Stoltz mentions some examples where reduplication is used to express diminutive or other similar forms. In Hindi, two adjectives, *kaccaa* ‘raw’ (e.g. “raw vegetable”) and *niilii* ‘blue’, can be fully reduplicated. However, the reduplicated forms do not express intensification (Stoltz 2007:335):

- (4)
- |                      |                |
|----------------------|----------------|
| <i>kaccaa</i>        | ‘raw’          |
| <i>kaccaa kaccaa</i> | ‘slightly raw’ |
| <i>niilii</i>        | ‘blue’         |
| <i>niilii niilii</i> | ‘bluish’       |

*Kaccaa kaccaa* means ‘slightly raw’ and *niilii niilii* means ‘bluish’. In the example of *kaccaa kaccaa*, more content is instead being used to express a less intense meaning (‘slightly raw’). The result is even more different in the case of *niilii niilii*, where the reduplicated form expresses a less intense meaning compared to the simplex form, but also gives the word a meaning similar to “blue-like” or “a kind of blue” (‘bluish’).

There are also cases where the reduplicated word takes a meaning that seems very different from its simplex form. In Saramaccan, the word *fania* ‘rice meal’ can be reduplicated into *fania-fania* ‘medicine’ (Stoltz 2007:337). The pair of “rice meal” and “medicine” seems quite odd. In cases like these, it is more difficult to identify and express patterns through reduplicated words in the language, compared to languages that frequently use reduplication to express more straightforward phenomena such as number. In the case of Saramaccan, it is tempting to make an attempt at describing the change of meaning in word pairs like *fania* and *fania-fania* from a socio-cultural perspective, for example attempting to link the symbolic meaning of rice to health and well-being. However, such attempts rarely give satisfactory and consistent results, and tend to lead into speculation and pure guesswork. There is also the obvious risk of a heavy cultural bias if the researcher is not familiar with the culture where the language is spoken.

#### 1.3.6. Reduplication and productivity

Although reduplication is present in many languages in the world, its degree of productivity vary from language to language. While there is no clear cut definition, it can be said that reduplication is likely to be productive in a language if the process of reduplication is frequently and actively used by the speakers to form new words. This includes adapting loan words into the process of reduplication. For example, in Standard Yoruba, reduplication is frequently utilized across the language to change the property of totality for a noun. If the word *ilé* ‘house’ is reduplicated into *iléilé*, it acquires the meaning of ‘each house’ (Arokoyo 2006:18). This pattern is systematic for all nouns in the language, and is used for words belonging to the regular lexicon as well as for new words, foreign loan words, and slang words. Therefore, it could be argued that the reduplication of nouns in Standard Yoruba is productive.

## 1.4. Reduplication in Japanese

### 1.4.1. Regular words

Japanese exhibits reduplication across many of the word classes, and also includes both full and partial reduplication (Stekauer et al. 2012:115, Nasu 2015:211), as well as simple and complex reduplication. Reduplicative forms can be created from nouns, verbs, adjectives, numerals, pronouns and other word classes (Stekauer et al. 2012:115, Shibasaki 2005:283) as shown in table 1 below:

Table 1: Reduplication of regular words<sup>1</sup>

| Word class | Simplex         | Meaning                 | Reduplicated        | Meaning            |
|------------|-----------------|-------------------------|---------------------|--------------------|
| Noun       | <i>yama</i>     | ‘mountain’              | <i>yamayama</i>     | ‘mountains’        |
| Verb       | <i>hanareru</i> | ‘to separate something’ | <i>hanarebanare</i> | ‘scattered, apart’ |
| Adjective  | <i>takai</i>    | ‘high’                  | <i>takadaka</i>     | ‘very high’        |
| Numeral    | <i>ichi</i>     | ‘one’                   | <i>ichiichi</i>     | ‘one by one’       |
| Pronoun    | <i>ware</i>     | ‘I’                     | <i>wareware</i>     | ‘we’               |

The examples given here are words from the regular lexicon with full reduplication (e.g. *yama*, *ichi*) and partial reduplication (e.g. *hanareru*, *takai*). It may be noted that meanings similar to the ones described in 1.3. are represented, for example plural number (e.g. *yamayama*) and intensification (e.g. *takadaka*).

### 1.4.2. Other forms of reduplication

In addition to the reduplication of regular words, there are other types of words in Japanese that exhibit a reduplication-like structure (Shibatani 1990:154). These words will not be included in this study, but will be mentioned here for the sake of completeness. These words are called **mimetic words**. They are often grouped into three different subgroups: **phonomimes** or **onomatopoetic** words (sound-miming words), **phenomimes** (words used to describe states of the external world), and **psychomimes** (words used to describe mental or non-auditory sensations) (Shibatani 1990:153–154). Some examples are given in table 2 below:

Table 2: Reduplication of mimetic words

| Type                      | Word            | Meaning                   |
|---------------------------|-----------------|---------------------------|
| Phonomime (onomatopoetic) | <i>dokidoki</i> | ‘the sound of heartbeats’ |
| Phenomime                 | <i>yoboyobo</i> | ‘wobbly’                  |
| Psychomime                | <i>iraira</i>   | ‘nervously’               |

<sup>1</sup> In this paper, the Hepburn Romanization System will be used when writing Japanese with the Latin alphabet.

However, as opposed to the reduplicated forms of the regular lexicon, most of the mimetic words seem to lack an identifiable simplex form. Forms like *\*doki* or *\*ira* seem rarely to be used. The mimetic words also show some different syntactic and pragmatic behavior compared to the regular words. They often appear in compound words with other general verbs like *suru* ‘to do’, which can be seen in constructions like *irairasuru* ‘to become nervous’ (Shibatani 1990:154). Furthermore, unlike the regular words, which almost exclusively stick to full reduplication, the mimetics appear to frequently undergo partial or even multiple partial reduplication, where the amount of partial reduplication appears to indicate the intensity or repetitiveness of the sensation (Nasu 2015:211–212). These partial and multiple partial reduplications are rarely used in formal language or listed in dictionaries, but are often found in spoken languages, particularly among younger speakers and in casual speech (Nasu 2015:214). Examples are shown in table 3 below:

Table 3: Partial and multiple partial reduplication

| Type                           | Word            | Meaning          |
|--------------------------------|-----------------|------------------|
| Standard expression            | <i>gasagasa</i> | ‘rustling sound’ |
| Partial reduplication          | <i>gasasa</i>   | ‘rustling sound’ |
| Multiple partial reduplication | <i>gasasasa</i> | ‘rustling sound’ |

The present study is concerned with the non-mimetic type and the mimetic words will not be further discussed.

### 1.4.3. Rendaku and Lyman’s law

Japanese has a phonological phenomenon called **rendaku**. Rendaku is a morphophonological process where an initial voiceless obstruent becomes voiced when it appears in the second element in a compound word or prefixed word (Rosen 2003:2). This process occurs in ordinary compound words as well as in reduplicated word forms, as shown in table 4 below:

Table 4: Example of rendaku

| Element 1   | Meaning      | Element 2   | Meaning      | Compound word   | Meaning    | Reduplication? |
|-------------|--------------|-------------|--------------|-----------------|------------|----------------|
| <i>te</i>   | ‘hand’       | <i>kami</i> | ‘paper’      | <i>tegami</i>   | ‘letter’   | No             |
| <i>yuki</i> | ‘snow’       | <i>kuni</i> | ‘country’    | <i>yukiguni</i> | ‘snowland’ | No             |
| <i>sama</i> | ‘sort, type’ | <i>sama</i> | ‘sort, type’ | <i>samazama</i> | ‘various’  | Yes            |

To clarify, this means that the word *samazama* is indeed the fully reduplicated form of *sama*, and not a compound word created from two separate elements with the forms *sama* and *\*zama*<sup>2</sup>.

In addition to the standard rules of rendaku, there is one more component involved, called **Lyman’s law**, where the rendaku process is halted. This law states that there can be a maximum of one voiced obstruent within a word (Rice 2002:2), and that rendaku therefore cannot occur if the second element has a voiced obstruent. This law occurs in both ordinary compound words and reduplicated forms, as seen in table 5 below:

<sup>2</sup> In Japanese rendaku, the voiced counterpart of /h/ is /b/ (Rosen 2003:5), for example in a reduplicated form like *hitobito*. The voiced counterpart of /ts/ is /z/ (Rice 2002:5), for example in a reduplicated form like *tsunезune*.

Table 5: Examples where Lyman’s law blocks rendaku

| Element 1   | Meaning          | Element 2   | Meaning          | Compound word                        | Meaning           | Reduplication? |
|-------------|------------------|-------------|------------------|--------------------------------------|-------------------|----------------|
| <i>yama</i> | ‘mountain’       | <i>kado</i> | ‘gate’           | <i>yamakado</i><br>* <i>yamagado</i> | ‘mountain gate’   | No             |
| <i>tabi</i> | ‘time, occasion’ | <i>tabi</i> | ‘time, occasion’ | <i>tabitabi</i><br>* <i>tabidabi</i> | ‘again and again’ | Yes            |

Rendaku (with Lyman’s law) therefore constitutes a useful criterion for wordhood, but as we shall see in the next section, there are exceptions.

#### 1.4.4. Exceptions

Finally, there exist some cases where certain words may look like reduplicated forms. In these cases however, it seems to be more about repetition for emphasis rather than a true reduplication:

- (5)                    *mukashi*    ‘olden days, former’  
                             *mukashimukashi*    “‘Once upon a time...’”

*Mukashimukashi* is a set phrase which is almost exclusively used at the beginning of classic fairytales (the equivalent of “Once upon a time...” in the English language). This raises the question whether *mukashimukashi* is a true reduplication, or if it is the word *mukashi* repeated again for stylistic effect to mark the beginning of the story. Furthermore, there are some occasions where a word might seem like an acceptable reduplication, but for some reason ignores the rule of rendaku:

- (6)                    *toku*    ‘profit, gain’  
                             *tokutoku*    ‘proudly, triumphantly’

If the rendaku rule were to be followed consistently, the reduplicated form of *toku* should be pronounced \**tokudoku* (compare for example *toki* ‘point of time’ and *tokidoki* ‘sometimes’), but this is not the case. The question is whether this is merely an exception to the rendaku rule, or if *tokutoku* is the word *toku* repeated again for stylistic effect.

As is seen from these examples with *mukashimukashi* and *tokutoku*, it is not always easy to distinguish between a repeated word and a true reduplication in Japanese. An attempt to discuss and identify exactly what is reduplication and what is a repeated word in these uncertain cases would require a lot of investigation and is beyond the scope of this study.

## 1.5. Japanese morphology

This section will briefly discuss the Japanese morphology that is featured in this study. Since the field of morphology is so vast, only the type of morphology that is relevant to the results and discussion of this study will be mentioned.

### 1.5.1. Nouns

The nouns in Japanese are non-inflectional. Gender, person, and number are not marked up in the nouns (Shibatani 1987:746). This means that a word such as *ki* ‘tree’ can also mean ‘trees’ depending on the context. There are therefore no obligatory markers for plurality in Japanese. Plurality can however be emphasized if needed, by adding suffixes such as *-tachi* or *-ra* to the noun (Kaiser et al. 2013:142–144):

- (7)           nihonjin ‘a Japanese/Japanese people’  
                nihonjintachi ‘Japanese people’  
                kare ‘he’  
                karera ‘they’ (men)

### 1.5.2. Adjectives

There are two distinct types of adjectives in Japanese. There is no remarkable difference in semantic behavior, but the two types differ in their morphological behavior. The two types are often called **true adjectives** and **nominal adjectives** (Yamakido 2005:24). The true adjectives are adjectives with an easily identifiable morphological form that is distinct from other word classes. All true adjectives end with the suffix *-i* in their standard form (Yamakido 2005:24). This suffix is then modified to display phenomena such as time, aspect, and polarity. The true adjectives can act as predicates on their own and do not need copula:

- (8)           haya-i ‘it is fast’  
                fast-PRS  
                haya-katta ‘it was fast’  
                fast-PST

The nominal adjectives on the other hand have a morphological form and behavior that closely resembles nouns. When a nominal adjective is preceding the noun it modifies, it ends with the suffix *-na*, similar to the true adjectives:

- (9)           shizuka-na umi ‘a quiet sea’  
                quiet-ADJ sea (Yamakido 2005:25)

In many other constructions however, the nominal adjective has a form identical to a noun. They also cannot act as predicates on their own and must use a copula. Compare the adjective *shizuka-na* ‘quiet’ with the noun *sensei* ‘teacher’:

- |      |  |   |
|------|--|---|
| (10) | umi wa shizuka da ‘the sea is quiet’     | Taro wa sensei da ‘Taro is a teacher’     |
|      | sea TOP quiet COP(PRS)                   | Taro TOP teacher COP(PRS)                 |
|      | umi wa shizuka datta ‘the sea was quiet’ | Taro wa sensei datta ‘Taro was a teacher’ |
|      | sea TOP quiet COP(PST)                   | Taro TOP teacher COP(PST)                 |

Because of constructions like these, some researchers have argued that the nominal adjectives in Japanese should not be classified as adjectives at all and should be grouped together with regular nouns (Yamakido 2005:26). However, other researchers have attempted to propose some criteria that distinguish nominal adjectives from regular nouns. These criteria are not universally agreed upon, and the whole discussion cannot be mentioned in this paper. The most common of these criteria can be summarized as follows:

Firstly, nominal adjectives have the suffix *-na* before nouns; nouns can only make compounds directly with other nouns or use the genitive particle *no* (Yamakido 2005:29). This is also the case for nouns that are color words:

- (11) shizuka-na umi ‘a quiet sea’  
quiet-ADJ sea (Yamakido 2005:25)  
\*sensei-na hito ‘\*a teacher-like person’  
teacher-ADJ person  
\*murasaki-na fuku ‘\*violet clothes’  
violet-ADJ clothes  
murasaki no fuku ‘violet clothes’  
violet GEN clothes

Furthermore, nominal adjectives cannot generally be used as subjects and objects of sentences; nouns can function as subjects (Yamakido 2005:29).

- (12) sensei ga kuru ‘the teacher will come’  
teacher SBJ come  
\*shizuka ga kuru ‘\*the quiet will come’  
quiet SBJ come

Finally, nominal adjectives can be modified by adverbs such as *zuibun* ‘quite a bit’; nouns cannot (Yamakido 2005:34):

- (13) zuibun shizuka da ‘it’s very quiet’  
very quiet COP(PRS)  
\*zuibun otoko da ‘\*it’s very a man’  
very man COP(PRS) (Yamakido 2005:34)

### 1.5.3. Adverbs

Adverbs are another word class that is difficult to clearly identify in Japanese. As in the previous examples, the nominal adjectives have a behavior similar to nouns when used in adverbial constructions. In these sentences, the multi-purpose particle *ni* is often being used. Compare the noun *sensei* ‘teacher’, the nominal adjective *kirei* ‘beautiful’, the true adjective *hayai* ‘fast’ (note that in Japanese, particles come after the words they modify):

- (14) sensei ni naru ‘to become a teacher’  
teacher FUT become  
kirei ni kaku ‘to write beautifully’  
beautiful ADV write  
haya-ku hashiru ‘to run fast’  
fast-ADV run

For *hayai* ‘fast’, it is easy to identify the word as an adverb due to its unique morphological form. This is not the case for *kirei* ‘beautiful’, however, as it behaves just like the noun *sensei* ‘teacher’. The only way to argue for

that *kirei* ‘beautiful’ is an adverb in this construction is by looking at the relation between the words in the sentences. In example 14 above, both *kirei* ‘beautiful’ and *hayai* ‘fast’ describe the activity that the subject performs (writing and running) rather than the subject itself. This is not the case for the sentence with *sensei* ‘teacher’, where the noun *sensei* ‘teacher’ describes what the subject will actually become.

There are however several other types of adverbs and adverb-like words in Japanese. The distinction between these adverbial words is not clear cut, with some words seemingly belonging to more than one category (Martin 2004:783). Some words act as **true adverbs** and are always adverbial (for example, *zuibun* in example 13 above). These words do not need to use the particle *ni*. Other adverbs are **predicable adverbs** and do not require the *ni* particle, but can take the copula *da* and the genitive particle *no*. Finally, some adverbs act more like nominal adjectives like *kirei* ‘beautiful’ in example 14 above and require the *ni* particle (Martin 2004:783).

#### 1.5.4. Adjectives ending in -shii

There are certain true adjectives in Japanese that end in *-shii*, e.g. *yasashii* ‘kind’, *kanashii* ‘sad’ and *urayamashii* ‘jealous’. The *-shii* ending is the result of a historical phonological change. These adjectives generally do not describe an objective state similar to adjectives such as *takai* ‘high’, *omoi* ‘heavy’ and *hayai* ‘fast’, but instead frequently describe a subjective feeling or emotion (Shirane 2005:53). Some *-shii* adjectives however can be used to describe a more objective state for non-animate things, for example *atarashii* ‘new’ (e.g. a new car) and *tadashii* ‘correct’ (e.g. a correct answer on a test). Apart from this semantic behavior, it should be noted that the *-shii* adjectives do not have a different morphological behavior compared to words like *hayai* ‘fast’. The *shi* syllable is part of the stem and the final *-i* is the same as the *-i* in other true adjectives. Compare *sabishii* ‘lonely’ and *hayai* ‘fast’:

|      |                                   |                               |
|------|-----------------------------------|-------------------------------|
| (15) | sabishi-i ‘it is lonely’          | haya-i ‘it is fast’           |
|      | lonely-PRS                        | fast-PRS                      |
|      | sabishi-katta ‘it was lonely’     | haya-katta ‘it was fast’      |
|      | lonely-PST                        | fast-PST                      |
|      | sabishi-ku hashiru ‘to run alone’ | haya-ku hashiru ‘to run fast’ |
|      | lonely-ADV run                    | fast-ADV run                  |

## 2. Aims and research questions

The aim of this study is to investigate the form and function of reduplicated nouns in Japanese and compare them to their simplex counterparts. Furthermore, the relationship between semantic category and the effect of reduplication will be investigated. For example, it could be assumed that a noun will behave differently depending on if it refers to a concrete or an abstract item. The investigation will focus on three main areas:

1. The meaning of the reduplicated nouns compared to their simplex forms, and how this relates to the nouns' semantic categories. For example, are there any patterns that can be found among the nouns based on semantic category?
2. The morpho-syntactic form of the reduplicated nouns compared to their simplex forms, and how this relates to the nouns' semantic categories. For example, do the nouns change word class when reduplicated based on semantic category?
3. The register and usage of the reduplicated nouns compared to their simplex forms, and how this relates to the nouns' semantic categories. For example, will a reduplicated form be part of a more specific register, or a more formal or casual speech, based on semantic category?



# 3. Method and data

## 3.1. Choice of method

To carry out the study, a method of interviewing informants was used. This method was chosen over other possible methods, such as using questionnaires or corpus texts. The decision to use this method was based on a small study performed by me in 2009 where reduplication in Japanese was investigated using text material (Olsson 2009:1–4). While the study, albeit very brief, gave interesting results, there was an indication that finer nuances and connotations among the reduplicated words were lost in the analysis. The main reason for this loss of information was the lack of live data and human interaction with native speakers during the data gathering process. Therefore, it was of interest to repeat a similar study using a different method (Olsson 2009:4–7).

The method of interviewing is more time consuming and may in the end generate a smaller amount of data to work with, but it has some advantages over using alternative methods. Specifically, it allows for studying how the words are used in spontaneous language in a real time setting by real informants rather than analyzing written words in a static bulk of text produced by anonymous persons (Chelliah 2014:60–61). As opposed to using questionnaire entries or a corpus, in an interview environment, the live interaction with the informant is there, and a more realistic impression of how the informants use the word can be captured, for example if they show doubt over a specific meaning or usage of a word, or, in contrast, if they feel completely certain about the form and function of a specific word. Furthermore, an interview allows for better access to an informant's personal lexicon and ways of using the language, and gives good opportunity for meta level discussions. Although a resource such as an extensive and well-balanced corpus may contain a wide variety of material from different people and time periods, several of the texts come from publications and may have been written by professionals or have gone through several editing cycles before being published, removing access to spontaneous language usage. A possible drawback with using the interview method is that it is very difficult to capture diachronic data, even if informants from several generations are included into the study.

## 3.2. Limitations

An examination of the full inventory of reduplication in the Japanese language is far beyond the scope of this study. For this reason, a number of restrictions and limitations on the number of words had to be made in order to narrow down the scope. A decision was made from the beginning that this study would focus exclusively on the reduplication of nouns. The reason for this limitation was to allow for a more thorough study of a sample where each subtype is better represented. There is a possibility that reduplicated words in Japanese will show different behavior and grammatical properties depending on word class, and limiting the scope to nouns allowed for a deeper investigation of a single word class.

In addition to this, only nouns that have full reduplication with a regular simplex form were included. The mimetic words, words that only have partial reduplication, and words where the status of reduplication is uncertain (such as *mukashimukashi* and *tokutoku* mentioned in 1.4.4.) were excluded. This restriction was made to further limit the scope and also to ensure that all the words in the sample followed the same basic morphological and phonological principles.

## 3.3. Data

### 3.3.1. Noun types

Even with these restrictions in place, there are a vast number of nouns to choose from. Therefore, a limited list of nouns had to be created. Words that belong to one of the following three categories were selected:

1. Nouns referring to concrete, countable, physical items (tree, human, cat, etc.)
2. Nouns referring to more abstract and/or uncountable items (poison, gold, colors, etc.)
3. Nouns referring to concepts of time and duration (hour, origin, continuity, etc.)

These categories were selected to investigate whether differences between them in the effects of reduplication can be demonstrated in terms of the observations described in 1.3. above. To make the analysis as smooth as possible, no more than three categories were selected. The categories relate to findings I found in my previous short study mentioned in 3.1., where there were indications that certain patterns could be found among nouns of these three semantic categories. Due to the limited scope and lack of live data and human interaction, my previous study did not allow for any steadfast conclusions. It was therefore of interest to use these three categories again to see if more conclusive results could be found.

In order to observe any possible patterns relating to these three categories of nouns, and to test the overall productivity of reduplication in nouns in Japanese, some pseudo forms were included. These consist of made-up reduplicated forms of regular nouns that normally lack a reduplicated form, taken from the same three categories. The form and function of the pseudo forms were compared to the words from the regular lexicon. With the observation in some of the world's languages that for example reduplicated nouns referring to concrete, physical items create a plural number, it was of interest to investigate whether this pattern could also be found in a pseudo form belonging to the same category, and whether a similar morpho-syntactic pattern could be found in both regular words and pseudo forms. If reduplication of nouns in Japanese is indeed productive, it would probably be more likely that the informants would show confidence in how to pronounce the pseudo forms and create sentences including these forms.

### 3.3.2. Selecting the words

The reduplicated nouns included in the study – both the regular words and the pseudo forms – were chosen by me based on the three categories mentioned in 3.3.1. above using my own judgment. No specific, automated method based on frequency or the alike was used. However, in order to establish that the chosen regular words were indeed common and frequently used in the Japanese language, and that the pseudo forms were not in fact already existing words, the Balanced Corpus of Contemporary Written Japanese (henceforth: BCCWJ) was used. Searches were made across the whole corpus for each word. Among the regular words, only words that yielded a very high number of hits were accepted. Among the pseudo forms, only words that did not yield any hits were accepted.

At the time of this study, I did not have access to the full features of the BCCWJ and could only use the free version. Future studies could benefit from using the full features of BCCWJ, for example by using customized and more advanced search options for identifying words appropriate for a similar study.

BCCWJ is a large corpus of around 100 million words (Maekawa et al. 2013:345). It was completed in December 2011 (Maekawa et al. 2013:370). It is publically available free of charge (although to get full access to all features, a free registration through an academic institution is required). The content is made up mainly of written Japanese rather than spoken, although certain content with transcribed spoken Japanese does exist. The corpus consists of three subcorpora: library, publications, and a special-purpose subcorpus (Maekawa et al.

2013:347). The library subcorpus consists of a selection of books and publications reflecting the collections of public libraries in the Tokyo Metropolitan area, containing 30.38 million words. The publication subcorpus consists of books, magazines, and newspapers from all around Japan, with a total of 34.36 million words. Finally, the special purpose corpus consists of other important types of text from all over Japan, such as white papers, blogs, and poetry with a total word count of 40.19 million words (Maekawa et al. 2013:348–350). The contents of the corpus cover material from the past 20–30 years, with the content from the special purpose corpus covering the largest time span (Maekawa et al. 2013:351). When the corpus was constructed and text material was gathered, a random sampling technique was used as much as possible to maximize the representativeness. The corpus is annotated using dual part-of-speech analysis, document structure, and biographical information (Maekawa et al. 2013:345). As of October 2013, the free, publically accessible version of the corpus had more than 297,000 visitors, and the number of registered users totaled 1,500 (Maekawa et al. 2013:370).

### 3.3.3. Words used in the study

The words shown in table 6 below were used in the study:

Table 6: Words used in the study

| Simplex form | Meaning            | Reduplicated form | Category         | Regular/pseudo |
|--------------|--------------------|-------------------|------------------|----------------|
| <i>hito</i>  | ‘person’           | <i>hitobito</i>   | 1                | Regular        |
| <i>ki</i>    | ‘tree’             | <i>kigi</i>       | 1                | Regular        |
| <i>mura</i>  | ‘village’          | <i>muramura</i>   | 1                | Regular        |
| <i>yama</i>  | ‘mountain’         | <i>yamayama</i>   | 1                | Regular        |
| <i>kuni</i>  | ‘country, kingdom’ | <i>kuniguni</i>   | 1 (or perhaps 2) | Regular        |
| <i>hana</i>  | ‘flower’           | <i>hanabana</i>   | 1                | Regular        |
| <i>ware</i>  | ‘I’                | <i>wareware</i>   | 1 (or perhaps 2) | Regular        |
| <i>doku</i>  | ‘poison’           | <i>dokudoku</i>   | 2                | Regular        |
| <i>kuro</i>  | ‘black’            | <i>kuroguro</i>   | 2                | Regular        |
| <i>mono</i>  | ‘item’             | <i>monomono</i>   | 2                | Regular        |
| <i>nama</i>  | ‘raw, original’    | <i>namanama</i>   | 2                | Regular        |
| <i>mizu</i>  | ‘water’            | <i>mizumizu</i>   | 2                | Regular        |
| <i>shiro</i> | ‘white’            | <i>shirojiro</i>  | 2                | Regular        |
| <i>mae</i>   | ‘before’           | <i>maemae</i>     | 3                | Regular        |
| <i>moto</i>  | ‘origin’           | <i>motomoto</i>   | 3                | Regular        |
| <i>dan</i>   | ‘step’             | <i>dandan</i>     | 3                | Regular        |
| <i>toki</i>  | ‘point of time’    | <i>tokidoki</i>   | 3                | Regular        |
| <i>tsune</i> | ‘always’           | <i>tsunetune</i>  | 3                | Regular        |
| <i>tsuki</i> | ‘month’            | <i>tsukizuki</i>  | 3                | Regular        |

|               |           |                       |   |        |
|---------------|-----------|-----------------------|---|--------|
| <i>eki</i>    | ‘station’ | * <i>ekieki</i>       | 1 | Pseudo |
| <i>tetsu</i>  | ‘iron’    | * <i>tetsudetsu</i>   | 2 | Pseudo |
| <i>shuu</i>   | ‘week’    | * <i>shuushuu</i>     | 3 | Pseudo |
| <i>neko</i>   | ‘cat’     | * <i>nekoneko</i>     | 1 | Pseudo |
| <i>midori</i> | ‘green’   | * <i>midorimidori</i> | 2 | Pseudo |
| <i>ban</i>    | ‘evening’ | * <i>banban</i>       | 3 | Pseudo |

For the interviews, subsets of 15 words were compiled into lists, meaning no single informant responded to all the words.

A few comments should be made about some of the selected words:

1. *Kuni* has the meaning of “country” or “kingdom”, but in modern Japanese also refers to nations in the world. It is therefore not a hundred percent certain whether it should be counted as belonging to category 1 (nouns referring to concrete, countable, and physical objects), or to category 2 (nouns referring to more abstract, uncountable objects). A nation is indeed more of an abstract concept rather than a physical object with clear cut boundaries (e.g. a cat or a tree). Still, however, a nation is clearly a concept that is not only countable, but is often used in contexts involving counting (for example, when one is looking at a world map and counting how many countries they have visited).
2. *Ware* means “I” (first person singular), and it could be argued that this word should be classed as a pronoun rather than a noun. Yet, this word has the exact same morphological and syntactic properties as a noun in Japanese, and it is also not the standard word for “I” in daily speech (the standard word is *watashi*). Pronouns are not used as frequently in Japanese as in many other languages, and they generally have the same morphological and syntactic properties as nouns. Furthermore, several pronouns (such as *boku* ‘I’) derive historically directly from nouns. *Ware* will be included and classed as a noun, despite the potential competing classification. It should also be noted that this word could fit in both into category 1 and 2, similar to the case with *kuni* mentioned above.
3. *Kuro* and *shiro* are color words, yet, they are still nouns. Color words are often adjectives in languages of the world (such as English), but the forms *kuro* and *shiro* are genuine nouns in Japanese and have no different morphological or syntactic properties compared to other nouns (see example 11 in 1.5.2. above). There should therefore be no complications including them in this study.

### 3.4. Informants

For the interview sample, 15 informants were used. All were native Japanese speakers. Out of these 15 informants, 10 were living in Japan, and 5 were currently living in Sweden and had been doing so for several years. Out of the 10 informants living in Japan, 5 had at some point lived in a country other than Japan for a period of 1 or 2 years. All informants had however, regardless of current and past residence, been born in Japan and spent the majority of their childhood there. The interviews with the informants living in Sweden were conducted in Stockholm, Sweden and the interviews with the informants living in Japan were conducted in Tokyo, Japan. All interviews were conducted entirely in Japanese.

All informants signed a consent form, giving their consent to participate in the interviews and the acquired data being used for research purposes. When signing the form, the informants also had the option to choose if they would allow the acquired data to be used for further research projects in the future or if the data should be

destroyed once this study had concluded. They also had the option to choose if they would allow the recorded data to be played in public for research purposes.

Among the 15 informants, 11 were female and 4 were male. The ages varied greatly, with 4 people being 20–24 years old, 5 people being 25–29 years old, 2 people being 30–39 years old, 3 people being 40–49 years old, and 1 person being over 50. The majority of the informants (8 people) were born in the Kanto region in Japan, with 2 informants being born on the northern island of Hokkaido and 5 informants not wanting to give away any information about where in Japan they were born. One factor where there was very little diversity between the informants was education. All 15 informants were either graduates of a Japanese university or were currently studying at a Japanese university.

### 3.5. Procedure

Each interview session took around 30–45 minutes. Out of the 15 informants, 6 people were interviewed alone, and for the remaining 9, the interviews were conducted with 2 or more informants at a time. 6 of these 9 informants were interviewed in pairs, and the final 3 were interviewed together as a group.

For each interview session, one specific word list was used, a subset of the words given in table 6 above. Each word list contained 15 words: 12 regular words and 3 pseudo forms. The words and forms were given in their reduplicated forms and were arranged in a simple list format and were presented with no context or additional text material whatsoever. The 12 regular words were put at the beginning of the list and the 3 pseudo forms were put at the end of the list, with nouns from all three categories being fairly represented. To avoid cognitive bias, the words were not ordered by category in the list, but were presented in an order that would make it less likely that the informants would find a pattern among the words.

Through the process of collecting data, the word list was changed a few times. As a general rule, words that had triggered responses that were very consistent among the informants were exchanged for new words, whereas words that the informants expressed doubt about were left intact. This was done mainly to acquire as much data as possible from the small sample of 15 informants. All in all, 5 different word lists were used through the whole study. The word lists were distributed according to table 7 below:

Table 7: Distributions of word lists across informants

| Word list | Informants | Interview style   |
|-----------|------------|---|
| A         | 1–4        | Each informant interviewed alone  |
| B         | 5–6        | Each informant interviewed alone  |
| C         | 7–8        | Informant 7 and 8 interviewed together  |
| D         | 9–12       | Informant 9 and 10 interviewed together; informant 11 and 12 interviewed together |
| E         | 13–15      | Informant 13, 14, and 15 interviewed together                                     |

The regular words in the word lists were listed both in the Japanese logographic *kanji* characters and in the syllabic *hiragana* script. The pseudo forms were only listed with kanji. During the interviews, some informants felt it was not appropriate to write certain regular words in kanji, or that some of them could have more than one reading. This also resulted in the informants feeling more insecure about describing that particular word. To prevent this in the upcoming interviews, these particular regular words were written only with hiragana or only with kanji to prevent further confusion. This change was introduced after the first four informants had been interviewed. Word list B (see table 7 above) was the first to include a number of words written only with hiragana or kanji.

At the start of the interview, the informants were asked to talk about the words in the list, one word at a time. They were asked to describe the meaning of the word and to create a sentence containing the word. The informants were also encouraged to talk freely, to say as much as they wanted to, and to express any thoughts and ideas they had about the words. In the cases when an interview session included more than 1 informant, the informants were encouraged to talk freely about the words, either by themselves or by conversing with each other. During the session, questions or comments were rarely given to the informants, in order to let them speak as freely and uninterrupted as possible. The only time question or comments were given was at times when the informants asked a question or when clarification was needed.

The audio from the whole interview session was recorded on a mobile device in mpeg4 format and then transferred into a computer where they were analyzed. No video material was recorded. All the material from the audio recordings was then transcribed into text using the Latin alphabet. The transcribed data were then analyzed for all possible interesting findings related to the three main points of interest: meaning, morphosyntactic usage, and additional pragmatic information or connotations. Recurring patterns, as well as contrasts, between informants were noted.

# 4. Results

## 4.1. Category 1: concrete nouns

### 4.1.1. Meaning

When reduplicated, basically all category 1 nouns (concrete nouns referring to countable physical items) took a meaning of plurality or a meaning highlighting that there were more than one referent. Several informants<sup>3</sup> described the words as meaning “many of X” without any hesitation and with good confidence.

(16) Hitobito ‘person-person’ – I4  
*Hito wa takusan iru.* “There are many people.”

(17) Kigi ‘tree-tree’ – I1  
*Takusan no ki ga ...* “Many trees ...”

However, some informants described some of the words not only as “many of X,” but compared them to other items or scenes with similar visual properties. For example, *yamayama* ‘mountain-mountain’, was often compared with words like *sanmyaku* ‘mountain range’:

(18) Yamayama ‘mountain-mountain’ – I6  
*Yama hitotsu janakute, sanmyaku no you na yama ga itsumo aru no arawasu kotoba.* “There is not one mountain. It is being used when you want to say that there are mountains that are always there, like a mountain range.”

Despite this, some informants stressed that while they used words referring to other similar physical items when describing the reduplicated forms, the reduplicated forms were not in themselves a substitute for these other words. When describing *kigi* ‘tree-tree’, I3 stressed that *kigi* was not identical to words like *mori* ‘forest’ or *hayashi* ‘woods, smaller forest’:

(19) Kigi ‘tree-tree’ – I3  
*Mori toka hayashi toka kanji ga chigatte, motto chiisai-na kanji* “The feeling is different from forest or woods, it is smaller.”

The informants mostly described the words visually, often by describing a setting that incorporated the visual impressions of the words:

(20) Kigi ‘tree-tree’ – I1  
*Kigi no aida kara taiyou no hikari ga hikorikomorete imasu* “The sunlight is shining and spreading between the trees.”

(21) Hitobito ‘person-person’ – I7  
*Hitobito ga Shibuya ni shuugoushite iru shite imasu.* “People are gathering in Shibuya.”

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<sup>3</sup> Henceforth, the informants will be referred to as “I1”, “I2” etc.

The informants seemed to emphasize the visual properties of specific scenes, for example a mountain range by the horizon or people gathering in a big city. No informant ever used the reduplicated forms in constructions involving for example metaphors or analogies, or in more abstract constructions (for *hitobito*, for example, nobody suggest anything like “he is doing many people’s work”). One informant even repeatedly stressed that *hitobito* ‘person-person’ was used when you are seeing more than one person but not as often when thinking of more than one person:

(22) Hitobito ‘person-person’ – I2

*Hito ga takusan iru toki ... hito wo miru toki ni mo ... atama de kangaeru toki ni yoku tsukawanai kotoba* “At a time when there are many people ... At a time when you see people ... You don’t use this word when you think of people.”

Another interesting observation relating to visual impression was also made. When some informants were describing the reduplicated forms, they emphasized that the word was used to describe not only “many of X,” but also “many types of X”:

(23) Hitobito ‘person-person’ – I4

*Hito wa takusan iru ... samazamana hitobito ga imasu* “There are many people ... there are different types of people.”

(24) Kigi ‘tree-tree’ – I4

*Iroirona shurui no kigi wa aru to iu ka* “When you want to say there are trees of different types.”

(25) Hanabana ‘flower-flower’ – I8

*Ironna no shurui no hanabana ... ikkou no hana ga ... isshu no hana ga saite irun janakute ... ironna shurui ga saite iru* “Flowers of different types ... One type of flower ... It’s not one peices of flower that is blooming ... There are different types blooming.”

Among the words belonging to category 1, *hanabana* ‘flower-flower’ exhibited an interesting property that was slightly different from the other words. Compared to words like *hitobito* ‘person-person’ and *kigi* ‘tree-tree’, almost all the informants were eager to stress that *hanabana* must refer to “different types of X” and not just “many X in general”. Even when asked explicitly if the word *hanabana* could not refer to many flowers of the same species or variety, they firmly stressed that it had to be about flowers of different species.

#### 4.1.2. Form

All category 1 nouns kept their noun status when reduplicated, with one exception: *hana* ‘flower’. The informants used two separate reduplicated forms of *hana*, one that was still a noun (*hanabana*), and one that turned into an adjective: *hanabanashii*. The pattern of changing word class from a noun to an adjective with the ending *-shii* was very common among reduplicated forms of words of category 2 (see 4.2.1. and 4.2.2. below), but among words belonging to category 1, only *hanabana* exhibited this behavior. While most of the informants mentioned *hanabana* as the first form, a few informants actually started with *hanabanashii* and later described *hanabana*. Compared to the noun *hanabana*, the adjective *hanabanashii* was described as having connotations similar to those of the simplex form “flower”:

(26) Hanabana(shii) ‘flower-flower’ – I5

*Hanayaka na kanji desu ne ... sugoku kirei de ... azayaka de ... performance ... sugoi kirei dattara ... ano hito no dansu wa hanabanashikute toka ... sonna fuu no kanji* “Yes, it’s a



gorgeous feeling ... very beautiful ... vivid ... performance ... very beautiful ... for example, that person's dance is hanabanashii ... that type of feeling.”

#### 4.1.3. Register

Most of the reduplicated forms of the words belonging to category 1 did not seem to be used a lot in daily, casual speech. Almost all informants stressed that they rarely used category 1 reduplications in their daily speech, and that the reduplicated forms were used mainly in one or more of the following three ways: 1. in writing, 2. in more formal situations such as a news broadcast or a university lecture, or 3. in older texts or speech written or uttered a long time ago. There was also a tendency for the older informants being more elaborate with their descriptions of, and having a greater knowledge of, the words belonging to category 1. Some of the informants that were under 25 years old did not recognize all of the category 1 words, and unsurprisingly, had trouble accounting for their meaning and usage.

#### 4.1.4. Pseudo forms

Among the category 1 words, the two pseudo forms used were the reduplications of *eki* ‘station’, and *neko* ‘cat’. The informants had more agreement for *ekieki* than for *nekoneko* and were much more elaborate when describing *ekieki*. For *ekieki*, all informants used the word as a noun, similar to the simplex form. This is evident in that the informants used the subject particle *ga* with *ekieki* (subject particle marked in bold):

(27) Ekieki ‘station-station’ – I6:

*Tokkyuusen wa ekieki **ga** kirei da toka ...*

Limited express line TOP ekieki **SBJ** beautiful COP etc.

“On the limited express line, the ‘ekieki’ is beautiful ...”

As for the meaning, almost all the informants mentioned that a possible meaning could be “many stations”, but most informants also emphasized that it could mean “every station” or “station after station”. When giving examples, they said things like “the train stops at every station, one after another” or “every station has vending machines.”

(28) Ekieki ‘station-station’ – I5:

*Densha ga eki ni ikou junban ni tomatte, iku kanji desu ne ... sorezore no eki ni ... nani ka onaji mono ga ohyougen shita mono aru toka* “The kind of feeling when the train stops at station after station ... An expression like when something is similar ... at later stations.”

For *nekoneko*, there was disagreement among the informants. Two informants used the reduplicated form as a noun and described the word as having a possible meaning of “many cats”, similar to the other category 1 words. Two other informants did not feel confident in creating a sentence with *nekoneko*, but described it as having a meaning of “a feeling like a cat” or “being like a cat”. Finally, one informant used the word, although not with complete confidence, as *nekonekoshii*, with the meaning of “being catlike”. No informant made any reference to any visual scene or described the word as “many kinds of cats.”

(29) Nekoneko ‘cat-cat’ – I7:

*Ippai no neko wa ... hitobito no onaji imeji* “Lots of cats ... same feeling as for hitobito.”

(30) I11:

*Nekonekoshii ka? Neko janai mono ... neko mitai* “Is it nekonekoshii? Something that is not a cat ... something that looks like a cat.”

## 4.2. Category 2: mass & abstract nouns

### 4.2.1 Meaning

Many of the category 2 words changed word class into adjectives when reduplicated, taking the ending *-shii* (similar to *hana* ‘flower’ mentioned in 4.1.2.). Like *hanabanashii*, the reduplicated forms of category 2 words seemed to take on a meaning with connotations similar to those of the simplex form, i.e. “a feeling of X” rather than “X itself” or “something that contains X.” One example is *doku* ‘poison’, which was reduplicated into *dokudokushii*. The informants described the word as meaning “poison-like”, “the feeling of something that would be poisonous (e.g. harmful)”, and used it to describe a variety of things such as strong colors (e.g. neon green or deep purple), plants with strong colors that could give the impression of containing poison, and even more abstract phenomena such as insults, or even people with a sharp tongue. No informant described the word as meaning “factually poisonous” or “something that factually contains poison.” One informant even stressed this specifically:

(31) Dokudoku ‘poison-poison’ – I3:

*Doku ga ippai to iu janakute ... Doku ni aru mono ni wa amari tsukawanai to omou* “It is not when you want to say that there is a lot of poison ... I don’t think you use this a lot for things that have poison.”

The reduplicated form of *mizu* ‘water’, *mizumizushii*, was described as meaning “fresh” or “juicy”, but not as having the meaning of “containing water” or “literally full of water” (e.g. a glass of water). The real world items described by the informants using *mizumizushii* were almost always things like fruit, vegetables, or plant life. When using the word in combination with plant life, the informants particularly chose smaller and more fragile plants, such as fresh green grass, young herbs, young trees or saplings. No informants used *mizumizushii* with words referring to inorganic objects such as stones or buildings. A few informants also used the word *mizumizushii* to describe people, particularly young and lively people.

(32) Mizumizushii ‘water-water’ – I5:

*Mizumizushii kudamono toka ... juicy na kanji ... oishisouna toki toka ... yasai ya kudamono ... shizen-na kanji no toki* “Mizumizushii fruit, for example ... a feeling of juiciness ... when something seems delicious ... vegetables or fruits ... when there is a natural feeling.”

As for the reduplicated forms of color words, the word *kuro* ‘black’ appeared in two different forms in a way similar to *hana* ‘flower’: *kuroguro* (noun) and *kuroguroshii* (adjective). For some of the informants, the two forms did not seem to differ much in meaning. These informants described both as having a meaning of “intense black” and “black and nothing else”, i.e. black without any other color, perhaps akin to “pitch black”. Some informants described *kuroguro* and *kuroguroshii* as also having very positive connotations, e.g. “a beautiful black color”. Some of the real world items used in association with *kuroguro* and *kuroguroshii* were coffee, dogs, and human hair.

(33) Kuroguro ‘black-black’ – I10:

*Makkuroi ... hontou ni kuroi ... kami no ke toka* “Deep black ... really black ... like hair.”

However, two other informants described the word *kuroguroshii* as meaning “something that is not factually black, but seems to be very black”. This description was similar to the other adjectives with the ending *-shii*, i.e. having a meaning similar to “the feeling of X” rather than “factually being/containing X.”

(34) Kuroguroshii ‘black-black’ – I12:

*Hontou kuro janai mono ga ita toki ni ... motto motto ... kooonii dattara ... motomoto kuroi kara ... kuroguroshii ... kooonii equal kuro* “It’s for when things that are not black for real ... It’s more ... like coffee ... originally black ... kuroguroshii ... black like coffee.”

One more color word, *shiro* ‘white’, was used in the study. This word yielded less reliable data however. The informants were not as confident when describing this word as they were when describing the reduplicated forms of *kuro* ‘black’. They used no less than four different reduplicated forms for *shiro*: *shirojira*, *shirajira*, *shirojiroshii*, and *shirajirashii*. The 2 informants that used the forms *shirajira* and *shirajirashii* described it as describing “something that is clear; something that comes to your mind”, and not for a sensation related to color (e.g. “white-like”). This description contrasted with 2 other informants, who used the forms *shirojira* and *shirojiroshii*, and instead gave a description of “intense white”, for example when describing a pale face. This description of “intense white” is parallel to the meaning several informants gave to *kuro* ‘black’ in the noun variety without *-shii*.

(35) Shirajira ‘white-white’ – I7:

*Akarasama na ... wakari kita toka* “Straightforward ... when you realize something.”

(36) Shirojira ‘white-white’ – I11:

*Kao ga shirojira shite iru ... kuroguro no youna imi ... motto sugoku* “A face becomes shirojira ... similar meaning to kuroguro ... more intense.”

There were 2 more category 2 words that yielded consistent, but somewhat unexpected results. These were the reduplicated forms of the words *mono* ‘item’ and *nama* ‘raw’ (e.g. “raw vegetable”).

*Mono* ‘item’ refers to any kind of unspecified object or item, and the informants used the reduplicated form *monomonoshii*. However, the meaning of *monomonoshii* sometimes seemed to be related to the sense of hearing. The informants described meanings such as “loud and noisy”, “crowded and boisterous”, and “not relaxed and generally unpleasant”.

(37) Monomonoshii ‘item-item’ – I7:

*Takusan no hito ga shabete iru kara ... monomonoshii ... shizuka janakute you na mono* “Many people are talking ... monomonoshii ... at a time when it’s not peaceful.”

*Nama* ‘raw’ was reduplicated as *namanamashii* by the informants. The meaning generally associated with *namanamashii* was somewhat difficult to obtain. Most informants described the word as meaning “something serious”, or “something that is real”. Several informants expressed that it had a very negative meaning, and when choosing words to combine with *namanamashii* for an example sentence, they chose scenarios such as car accidents or wounds to the human body.

(38) Namanamashii ‘raw-raw’ – I4:

*Kuruma wo untenshite ittara jiko wa ... kuruma no jiko wo mikakaete ... soko de ... namanamashii ... hito no karada wa kou yoku ... namanamashii* “An accident when a car is driving ... You see the car accident ... After that ... namanamashii ... a person’s body is like ... namanamashii.”

#### 4.2.2. Form

As mentioned in 4.2.1., the category 2 words showed a tendency to change word class into adjectives with the ending *-shii*. There were a few exceptions to this. *Kuro* ‘black’ could keep its noun class and be reduplicated as *kuroguro*, taking the genitive particle *no* as in example 36 above, or change into the adjective *kuroguroshii*, as

most other category 2 words. *Shiro* ‘white’ could be both a noun and an adjective when reduplicated, and had two separate pronunciations, resulting in four forms in total: *shirojira*, *shirojiroshii*, *shirajira*, and *shirajirashii*.

### 4.2.3. Register

For the category 2 words, it was the informants above 30 years old that were the most familiar with the reduplicated forms, used the most elaborate descriptions, and were the most confident when they described the words. Among the informants below 25 years old, some did not recognize the words at all. Generally, there was no indication among the informants that the category 2 words were restricted to specific situations, such as a more formal context or in writing only. The words tended to be used more by the older informants and some remarked that they were not frequently used.

### 4.2.4. Pseudo forms

For the pseudo forms belonging to category 2, the results were inconclusive. The two words used were *tetsu* ‘iron’ and *midori* ‘green’. The reduplicated form of *tetsu* yielded no results at all. None of the informants felt confident with the word and their descriptions were very vague and short. One informant mentioned that it might have the meaning of “several things made out of iron.” Several informants were unsure of how to pronounce the form, whether it was supposed to be *tetsutetsu* or *tetsudetsu*.

For *midori* ‘green’, the results were somewhat inconclusive. The informants did not pronounce the reduplicated form as *midorimidori*, but instead used the synonymous but bound morpheme *ryoku*, creating the form *ryokuryokushii*. All the informants used the form *ryokuryokushii* rather than the noun form. They did however differ somewhat in how they described the meaning. Several informants described the word as “a feeling of green” or “greenish”, which is quite consistent to how some informants described words like *kuroguroshii*. However, two informants instead described *ryokuryokushii* as having the meaning of “fresh, young, and lively”, somewhat similar to how the informants described the word *mizumizushii* ‘water-water’.

(39) Ryokuryokushii ‘green-green’ – I7:

*Kuroguro to chikai ... midori ga ippai-na imeji ... mori wo sono sora kara mite iru youna imeji*  
“It’s close to kuroguro ... a feeling of lots of green ... a feeling like you are watching a forest from above.”

(40) I6:

*Mizumizushii tte nanka mite tte ... yappari shizenna imeji ... ryokuryokushii arisou na koto ...*  
*yappari fresh ... mizumizushii to nite imasu* “It reminds me of mizumizushii ... Obviously a natural feeling ... things that seem to be ryokuryokushii ... obviously fresh ... feels like mizumizushii.”

## 4.3. Category 3: nouns referring to time

### 4.3.1. Meaning

At least 5 of the category 3 words could be said to have a meaning that corresponded at least to some extent to the meaning of their simplex forms. These words were *moto* ‘origin’, with the reduplicated form *motomoto* ‘originally’, *dan* ‘step, phase’, with the reduplicated form *dandan* ‘gradually’, *toki* ‘point of time’, with the reduplicated form *tokidoki* ‘sometimes’, *mae* ‘before’, with the reduplicated form *maemae* ‘for a long time’, and finally, *tsuki* ‘month’, with the reduplicated form *tsukizuki* ‘every month, monthly’. While these reduplicated

forms may seem to have many different meanings, they all relate in some ways to time and frequency, indicating how long or how frequently an action is performed.

The remaining word of category 3, *tsune* ‘always’, showed some differences in function compared to the other 5 words. The reduplicated form *tsunezune* seemed to have a meaning of intensification. The informants showed some hesitation when describing the meaning of this word as compared to its simplex form. It seemed the meaning of *tsunezune* is in many ways the same as the simplex form, only that it is more emphasized. Two informants added – somewhat vaguely – that *tsunezune* was used when speakers are talking about their own thoughts, feelings, and opinions, as opposed to the simplex form *tsune* or synonyms such as *itsumo* ‘always’, which are more general words that can be used anytime speakers want to express that anything is done constantly. While there is not enough data to support any strong conclusion, it could be speculated that it is not as easy with a word like *tsunezune* to create a meaning similar to the other category 3 words. Compared to for example words like “month” or “point of time”, “always” is a complete and constant concept that spans the whole timeline, making it more difficult to add meanings such as “every month” and the alike.

(41) Tsunezune ‘always-always’ – I1:

*Tsunezune okane wo taisetsu ni suru you ni ki wo tsukete imasu ... tsunezune wa kaiwa de amari iiwanai ... kaita toki ni ... jibun no ishii wo kou arawasu you na imi wo ... ga haite kuru* “When you want to make sure you always spend your money wisely ... *tsunezune* is not used often in conversation ... when you write ... it’s when you want to present your intent like this ... That’s when you say it.”

One of the category 3 words, *tsukizuki* ‘every month, monthly’, had a more specific usage compared to other category 3 words. While the basic meaning of *tsukizuki* was “every month” or “monthly”, the informants tended to use this word in sentences that had a topic related to buying or selling items, such as “I pay the bills for my cell phone monthly”. When asked if *tsukizuki* could not be used in other sentences not relating to the topic of buying and selling, the informants answered that it perhaps could be used, but that they felt the topic of buying and selling was more appropriate for the word.

(42) Tsukizuki ‘month-month’ – I1:

*Tsukizuki no chokin wo tamete ookina mono kaemasu ... maitsuki ... oshiharai no toki* “I save money monthly so that I can buy something big ... every month ... when you pay.”

#### 4.3.2. Form

All but 2 of the category 3 words changed word class from noun to true adverb. The 2 remaining words, *maemae* ‘for a long time’ and *tsukizuki* ‘monthly’, did not change into true adverbs, but took the forms of predicable adverbs that were connected to a regular noun with the genitive particle *no* (as in example 42 above). None of the reduplicated forms of the category 3 words remained a pure noun or changed into an adjective with the ending *-shii*.

#### 4.3.3. Register

The informants could generally easily describe and use the category 3 words regardless of age. Some of the informants below 25 years old said that there were some category 3 words they did not often use themselves, but they did recognize them and could describe them. The category 3 words displayed somewhat irregular pattern in register and usage. Two of the category 3 words, *motomoto* ‘originally’ and *tsunezune* ‘always’, were described by the informants as having a more formal tone and being used more in writing than in speech. Most of the

remaining category 3 words did not exhibit this trait. The informants were neutral when describing them, and did not remark whether the words were used in a more formal or casual context.

One word that broke the pattern was *tokidoki* ‘sometimes’. All 15 informants immediately recognized this word and could describe it without problems. They also mentioned with confidence that they used this word very frequently, usually every day, and that it was a very common word used in any setting, both in formal and casual speech, both among younger or older speakers etc. The immediate response and confidence of the informants for *tokidoki* was unlike any other category 3 word.

#### 4.3.4. Pseudo forms

As pseudo forms for the category 3 words, *shuu* ‘week’ and *ban* ‘evening’ were used. For these words, there was a bigger agreement among the informants. For *shuu*, the informants were unsure whether the pronunciation would be *shuushuu* or *shuujuu*, but they agreed that the meaning would be “every week”, similar to other category 3 words such as *tsuki* ‘month’. The informants also felt quite comfortable with this word, with one of them remarking that it was “strange that this is not a real word”, and that this word “felt very much like similar words such as *tsukizuki*”. Also, all informants (except one) used the word as either a true adverb or an adverb using the *ni* particle, for example:

(43) Shuushuu ‘week-week’ – I5:

*Shuushuu ni kare wa watashi no ie ni tazune-ni kuru ...*

“shuu-shuu” ADV he TOP 1SG GEN house DAT visit-AUX come

“He comes visiting my house ‘shuushuu’ ...”

One informant however created a sentence where *shuushuu* ‘week-week’ was used with the durative particle *de*:

(44) *Shuushuu de yotei wo kumimashi-ta mitai na ...*

“shuushuu” DUR plan ACC assemble-PST look like (emphasis)

“It looks like I assemble my plans for every week ...”

The reduplicated form *banban* was tested on rather few informants, and the results were not very elaborate. The informants felt it was difficult to create a sentence with the word, but three of them mentioned that a possible meaning could be “a very late evening” or “deep night”, which displays a function of intensification rather than time/frequency displayed by most other category 3 words.

# 5. Discussion

## 5.1. Results discussion

This study has brought out a number of interesting patterns in the semantic effects of reduplication. The inclusion of pseudo forms have added to the results. The number of words tested and the number of informants do not permit categorical statements, and a number of words deviated from the behavior observed among other nouns in the same category. Nevertheless, several tendencies and patterns are indeed suggested.

### 5.1.1. Representativeness of categories

It could be argued that the three noun categories used in this study were not equally represented. Whereas the nouns in categories 1 and 3 had more similarities, the nouns in category 2 were more heterogeneous. Words included in category 2 were mass nouns (e.g. water) and elements (e.g. iron), or more abstract items such as physical properties (e.g. toxicity), or mental-visual phenomena (e.g. colors). Together, they cover a very broad semantic area, and it is not guaranteed that the available data in this study was enough to draw any safe conclusions on the nature of the reduplicated forms of these words. Nevertheless, some interesting findings were made.

### 5.1.2. Meaning

One of the most conclusive patterns among the words is the observations in meaning within category 1 and category 3 words. Category 1 nouns almost exclusively showed plurality when reduplicated. There also seemed to be a preference among the informants to use the reduplicated nouns primarily for describing visual impressions. More abstract constructions, or constructions where the reduplicated forms were used to express plurality more generally, were not observed. The tendency for concrete nouns to show plurality when reduplicated has been observed in many of the world's languages. However, the reduplicated nouns in Japanese seem to have a more restricted usage. The reduplicated forms of category 1 nouns seem to have the function of emphasizing that there are many instances of an item in one place. Furthermore, some reduplicated forms have some additional attributes. Mainly, many of the nouns express a meaning of many different kinds of an item, with a strong example being *hanabana* 'flower-flower'. Following the assumption of a preference for visual impressions, it could be suggested that this is a reflection of the environment these items appear in. A garden has flowers of many species, and people who gather in a town square are almost always of different styles and sizes. There is however too little data to draw any firm conclusions at this point.

The category 3 words showed a strong tendency of semantic expressions of time & frequency, and to a lesser extent, intensification. These results are also similar to other languages of the world. As time is an abstract and non-physical phenomenon; it is more difficult to argue for a direct connection between the meanings of the simplex and reduplicated forms for the category 3 words. Still, some arguments could perhaps be made that reduplication causes an effect similar to the category 1 words. In the word pair *toki* 'point in time' and *tokidoki* 'sometimes', *toki* refers to a specific point in time. If *tokidoki* is interpreted as meaning "many of *toki*", it could be argued that several points in time effectively means "many times" or "sometimes". This could also be a reason why the words *mae* 'before' and *tsune* 'always' seem to display intensification when reduplicated. Compared to *toki* 'point in time', expressions like "before" or "always" cannot be quantified as easily, leading them to have a meaning of an intensified "before" and "always". This assumption does however not explain why

certain words have additional meanings, particularly *tsukizuki*, which seems to be used in the more specific register of buying and selling.

The category 2 words had the most diverse results for meaning. This is probably to some extent due to the wide variety of words included in this category. A few results were similar to findings in other languages, for example the effect of intensification for reduplicated color words. It is understandable that a repeated color word such as *kuro* ‘black’ would have the meaning of an even more intense black. However, the phenomenon of the category 2 words turning into adjectives with the meaning of “similar to X” when reduplicated is more surprising. While it could be argued that it makes sense that such an effect is more common among abstract nouns, it is surprising that there are not more instances of intensification. It could be expected that a word like *doku* ‘poison’ would have the meaning of “extremely poisonous” when reduplicated, but the reduplicated form *dokudokushii* instead describes more a meaning of “giving you a sensation that feels as if it was poisonous”. This is strengthened by the fact that many of the informants stressed that *dokudokushii* did not have the meaning of “something that factually is poisonous.” Generally speaking, it seems that many of the reduplicated category 2 words had meanings of “a feeling like X”, and that the meaning of the reduplicated word is taken from attributes of the simplex form. This is seen primarily in the previous example *doku* ‘poison’, and in *mizu* ‘water’, which had the meaning of “something that is fresh or juicy” when reduplicated. However, some of the words were not as straightforward. The nouns *mono* ‘item’ and *nama* ‘raw’ had meanings when reduplicated that did not seem to have an immediate link to the simplex forms. For example, the simplex form *nama* ‘raw’ is used for describing a state with no negative connotations whatsoever, for example raw vegetables or unpasteurized foods. A possible connection could be if the *nama* in *namanamashii* would be interpreted as carrying a meaning of “crude” or “unrefined” in addition to the neutral “raw”. This is however merely speculation, and there is far too little data to draw any conclusions at this point.

### 5.1.3. Form

The category 1 nouns were the words that changed the least. With the exception of *hana* ‘flower’, all the reduplicated forms remained as nouns only. Most of the category 3 words had a pattern of changing into true adverbs when reduplicated, except for the 2 words *maemae* ‘for a long time’ and *tsukizuki* ‘every month’ that turned into predicable adverbs taking the *no* particle. Among the category 2 nouns, there were surprisingly few words that remained as nouns when reduplicated. The most common pattern was to change into an adjective with the ending *-shii*. When comparing these forms with the semantic patterns, it is perhaps not so surprising that most of the category 1 nouns remained as nouns and the category 3 nouns turned into true adverbs or predicable adverbs taking the *no* particle. It is more unexpected that not more of the category 2 words remained as nouns when reduplicated. For certain words, such as mass nouns, this is perhaps expected. With the concrete nouns referring to countable items showing such a strong tendency of having the meaning of plurality, it would perhaps be less likely to include a reduplicated form of for example *mizu* ‘water’ as a noun form like *\*mizumizu* meaning “many bodies of water.” Overall, while the tendency of category 2 words taking the form of adjectives with the *-shii* ending when reduplicated is indeed very strong, it is at this point not easy to find strong arguments for why this happens.

### 5.1.4. Register

The reduplicated forms of the nouns included in this study showed some irregular results related to register. The category 1 nouns had a tendency of being used in writing or more formal speech. The category 2 nouns did not show any specific pattern similar to category 1. The category 3 nouns showed a variation in register, with some words belonging to a more formal register and some words being more casual. One striking feature in this study is that the informants showed a lot of insecurity when describing the reduplicated forms. The only word in the



study where the informants showed a hundred percent confidence for was *tokidoki* ‘sometimes’. *Tokidoki* was also the only word that was used daily by all speakers and that was not restricted to any specific register. Furthermore, there was a strong tendency in the study that the older informants had a better recognition of the reduplicated forms and were more elaborate in their descriptions. The informants under 25 years old were not confident and did not recognize certain words. Although some patterns can be identified for each category, this wide spread in register, and the high frequency of the word *tokidoki* ‘sometimes’, seems to indicate that reduplication is not a perfectly basic and solid phenomenon in Japanese compared to in some other languages of the world.

### 5.1.5. Pseudo forms and productivity of reduplication

As has been shown in this study, there are indeed a lot of reduplicated words in Japanese among all the word classes. However, the results of this study seem to indicate that reduplication, at least in nouns, is less productive and has a more restricted usage than in many other languages of the world. The results from the pseudo forms seem to make this claim stronger. Admittedly, the number of pseudo forms was not very high, making it difficult to draw any steadfast conclusions. However, the observation that informants showed a lot of uncertainty when describing the pseudo forms is indeed notable. The informants disagreed upon the form and meaning of many of the words, and they were sometimes unsure of whether a reduplicated form should be pronounced using *rendaku* or not. Had the informants’ responses been more confident regarding the pronunciation and usage, and the function of the pseudo forms conclusively been very close to the observed form and function of the regular words, there would have been a stronger argument for the existence of a system for reduplication of nouns in Japanese. Moreover, the observation that most of the reduplicated nouns seem to be more recognized and used more easily among the older informants (*tokidoki* ‘sometimes’ being a notable exception) could be an indication that the reduplicated nouns are not a part of the standard lexicon but have a more specific usage related to certain contexts. While the results from this study are not enough to make any definite statements, there seems to be an indication that the process of reduplication in nouns in Japanese is limited to a certain set of nouns, that it is not productive, and not part of the standard lexicon.

## 5.2. Method discussion

Using interviews and audio recordings for gathering data had both advantages and disadvantages. The primary advantage was the access to spontaneous language usage in real time and the possibility of meta discussions. If data had been collected in text form from for example a corpus, some of the small nuances observed in this study could very well have gone unnoticed. The method did however have some disadvantages. One of them was the time required to gather, process, and analyze all the data. The process of acquiring and analyzing the data took up a big portion of the total time for this study, leaving less time for other areas. This resulted in the study focusing heavily on the recorded data and the findings therein. This meant that the focus on previous research or the typology of reduplication in the world’s languages received less attention. There was also a limit to how many informants could be included in the study. It would have been preferable to have more informants than 15, but by using this method, the time and scope for the study did not allow for more informants. This also meant that the informants available were restricted. Even though the informants in this study had a fairly diverse background and personal data in some categories, the lack of diversity in other categories, for example academic background, makes it more difficult to draw conclusions for the language as a whole.

Another issue was the logistics and organization of the interviews. The interviews had to be scheduled at times and places that were suitable for the informants. This sometimes resulted in the interviews being made in locations that were not fully suitable for an audio recording, such as a public place. This caused some of the

recordings to have background noise, which made the transcription of some parts more difficult and at certain times impossible. Furthermore, a public location could have resulted in some of the informants becoming less relaxed and less talkative. This could especially have affected the informants under 25 years old. These 4 informants generally showed less confidence during the interviews compared to older informants. It is however difficult to say whether this was due to their young age or to the environment. The different schedules of the informants sometimes lead to the only possible solution being to interview two or more informants at the same time. While this style of interview gave some interesting opportunities to observe a dialogue between informants, it was sometimes difficult to prepare properly for these situations as they were sometimes decided right before the interview took place.

There was also a concern with the words chosen for the lists as the interviews were performed through the study. Even though test interviews had been made before the real interviews, and the procedure and equipment had been tested, some issues presented themselves after the study had already begun. For example, in some of the early word lists, some informants felt the words were not spelled with the appropriate kanji character, making them more insecure when describing a word. This had then to be corrected before the next interview.

Furthermore, the pseudo forms were not always tested in the most appropriate way. In order to not put too much pressure on the informants, it was decided that a maximum of 15 words could be tested per interview. Due to the importance of acquiring data for the regular words, very few pseudo forms could be tested in total. Also, the pseudo forms were presented to the informants as already reduplicated (in logographic kanji only), which may have affected the informants trying to come up with a description. It could have been better to present the pseudo forms in their simplex form and see what the informants would do. Finally, although the list of regular words were ordered in a way to avoid any bias and to prevent the informants from discovering the categories included, the pseudo forms were always put at the end of the lists. This means the previous 12 regular words could have affected the informants when describing the pseudo forms. It would probably have been more beneficial to put all words in a completely random order.

Nevertheless, the choice of method still allowed for the gathering of a lot of useful data. The access to spontaneous speech in real time is a huge advantage over other methods where interaction with informants is not present, for example using corpora or questionnaire. If a similar study is performed with a bigger scope and a much longer period of time available, this method can surely be recommended.

### **5.3. Ethics discussion**

No particular ethical issues were observed when this study was made. No informant expressed any discomfort or request for withdrawal from the study either during the interviews or after the interviews had been made.

## 6. Conclusions

The present study has contributed to some interesting insights in the reduplication of nouns in Japanese. While neither the amount of data nor the number of informants interviewed are sufficient for drawing safe conclusions about the process of reduplication as a whole, some claims can be made that some patterns do exist and that these patterns relate in some ways to the semantic category of the noun being reduplicated. With regard to the research questions posited in section 2, the following patterns in particular were discovered:

1. Nouns that refer to concrete, countable, physical items seem to have a meaning of plurality when reduplicated. Nouns referring to items relating to time often have a meaning relating to time and frequency, and in some cases, intensification. Some reduplicated nouns had additional meanings compared to their simplex parts. These additional meanings cannot be explained at the present moment.
2. Concrete nouns mostly maintain their noun status when reduplicated. Nouns referring to time show a tendency of changing into a true adverb or a predicable adverb taking the genitive particle *no*. Mass nouns and abstract nouns showed a tendency of changing form into adjectives with the ending *-shii*. The results for the mass and abstract nouns were not as conclusive as the results for the concrete nouns and nouns referring to time.
3. Most of the reduplicated nouns seem to have a more limited usage and belong to a more limited register. Concrete nouns tended to be used more in writing or in formal speech, whereas the results were more diverse for nouns referring to time. There was a tendency that the older informants were more familiar with the reduplicated nouns and were more elaborate in their descriptions.

There was also some indication that reduplication in nouns in Japanese does not seem to be very productive. The pseudo forms included did not trigger responses similar to the patterns discovered among the regular words. The informants were often unsure of how to describe the pseudo forms and sometimes could not decide how to pronounce certain pseudo forms. This observation, and the observation mentioned in point 3 in the list above, that reduplicated nouns seem to belong to a specific and more limited register, could be an argument that reduplication in nouns is a limited process in Japanese and is not productive.

For future research, it would be of interest to do a similar study, but to expand the scope. A higher number of words and informants could be included. The words tested could also be separated into more than three categories, allowing for a better analysis of the form and function of all words. More pseudo forms could also be included, perhaps for a separate test group, to further study how the informants will describe the forms. Finally, the interviews should be better organized, using appropriate preparations and environments.

In addition to this, it would also be of interest to expand the scope to not only nouns, but to other word classes such as adjectives, verbs, and numerals as well, and investigate the form and function of these words compared to the nouns.

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# Appendix I: Instructions sent to informants

## RESEARCH PROJECT FOR MASTER THESIS

Hello! My name is Linus Olsson and I am a graduate student<sup>4</sup> at the faculty of linguistics at Stockholm University. I am currently doing my MA thesis in linguistics. The subject of the thesis is the Japanese language and, more precisely, the meaning and usage of the so-called “reduplicative compounds” in Japanese (reduplicative compounds are compound words like kuniguni and hitobito). In my research, I would like to make interviews with native Japanese speakers. I will record the native speakers as they describe the meaning of these words and use these words in sentences. It would be very helpful for me if you would like to participate, and I would be very grateful!

### Procedure:

The interview will be in Japanese and will take approximately 30–45 minutes (but it is very flexible). During the interview, the Japanese native speaker will receive a list of 15 Japanese words (reduplicative compounds like hitobito). The native speaker will then describe these words (in Japanese) and then construct sentences with these words. The purpose of this research is to see how these words are being used in Japanese.

The interview will be recorded (audio only; not video). However, the recording is completely anonymous and the speaker’s name and identity will not be revealed to anyone. Also, the recordings will not be played for anyone else. Only I will hear them and have access to them. Please note that there are no correct or incorrect answers when describing the words. All answers are equally as important, and I am only interested in how the words are being used.

### Time and place:

I am mostly very flexible with both time and place, so the meeting time and place can be adjusted to what fits your schedule best. I live in Stockholm and can travel over the city to where you want to meet. The interview can be done in any environment (at home, at a public place, at a school etc.) as long as there is no loud background noise.

Thank you so much for your help!

Kind regards,

Linus Olsson

Mobile: 070-778 70 36

Email: [linuso@hotmail.com](mailto:linuso@hotmail.com)

### About me:

I have a Bachelor degree in Japanese linguistics and I have also been a student at Chuo University in Tokyo in Japan. In addition to this, I also have a certification for translation from Japanese into Swedish from the Institute for Interpreting and Translation Studies in Stockholm. Apart from doing my MA in Linguistics, I am currently working for a British translation agency (working from Sweden) and I am also working part-time as an external reviewer for current students translating from Japanese into Swedish at the Institute for Interpreting and Translation Studies.

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<sup>4</sup> In this instruction sheet, I referred to myself as a “graduate student”. This title is however ambiguous, as “graduate student” can refer to either a PhD student or a Master’s student depending on in what academic circle the word is used. I want to clarify that at the time this study was made, I was a Master’s student and not a PhD student. The informants were however always told at the beginning of the interview that I was a Master’s student.

# Appendix II: Consent form (English)

ACKNOWLEDGEMENT FORM FOR RESEARCH PROJECT FOR MASTER THESIS AT STOCKHOLM UNIVERSITY (writer/researcher: Linus Olsson)

The aim of the project is to investigate the meanings of reduplicative word forms compared to their simple forms in Japanese. Native speakers will be interviewed face to face about the word forms and will be asked to give descriptions and create sentences. The answers will be recorded so that the complete impression of the utterances can be acquired.

The research results will be presented in a written report and the recordings are only for internal use within the project. If certain interesting phenomena are discovered in the recorded material, it may be of interest to allow other people to listen to certain sections of the recording as long as the recorded persons give their permission. Permission for this will therefore be asked from the speaker in this acknowledgement form.

The recording will only be used for research purposes. The personal data are used in order to acquire information about the group of speakers as a whole and will not be used for any other purpose. The individual speakers will not be mentioned by name in the report or in public seminars.

Personal data (optional):

Name: \_\_\_\_\_

Phone number: \_\_\_\_\_

Gender: \_\_\_\_\_ Age: \_\_\_\_\_

City/region of origin: \_\_\_\_\_

Period of time for residence outside of Japan: \_\_\_\_\_

Main language(s) used in daily life: \_\_\_\_\_

I acknowledge that:

Yes

No

• My recorded utterances may be kept for future use

• Certain parts of my recorded utterances may be played in public for

research purposes

Name: \_\_\_\_\_

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

# Appendix III: Consent form (Japanese)

ストックホルム大学修士課程研究調査への協力承諾書

研究プロジェクト担当：リーヌス・オルソン(Linus Olsson)

ストックホルム大学大学院言語学科修士課程

メール：linuso@hotmail.com 電話: +46-707787036

本研究の目的は、日本語の「畳語」の意味と使い方を、普通形の単語と比較し、調査することです。本研究のデータ収集はインタビューによって行われます。インタビュー調査では、単語を読んで単語の意味を説明したり、文を作ったりしていただきます。インタビューは録音されます。

調査結果は、論文等として書式で発表されます。録音データは本研究プロジェクト関係者内での使用に限定されますが、特別な現象が認められた場合、将来的に研究発表等で短い音声サンプルとして再生し使用する可能性があります。その際の録音データの使用の許可についても、ご承諾いただくと助かります。

本研究で録音されたデータと個人情報は研究目的以外には使用いたしません。論文や研究発表等で使用する際は、協力者個人が特定できないよう匿名で扱います。

個人情報 (任意)

名前： \_\_\_\_\_

電話番号： \_\_\_\_\_

性別： \_\_\_\_\_ 年齢： \_\_\_\_\_

出身地： \_\_\_\_\_

日常使用している言語： \_\_\_\_\_

|                                 | 許可します                    | 許可できません                  |
|---------------------------------|--------------------------|--------------------------|
| 将来の研究のために録音データを保存することについて       | <input type="checkbox"/> | <input type="checkbox"/> |
| 録音データを研究発表等で音声サンプルとして使用することについて | <input type="checkbox"/> | <input type="checkbox"/> |

本研究に関する説明事項を理解し、調査・研究への参加を承諾します。

2015年 月 日

調査協力者名： \_\_\_\_\_

ご署名： \_\_\_\_\_



# Appendix IV: Word list A

(Transcription and glossing added for reference)

|    |      |                    |                               |
|----|------|--------------------|-------------------------------|
| 人々 | ひとびと | <i>hitobito</i>    | ‘person-person’               |
| 木々 | きぎ   | <i>kigi</i>        | ‘tree-tree’                   |
| 元々 | もともと | <i>motomoto</i>    | ‘origin-origin’               |
| 毒々 | どくどく | <i>dokudoku</i>    | ‘poison-poison’               |
| 山々 | やまやま | <i>yamayama</i>    | ‘mountain-mountain’           |
| 我々 | われわれ | <i>wareware</i>    | ‘I-I’                         |
| 生々 | なまなま | <i>namanama</i>    | ‘raw-raw’                     |
| 時々 | ときどき | <i>tokidoki</i>    | ‘point in time-point in time’ |
| 常々 | つねづね | <i>tsunezune</i>   | ‘always-always’               |
| 水々 | みずみず | <i>mizumizu</i>    | ‘water-water’                 |
| 花々 | はなばな | <i>hanabana</i>    | ‘flower-flower’               |
| 月々 | つきづき | <i>tsukizuki</i>   | ‘month-month’                 |
| 駅々 |      | <i>*ekieki</i>     | ‘station-station’             |
| 鉄々 |      | <i>*tetsutetsu</i> | ‘iron-iron’                   |
| 週々 |      | <i>*shuushuu</i>   | ‘week-week’                   |

# Appendix V: Word list B

(Transcription and glossing added for reference)

|      |      |                    |                               |
|------|------|--------------------|-------------------------------|
| 人々   | ひとびと | <i>hitobito</i>    | ‘person-person’               |
| 木々   | きぎ   | <i>kigi</i>        | ‘tree-tree’                   |
| 元々   | もともと | <i>motomoto</i>    | ‘origin-origin’               |
| 毒々   | どくどく | <i>dokudoku</i>    | ‘poison-poison’               |
| 山々   | やまやま | <i>yamayama</i>    | ‘mountain-mountain’           |
| 黒々   | くろぐろ | <i>kuroguro</i>    | ‘black-black’                 |
| 物々   | ものもの | <i>monomono</i>    | ‘item-item’                   |
| 時々   | ときどき | <i>tokidoki</i>    | ‘point in time-point in time’ |
| 常々   | つねづね | <i>tsunezune</i>   | ‘always-always’               |
| 月々   | つきづき | <i>tsukizuki</i>   | ‘month-month’                 |
| みずみず |      | <i>mizumizu</i>    | ‘water-water’                 |
| はなばな |      | <i>hanabana</i>    | ‘flower-flower’               |
| 駅々   |      | <i>*ekieki</i>     | ‘station-station’             |
| 鉄々   |      | <i>*tetsutetsu</i> | ‘iron-iron’                   |
| 週々   |      | <i>*shuushuu</i>   | ‘week-week’                   |

# Appendix VI: Word list C

(Transcription and glossing added for reference)

|      |      |                      |                               |
|------|------|----------------------|-------------------------------|
| 人々   | ひとびと | <i>hitobito</i>      | ‘person-person’               |
| 村々   | むらむら | <i>muramura</i>      | ‘village-village’             |
| 元々   | もともと | <i>motomoto</i>      | ‘origin-origin’               |
| 毒々   | どくどく | <i>dokudoku</i>      | ‘poison-poison’               |
| 山々   | やまやま | <i>yamayama</i>      | ‘mountain-mountain’           |
| 黒々   | くろぐろ | <i>kuroguro</i>      | ‘black-black’                 |
| 物々   | ものもの | <i>monomono</i>      | ‘item-item’                   |
| 時々   | ときどき | <i>tokidoki</i>      | ‘point in time-point in time’ |
| 国々   | くにぐに | <i>kuniguni</i>      | ‘kingdom-kingdom’             |
| みずみず |      | <i>mizumizu</i>      | ‘water-water’                 |
| はなばな |      | <i>hanabana</i>      | ‘flower-flower’               |
| 白々   |      | <i>shirojiro</i>     | ‘white-white’                 |
| 猫々   |      | <i>*nekoneko</i>     | ‘cat-cat’                     |
| 緑々   |      | <i>*midorimidori</i> | ‘green-green’                 |
| 週々   |      | <i>*shuushuu</i>     | ‘week-week’                   |

# Appendix VII: Word list D

(Transcription and glossing added for reference)

|    |      |                 |                   |
|----|------|-----------------|-------------------|
| 人々 | ひとびと | <i>hitobito</i> | ‘person-person’   |
| 村々 | むらむら | <i>muramura</i> | ‘village-village’ |
| 前々 | まえまえ | <i>maemae</i>   | ‘before-before’   |
| 毒々 | どくどく | <i>dokudoku</i> | ‘poison-poison’   |
| 段々 | だんだん | <i>dandan</i>   | ‘step-step’       |
| 黒々 | くろぐろ | <i>kuroguro</i> | ‘black-black’     |
| 物々 | ものもの | <i>monomono</i> | ‘item-item’       |
| 生々 | なまなま | <i>namanama</i> | ‘raw-raw’         |
| 国々 | くにぐに | <i>kuniguni</i> | ‘kingdom-kingdom’ |

|      |  |                  |                 |
|------|--|------------------|-----------------|
| 白々   |  | <i>shirojiro</i> | ‘white-white’   |
| みずみず |  | <i>mizumizu</i>  | ‘water-water’   |
| はなばな |  | <i>hanabana</i>  | ‘flower-flower’ |

|    |  |                      |                   |
|----|--|----------------------|-------------------|
| 猫々 |  | <i>*nekoneko</i>     | ‘cat-cat’         |
| 緑々 |  | <i>*midorimidori</i> | ‘green-green’     |
| 晩々 |  | <i>*banban</i>       | ‘evening-evening’ |

# Appendix VIII: Word list E

(Transcription and glossing added for reference)

|    |      |                      |                               |
|----|------|----------------------|-------------------------------|
| 国々 | くにぐに | <i>kuniguni</i>      | ‘kingdom-kingdom’             |
| 木々 | きぎ   | <i>kigi</i>          | ‘tree-tree’                   |
| 毒々 | どくどく | <i>dokudoku</i>      | ‘poison-poison’               |
| 山々 | やまやま | <i>yamayama</i>      | ‘mountain-mountain’           |
| 黒々 | くろぐろ | <i>kuroguro</i>      | ‘black-black’                 |
| 時々 | ときどき | <i>tokidoki</i>      | ‘point in time-point in time’ |
| 常々 | つねづね | <i>tsunezune</i>     | ‘always-always’               |
| 月々 | つきづき | <i>tsukizuki</i>     | ‘month-month’                 |
| 村々 | むらむら | <i>muramura</i>      | ‘village-village’             |
| 段々 | だんだん | <i>dandan</i>        | ‘step-step’                   |
| 物々 | ものもの | <i>monomono</i>      | ‘item-item’                   |
| 白々 |      | <i>shirojiro</i>     | ‘white-white’                 |
| 猫々 |      | <i>*nekoneko</i>     | ‘cat-cat’                     |
| 緑々 |      | <i>*midorimidori</i> | ‘green-green’                 |
| 晩々 |      | <i>*banban</i>       | ‘evening-evening’             |

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