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## **A semiotactic approach to modern Japanese**

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# A Semiotactic Approach to Modern Japanese

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## CONTENTS

### Introduction

#### Chapter 1 Ebeling's theory

- 1.1 Theory
- 1.2 Explanation of the symbols

#### Chapter 2 Characteristics of Japanese

- 2.1 Structure of Japanese
- 2.2 Inflection of verbs and adjectives

#### Chapter 3 Applying the theory to Japanese

- 3.1 Particles
- 3.2 Word order
- 3.3 Predicates
- 3.4 Negation
- 3.5 Adjectives and the noun-modifier *na*
- 3.6 Adverbs
- 3.7 Plural forms and titles

#### Chapter 4 Basic case particles

- 4.1 The nominative particle *ga*
- 4.2 The accusative particle *wo*
- 4.3 The genitive particle *no*

#### Chapter 5 Other case particles

- 5.1 The dative particle *ni*
- 5.2 The instrumental particle *de*
- 5.3 The directive particle *he*
- 5.4 The ablative particle *kara*
- 5.5 The allative particle *made*

#### Chapter 6 Coordinative particles

- 6.1 The coordinative particle *to*
- 6.2 The coordinative particle *ya*
- 6.3 The coordinative particle *ka*

#### Chapter 7 Topical particles

- 7.1 The particle *wa*
- 7.2 The particle *mo*
- 7.3 The particle *sae*
- 7.4 The particle *made*

#### Chapter 8 Restrictive particles

- 8.1 The particle *shika*
- 8.2 The particle *dake*
- 8.3 The particle *bakari*
- 8.4 The particle *hodo*
- 8.5 The particle *kurai (gurai)*
- 8.6 The particle *yori*

## **Chapter 9    Conjunctional particles**

- 9.1 The particle *ga*
- 9.2 The particle *kara*
- 9.3 The particle *made*
- 9.4 The particle *to*
- 9.5 The conjunction *shi*
- 9.6 The conjunction *ke(re)do*
- 9.7 The conjunction *nara(ba)*
- 9.8 The conjunction *nagara*

## **Chapter 10    Sentence final particles**

- 10.1 The particle *ka*
- 10.2 The particle *ne (nee)*
- 10.3 The particle *na (naa)*
- 10.4 The particle *sa*
- 10.5 The particle *yo*
- 10.6 The particle *zo*

## **Chapter 11    Derived verb constructions**

- 11.1 Passive and Potential constructions
- 11.2 Causative constructions
- 11.3 Causative-passive constructions

## **Chapter 12    Complex verb constructions**

- 12.1 Constructions with *-te iru*, *-te aru* and *de aru*
- 12.2 Constructions with verbs of giving and receiving
- 12.3 Constructions with verbs of coming and going
- 12.4 Constructions with the verbs *miru*, *oku* and *shimau*

## **Chapter 13    Other constructions**

- 13.1 Numerals and counters
- 13.2 The reflexive pronoun *jibun*
- 13.3 Nominalizations with *koto* and *no*
- 13.4 Constructions with *tokoro*
- 13.5 The expressions *rashii*, *soo da*, *yoo da*, *hazu da* and *tsumori da*
- 13.6 The expressions *-tai* and *hoshii*

## **Conclusion**

**Sample text**    *Yume juuya, dai sanya* – Natsume Sōseki

## **References**

## **Abbreviations**

## **List of symbols**

## **List of particles**

## **Index of Japanese words**

## Introduction

A few years ago the linguistic works of Prof. C. Ebeling came to my notice, and I immediately became very interested in his views and his way of describing a language. His semiotactic theory provided me with a new insight into the structure of languages, focussing on the meaning, whereas other sources that I studied seemed to be mostly preoccupied with the form. Also Ebeling's methodology of capturing the syntax and semantics of sentences in mathematical descriptions offered a clear and concise method for describing languages. By looking at these formulae, the syntactic and semantic structures of a sentence can immediately be observed from the placing of the words and from the relation symbols connecting them. The position of a word inside the description shows its function and the symbols linking them denote the relations between the meanings of the words in a sentence. Ideally, composing such mathematical descriptions should be possible for all languages alike, because they are focused on the meaning of the words and how these are interrelated, independent of specific structural differences between languages. Ebeling himself described his theory for various European languages, notably for English and Dutch. Although there are various structural differences between the latter two languages, they are similar in many ways, most importantly in the fact that they are both commonly classified as SVO (subject, verb, object) -structured languages. When I started my investigation, the question was to find out if Ebeling's theory could be applied to a language with a completely different grammatical structure, such as Japanese, which is an agglutinating language with a different word order than the European languages, namely, SOV.

The aim of this research therefore was to try to apply Ebeling's theory and descriptive methodology to Modern Japanese and give mathematical semiotactic descriptions of Japanese sentences. Already at the beginning of this project it became clear that, although there were a number of differences between Japanese and the European languages that made my work easier, such as the fact that Japanese has no articles and no declensions for gender or number, there were also differences that forced me to venture on new ground due to categories that do exist in Japanese but are not found in the languages analyzed by Ebeling. The first problem I wanted to solve was how to deal with the particles, due to the fact that most Japanese sentences (apart from exclamations or elliptical sentences) contain at least one particle, and usually more than one. Since such particles are absent in the languages described by Ebeling, the question was how these particles should be analyzed, and how they should be linked to the meanings of other words in a sentence. That is the reason why the first and greater part of this project was devoted to finding a way to describe the particles and to discover how they should be noted down inside the mathematical descriptions. Based on their individual functions and meanings gradually different descriptions were construed for the various groups of particles. When all the particles had been described, other words, phrases and grammatical constructions of Japanese were analyzed.

In the first chapter of this work a brief summary will be given of the aspects of Ebeling's theory and methodology that are relevant for this work, followed in chapter 2 by a summary of the basic characteristics of the Japanese language, including a list of tenses. In the next chapter various issues that came up when applying this theory to Japanese will be discussed and the Japanese adjectives and adverbs will be analyzed. The following seven chapters are devoted to analyzing and describing the particles; for this a division was made between different groups of particles, classifying them by their functions.

Firstly, in chapter 4 the core case particles *ga* and *wo* in their function of denoting, respectively, the subject and the direct object of a predicate, and the genitive particle *no* are analyzed. The particle *ga* occurs in another function as well, namely in a conjunctive function, which will be discussed later. The second group of case particles to be discussed are: dative/locative *ni*, instrumental/locative *de*, directive *he*, ablative *kara* and allative *made*. In chapter 6 the coordinative particles *to*, *ya*, and *ka* are dealt with, followed by the topical particles *wa*, *mo*, *sae* and *made* in chapter 7. In the ensuing chapters the restrictive particles, the clause conjunctive particles and the sentence final particles will be analyzed. In the last three chapters various constructions will be discussed, starting with the passive, causative and potential verb constructions; the passive construction in particular is an important issue, since it is widely used in Japanese and doesn't always have a pure passive meaning as is the case in Dutch and English. In the chapters 12 and 13 other verbal and nominal constructions will be described. Finally, after a great number of individual example sentences from various sources had been analyzed, I decided to put the method further to the test by making semiotactic descriptions for all the sentences from one complete literary text; for this the short story *Dai sanya* from the story collection *Yume juuya* by Natsume Sōseki was chosen.

For the classification of tenses in this study, the book 'Bernard Bloch on Japanese', by Roy Andrew Miller has been taken as a reference. This book, edited and published by Miller (1970), contains five articles on Japanese written by Bloch between 1942-1950. Bloch's work contains a good and concise outline of the Japanese syntax and morphology, which turned out to be very useful here, in spite of the fact that it was written more than 50 years ago. One of the arguments put forward by Bloch is that assigning specific names is not what is essential in analyzing a language. Miller (1970:xxx-xxxi) writes: "To Bloch the analysis of the entire system and the identification of all the morphemes, whether overtly distinct or homophonous, that have a function in that system was the work of the linguist. From this analysis and identification the categorization implied in assigning grammatical names and terms followed naturally. But since this naming was completely secondary to the analysis and identification, the names themselves were always arbitrary, and considerations of "correctness" in assigning these names were totally irrelevant, even though there was no point in selecting willfully perverse or misleading designations." This view that analysis and grammatical explanation consist in observing and ordering the forms of the language and their occurrences, and not in just assigning them their "correct names", is whole-heartedly supported here. The mathematical descriptions provide a good tool for describing a language while avoiding this naming.

Another of Bloch's arguments that is consistent with the view taken in this present study is that the form is important to the meaning and the form as it stands is what should be analyzed. This standpoint is clearly expressed in one of Bloch's letters (1970:xxxiii). Bloch replied to someone who had criticized a point in Bloch's analysis, by reference to something in the structure that he claimed had been "left out". Bloch reacted to this attempt to "explain" a grammatical structure not by what is in the text but by what the analyst wishes were there, by stating: "I have no right to say that a quotative particle *to* has been left out: *to* is simply not there, just as dozens of other words that might have been used in such a sentence are also not there. I consider it incumbent upon me to analyze the sentences I hear on the basis of the words that they actually contain, without reference to other words that might have been used instead of or beside these." And Miller aptly points out: "This is not only very sound advice, but a more salutary caution than ever today, when "embedded transforms", "deep structures", and a whole new repertory of superficially sophisticated labels has been generated in an attempt to transform the same old technique, still scientifically untenable, of trying to

describe one thing in terms of something else that, in Bloch's words, "is simply not there." This is the line that has been followed in this work, too, the sentences will be analyzed as they are, without taking into account "what is simply not there", i.e. "omitted" sentence parts or underlying structures are not taken into consideration, and the principle 'one form, one meaning' is taken as a guideline.



## 1 Ebeling's theory

Since Ebeling's theory and methodology are the basis and starting point for this research, in this chapter a number of his views and arguments will be quoted. I have chosen the parts that I consider to be the most relevant for the analyses and descriptions made in this work and as such it is a subjective selection and does not constitute a complete summary of Ebeling's work. The quotations in this chapter are taken from 'Syntax and Semantics' (1978), 'Een Inleiding tot de Syntaxis' (1994) and 'Semiotaxis, over Theoretische en Nederlandse Syntaxis' (2006); I have translated the Dutch quotations from the latter works into English here.

### 1.1 Theory

Language is a means of communication, Ebeling (1994:5) gives the following description of a SPEECH ACT: "The participants in a speech act are a speaker S and one or more hearers H: S has in his mind a PICTURE (PROJECTION) of a portion W of the world, and by producing sounds he tries to accomplish the result that H knows that S has a projection of W in his mind. (Strictly speaking, this definition only applies for an ideal speech act; however, one also finds variants with another purpose, such as when talking to oneself, in which case S = H, or when talking only serves the purpose of "keeping sound in the room", or when someone is reading aloud someone else's letter, etc. All these variants may be considered to be derivations from the ideal speech act.) The sound produced by S in a speech act is an UTTERANCE. The portion of the world that fulfils the role of W is the REFERENT of that utterance. The world of which W is a part may be real or imaginary. If a unicorn is part of W, then only the second option is possible. If Peter is lying to his teacher, saying: *I didn't do it*, there is a projection of W in the mind of S (Peter), but there is no W in the real world, in other words, W belongs to an imaginary world fantasized ad hoc by Peter. Therefore, the definition of "speech act" given in the first paragraph here above remains fully applicable. (In this respect it is important to point out that the referent of *I didn't do it* in this case is not the fact<sub>1</sub> that Peter really did it, but the fact<sub>2</sub> that he did not do it, even though fact<sub>1</sub> exists in reality and fact<sub>2</sub> does not.)"

A very important aspect in Ebeling's theory is the link between form and meaning. In this respect Ebeling (2006:17) writes: "De Saussure has taught us that a meaning is associated in our mind with another image, a "form". The two projections are as inseparable as the two sides of one sheet of paper. Together they form a (language) sign." In Syntax and Semantics (1978:1), Ebeling introduces his theory as follows: "The main thesis of the present monograph is that a complex meaning equals the constellation of its constituent meanings. That is, a meaning of a complex form can be completely and adequately described in terms of the meanings of the constituent forms and their interrelations". In his latest work (2006:12) Ebeling argues: "For me the method of research is determined for the greater part by the principle "one form – one meaning", together with the complementary principle "different form – different meaning". However, he also points out that the principle "one form, one meaning" cannot always be maintained, since in the case of homonymy and polysemy we have to accept that one form has more than one meaning (2006:23).

According to Ebeling (2006:12), probably the most remarkable feature of his approach is that relations between sentence parts – such as the one between subject and predicate – are not regarded as relations between form elements, but primarily as relations between meanings. In

this view, the greater part of what is usually considered as syntax actually belongs to the field of semantics, which is why he uses the term “SEMIOTACTIC” for this theory.

Another aspect of Ebeling’s theory, one that is frequently referred to in this present work, is the fact that contextual knowledge and interpretation are not to be taken into account when making semiotactic descriptions of sentences. According to Ebeling (2006:12), a sentence is AUTONOMOUS in the sense that the hearer’s knowledge as supposed by the sentence does not necessarily have to coincide with the knowledge inside the speech situation in which the sentence is used; the sentence creates its own “context and situation”. Furthermore, a precise distinction has to be made between meaning and INTERPRETATION in the (technical) sense in which these concepts are used in a linguistic context: “Interpretation as a process is nothing else than searching the referent on the basis of a given meaning plus the circumstances in which this meaning is presented (such as context, speech situation, background information of the interlocutors” (2006:27). The meaning of something is the set of features that an object must have in order to be that something. Therefore, meanings are elements of language, whereas interpretations are not.

In the semiotactic descriptions a complex meaning (a semantic construction) is noted down as the individual meanings of the components, which Ebeling calls SEMANTIC PARTICLES (SP’s), connected by relation symbols. Ebeling (2006:14) explains that the benefit of using such mathematical descriptions is that: “The syntactic (“semiotactic”) relations are represented by the use of symbols. The only purpose of this is that in this way a notation is not only shorter, but most importantly, more exact and less ambiguous, and as such easier to verify than a more vague, impressionistic description.” Ebeling compares his own system of symbolization with the one Jespersen (*Analytic Syntax*, 1969:3) proposed as “an attempt [...] at devising a system of succinct and in part self-interpreting formulas”, and he points out that the difference between them is that with Jespersen the relations in the form are more important, whereas in his own descriptions the symbols indicate relations between meanings.

Another important concept in the semiotactic analyses is the classification of VALENCES, which are defined by Ebeling (1994:12) as follows:

“Often a SP cannot be described as a projection of one single entity having the required features, because the features in question presuppose various clearly distinctive carriers. The SP ‘walking’ in the meaning of *the child is walking* poses no problems in this respect, but *the child is reading a book* yields the notation of a SP ‘reading’, which presupposes the presence of a reader as well as of something that is read, i.e. the carriers of the features |reading| and |read|. These features are COMPLEMENTARY in the sense that not only there is a reader and something that is read, but in addition these features are derived from one and the same act of reading.” In the notation this is expressed by splitting up the SP ‘reading’ into two valences, and the fact that both valences belong to one SP is indicated by placing them in one column; thus, ‘child’ and ‘reading’, and ‘read’ and ‘book’ are convergent, whereas ‘child’ and ‘book’ are divergent:

$$(a) \quad \begin{array}{l} \dots child = [reading] \\ \quad \quad \quad [read \quad ]; book... \end{array}$$

(Three dots before and after a semantic construction show that the description is not complete.)

The most important semiotactic relations are CONVERGENCE, which Ebeling also calls PARALLELISM or “identity of referent” (1978:196), and its opposite DIVERGENCE or “non-identity of referent”. In the mathematical descriptions two convergent meanings, i.e. two meanings referring to the same referent, are written in the same horizontal line, called a LAYER. The example (a) quoted above, *the child is reading a book*, is an example for divergence, whereas the following example is convergent:

(b) *the skinny child*: 'child – skinny / SING – THE'

(‘THE’ correlates with *the* and is an abbreviation for ‘something that, given the speech situation and context, is the thing most likely to be meant by the speaker’; ‘SING’ = ‘set consisting of one element’)

## 1.2 Explanation of the symbols

In this section the use of the relation symbols is explained; Ebeling (1994:9-10) writes: “The ordering of components can be expressed in terms of relations, e.g. “realized before” to indicate the relation between /ε/ and /l/ in *fell*.”

Relations between meanings are noted down by means of RELATION SYMBOLS (FUNCTORS). These are comparable to mathematical symbols such as – and +. Thus one can see that  $7 + 2$  and  $7 - 2$  consist of the same numerical components, but as a whole they differ because the relation between 7 and 2 differs: in the first case it is “to be added (up) by”, and in the second case “to be subtracted by”. These paraphrases take – and + as relation symbols. Another paraphrase of  $7 + 2$  is possible, namely, when + is considered as being a functor (an instruction symbol): “besides 7 and 2, find a third number by adding them up”.

A comparison between  $7 + 2$  and  $2 + 7$  shows that different notations may have the same result. This characteristic can be found in languages, too: two meanings that have different meanings due to their ordering may have sets of APPROPRIATE REFERENTS (APR’s) in common. For instance, the meaning of *the blind sage* is “sage – blind”, whereas that of *the sage blind* is noted down as “blind – sage” (in these cases the symbol “–” is a representation of “find a third APR-set by selecting from the APR-set of the meaning on the left those elements that also belong to the APR-set of the meaning on the right”). In this particular case switching “blind” and “sage” does not change the outcome.

Next we compare the outcome of  $4 + 1$  and  $8 - 3$ . Without repeating the arguments presented here above, it is clear that in languages we have similar pairs, such as *John is bigger than Peter/Peter is smaller than John* or *John bought the book from Peter/Peter sold the book to John*, i.e. there are different components in a different ordering yet they have the same set of APR’s. (Note that this implies the rejection of the notion that  $4 + 1$  and  $8 - 3$  (or  $4 + 1$  and  $7 + 2$ ) have the same “deep structure” (which, by the way, no-one has ever asserted), but also a rejection of the earlier transformational-generative point of view which assumes that *the dog bit the man* and *the man was bitten by the dog* have the same deep structure.)”

The relation symbols that are used in the mathematical descriptions in this work are defined by Ebeling as follows (1994):

1.  $\begin{matrix} '[p] \\ [q]' \end{matrix}$  VALENCES

This notation indicates that these valences are complementary and belong to the same SP, e.g.

- (a) *the child is reading a book:*  $\begin{matrix} '...child = [reading] \\ [read ] ; book...' \end{matrix}$

2. ' $p \cup q$ ' CLOSE KNITTING

The elements are analyzed as being closely connected because the syntactic possibilities within this combination are limited; for instance, when we compare *an inkblot* and *a blot of ink*, we find that the latter can be extended in more ways than one, e.g. *a red blot of ink* or *a blot of red ink* (1978:387), whereas the first can only be further defined as *a red inkblot*. (see also example 5h here below)

- (b) *an inkblot:*  $'...blot \cup ink...'$

(In his latest work (2006) Ebeling uses the term ‘incorporation’ for this relation.)

3. ' $p > q$ ' GRADATION

Frequently a construction has two SPS, 'p' and 'q', projections of the two entities P and Q (which are appropriate referents of 'p' and 'q' because they possess the characteristics |p| and |q|, respectively), in the particular way that Q is identical with the feature |p|. This means that in such cases there is a feature |q| which is carried by the feature |p|, e.g.:

(c) *remarkably high trees*: '*...tree – high > remarkable...*'

In this example the group 'high > remarkable' is convergent with 'tree', but 'remarkable' is convergent with the feature |high|, not with its carrier 'tree – high'.

4. ' $p, q$ ' TEMPORAL GRADATION

The feature expressed by 'q' is referring to 'p' only for a certain period of time. In this present work the relation symbol “,” is replaced by the symbol “ $\supset$ ” because the latter is more distinctly recognizable. For this relation Ebeling (1994:18-19) gave the following examples:

(d) *hij is dronken gevaarlijk*:  
(lit. 'he is drunk dangerous' = he is dangerous when he is drunk)

*'...hij = gevaarlijk  $\supset$  dronken...'*

(e) *she ate her soup cold*:  
*'...she = [eating]*  
*[eaten]  $\supset$  cold ; soup...'*

In his earlier works Ebeling made a distinction between TEMPORAL GRADATION and TEMPORAL LIMITATION; for the latter he used the symbol “ $\sim$ ”, e.g.: *the president drunk* (written underneath a photograph): '*...president  $\sim$  drunk...*'. Since I found no occurrences for this relation in the Japanese example sentences that I quote in my work, the latter symbol is not used here. In Ebeling's latest work (2006), the distinction between the two relations has disappeared altogether, and the term temporal gradation and the corresponding relation symbol are not mentioned; the three examples above are all analyzed as cases of temporal limitation. However, in my view the definition for temporal gradation, as quoted here above, is appropriate for describing various temporal structures in Japanese, which is why the symbol “ $\supset$ ” is used quite frequently in this work.

5. ' $p - q$ ' ORIENTED LIMITATION

This relation indicates that in principle the referent carries the feature |q|, measured according to the standard that applies for the carriers of |p|; the limitation may be convergent, e.g.:

(f) *a tall tree*: '*...tree – tall...*'

or divergent, in which case “ $-$ ” symbolizes an unspecified relation, e.g.:

(g) *the door of the house*:  
*'...door  $\downarrow$*   
*- house...'*





## 2 Characteristics of Japanese

For those readers who are not completely familiar with the Japanese language, in this chapter a brief outline will be given of the main characteristics of Modern Japanese. For this summary various sources have been used, in particular the works of Makino&Tutsui (1995), Bloch (1970) and Kuno (1973) were very helpful in this respect.

### 2.1 Structure of Japanese

#### Word order

Japanese is typically classified as having a SOV -structure, with the subject appearing at the beginning of the sentence, the predicate at the very end (only followed optionally by a sentence final particle) and the object somewhere in between. However, this SOV word order is sometimes difficult to detect, since ellipsis of the subject, object or any other sentence part except the predicate, is very common in Japanese. Furthermore, the frequent use of topicalization in Japanese also effects the word order; the topicalized words or phrases most frequently appear at the beginning of a sentence or clause, followed by a topical particle or without any particle, indicated by a pause in speech. This structure of topicalization will be described in chapter 7, in which the topical particles are analyzed.

Japanese is a left-branching language, which entails that genitives, adjectives and relative (attributive) clauses precede their head nouns. In complex sentences sub-clause(s) and the main clause can be linked by various constructions and conjunctions, with each clause maintaining its original word order and the main clause always appearing at the end of the sentence. Apart from the fact that the predicate is always placed at the end of the sentence and the modifier precedes what is modified, the word order of Japanese sentences is generally assumed to be 'relatively free'. In chapter three this question of the word order will be further discussed.

#### Questions

Questions are formed in Japanese by adding an interrogative particle at the end of a sentence without a change in word order as compared to the affirmative counterpart sentence.

Although various particles can occur in this function, the interrogative particle *ka* is the one most commonly used. Informal questions without *ka* can also occur, again without a change in word order, but with a rising intonation. The original word order of the sentence is also maintained when interrogative words, such as *dare* 'who', *nani* 'what', and *doko* 'where', are used.

#### Particles

There are no prepositions in Japanese; functional relations are expressed by postpositional particles. Each part of a Japanese sentence is generally followed by a particle, indicating the function of the preceding sentence part. At first glance Japanese particles seem similar in meaning to the English prepositions; for instance, in 'go to Japan' the English preposition 'to' (indicating direction) has the same meaning as the Japanese postposition *ni* in *Nihon ni iku*; the difference between them is that 'to' refers to the phrase that follows, whereas *ni* marks the phrase that precedes it. However, some Japanese particles do not have such a specific meaning, they only serve the purpose of indicating the function of the preceding phrase, as in the case of the nominative particle *ga*, which marks the subject of a sentence, and the accusative particle *wo* marking the direct object; in these functions these particles do not have a specific meaning of their own. Since particles are postpositions, a Japanese sentence does



not commonly begin with a particle; however, there are a few exceptions, i.e. occurrences of the conjunctions *ga* or *keredomo* at a sentence-initial position. When a conjunctive particle connects two sentences, it is analyzed as being a part of the first sentence not of the second one.

### Articles and pronouns

Japanese has no definite or indefinite articles. There are no relative pronouns in Japanese, relative clauses directly precede their head nouns, without a change in word order, with the constraint that the predicate of the relative (attributive) clause must be in the (non-past or past) Indicative form. The personal pronouns *wata(ku)shi* (or the more informal *boku*, and the rather abrupt *ore* used only by men) ‘I’, *anata* ‘you’, *kare* ‘he’ and *kanojo* ‘she’ are less frequently used in Japanese than their counterparts in English, due to the fact that in Japanese the subject is frequently left out and also because the Japanese have the tendency to mention the people spoken to or spoken about by name rather than by personal pronoun. The demonstrative pronouns *kore/kono* ‘this’, *sore/sono* ‘there’, *are/ano* ‘(over)there’, *konna* ‘such as this’, *sonna* ‘such as that’, *anna* ‘such as that (overthere)’, and the interrogative pronouns are *dare* ‘who’, *nan(i)* ‘what’, *doko* ‘where’ are originally built from the same base form, i.e. *ko* ‘here’, *so* ‘there’ and *a* ‘overthere’, but are generally classified as lexical units in Modern Japanese.

### Plural forms.

Nouns in Japanese may express a single or a plural form, thus *inu* can mean ‘a/the dog’ or ‘(the) dogs’; which of the two is referred to depends on interpretation or contextual knowledge. However, Japanese has plural forms which are regularly used, namely, *-tachi* (or *-dachi*), e.g. *hito-tachi* ‘people’, *kodomo-tachi* ‘children’, and (less commonly used) *-ra*, as in *kare-ra* ‘they’, *kodomo-ra* ‘children’. When *-tachi* is used with a personal name, it usually refers to this person and his or her family or group, e.g. *Tanaka-san-tachi* ‘Mr. Tanaka and his family’. Although usually animates are marked for plurality, in particular human beings, there are other occurrences of these plural forms, too, such as for animals, plants and pronouns, e.g. *kore-ra no hon* ‘these books’. Furthermore, the presence of the suffix *-tachi* does not always refer to a plural, for instance *tomo-dachi* (from *tomo* ‘friend’ + *tachi*) is used in a singular meaning for ‘a/my friend’, as well as in the plural sense ‘friends’.

### Adjectives

Japanese adjectives differ from their English counterparts by the fact that a copula is already contained in them. The Japanese adjectives are most commonly classified in two groups, the largest group consisting of the adjectives with the inflectional ending *-i*, such as *takai* ‘high’, and *shiroi* ‘white’. These adjectives are also called “verbal adjectives” because of the fact that they inflect for tense and aspect in a similar way as verbs do (e.g.: *shirokatta* ‘was white’). The adjectives of the second group in this classification are the so-called *na*-adjectives, which consist of the combination ‘noun + *na*’, e.g. *shizuka na* ‘quiet’, and *kirei na* ‘beautiful’.

Bloch (1970:38, 57) rejected this classification of two groups of adjectives. He argued that there is only one group of adjectives, the so-called *i*-adjectives, and he analyzes *na* as being an alternant form of the copula *da*, used only attributively to link two nouns. Supporting this view is the fact that nouns that appear in those combinations, such as *shizuka* and *kirei*, can occur in nominal predicates with the copula *da* (or *desu*) in the same manner as other nouns do. Another point in favor of not classifying the *na*-combinations as adjectives is the fact that, contrary to the *i*-adjectives, which have endings that show inflection for tense and negation,

the *na* form does not inflect in any way when it is used attributively, and when it is used predicatively, it is replaced by *da*. Moreover, *na* in combined noun phrases can be replaced by the genitive particle *no*, which attributively links other nouns as well and is also analyzed as being a copula form by Bloch. There is, however, an essential difference between *na* and *no*, namely that, contrary to noun-combinations with *no*, the attributive use of ‘noun + *na*’ is not possible for all nouns, but only for a very restricted number of them, the ones Bloch calls “quality nouns”. How adjectives are analyzed in this work will be explained in section 3.5.

### Adverbs

Kaiser et al. (2001:10-13) define adverbs as: “a class of words that modify V and other predicates, typically indicating when, how, where, by what means, to what degree, etc. the action or state of V takes place.” They divide adverbs into various main types, depending on what word class they are or from what word class they are derived, such as: adjective -stem adverbs, e.g. *yasui* ‘cheap’ → *yasuku* ‘cheaply’; adjectival noun derived adverbs, e.g. *kirei na* ‘beautiful’ → *kirei ni* ‘neatly’; onomatopoe used as adverbs, e.g. *sukkari* ‘completely’, *yukkuri (to)* ‘leisurely’, *pika-pika (to)* ‘sparkling’; V -*te* derived adverbs, e.g. *hajimete* ‘for the first time’, *kiwamete* ‘extremely’; nouns used (unchanged) as adverbs, e.g. *asa* ‘morning’, *getsuyoobi* ‘Monday’.

### Numerals

Japanese has two sets of numbers, one set is native Japanese, e.g. *hitotsu*, ‘one’, *futatsu*, ‘two’, *mittsu*, ‘three’, which are used independently, and the other set is of Chinese origin, e.g. *ichi*, *ni*, *san*, which are commonly used in combinations. For counting things in Japanese the numerals are followed by so-called ‘counters’ (or classifiers), which are special nouns that indicate the nature of the counted object. For instance, *-nin* is the counter for people, as in *sannin* ‘three persons’, *-satsu* is the counter used for books or magazines, e.g. *yonsatsu* ‘four books’, and *-kai* is for counting floors of buildings, e.g. *nikai* ‘the second floor’. In section 13.1 a number of example sentences with numerals and counters will be described.

### Reflexive

The reflexive form most commonly used in Japanese is *jibun* ‘(one)self’, which is also used in a plural sense, although it can be pluralized to *jibun-tachi*; there are two other reflexives, namely, *jishin* and *jitai*, but these are rarely used in Modern Japanese. *Jibun* can also occur as a first-person pronoun, particularly in literary Japanese, as can be observed in the sample text *Dai sanya* in this work.

Martin (2004:1078) quotes the following characteristics of *jibun*:

1. it may refer to all persons, gender and number
2. if the antecedent of *jibun* is in the same sentence, it must be the subject
3. it can be used to refer to the underlying subject even when it is marked by *ni* under the causative or passive conversions; since *jibun* can refer either to the subject of an embedded sentence or to the subject of the sentence in which it is embedded, there are a number of situations where the reference is ambiguous
4. the antecedent must be animate (probably human)

## Predicates

Predicates in Japanese have no conjugation for gender or number, but they do inflect with respect to tense, aspect and mood. Every Japanese predicate contains an inflected word as its nucleus. A predicate may consist of only a nucleus (e.g. *daroo* ‘may be’) or of a nucleus preceded by one or more inflected (e.g. *itta daroo* ‘may have gone’) or uninflected words (e.g. *heitai daroo* ‘may be a soldier’). The words that inflect in Japanese are verbs and (verbal) adjectives.

Bloch (1970:xxx) classified the copula *da* ‘to be’ (or its polite form *desu*) as a third group of inflected words in Japanese. His decision to classify the copula as a separate category, notwithstanding the fact that most Japanese grammarians include the copula in the group of *jodooshi* ‘auxiliary verbs’ was made because of “its unique role in syntax as well as its anomalous position within the morphological patterns of the language.”

Narahara (2002:18) also classifies *da* (*desu*) as a Japanese copula, and gives the following definition of the function of the copula: “A copula supplies tense and other verbal inflectional features to non-verbal predicate categories.” This function of *da* bears a strong resemblance to the copula in European languages such as English and Dutch. There are verbal forms in Japanese that are used in a conjunctive function, connecting two sentences; these are the infinitive (*V-i*), the optative (*V-(r)eba*), the alternative (*V-tari*), the conditional (*V-tara*) and the gerund (*V-te*). The first two of these forms are non-temporal conjunctives, whereas the latter three are analyzed as temporal conjunctive constructions; this semantic difference is expressed by two different relation symbols in the mathematical descriptions. In the description of the tenses in section 2.2 the meanings of these verbal forms are listed.

## Gerunds

Hasegawa (1996:2) writes that the suffix *te* is attached to the stem of a verbal (verb or adjective), thereby casting the verbal and its preceding grammatical dependents as part of a complex construction. She remarks that the resultant combination has been variously referred to as a ‘gerund’, ‘gerundive’, ‘past participle’, or the ‘*te*-form’.

Hasegawa (1996:4-7) quotes the following classification for the *te*-constructions according to their functions:

1. as a nonproductive derivational suffix; in this category *te* has formed an adverb from a verb. In general, the verbs in this category lose much of their verbal nature when *te* is attached. Examples of this category are: *hajimete* ‘for the first time’ (from the verb *hajimeru* ‘to begin’), *kiwamete* ‘extremely, to a high degree’ (from the verb *kiwameru* ‘go to extremes/ extend/ reach to the end’) and *shitagatte* ‘therefore’ (from the verb *shitagau* ‘follow’). In this work, too, these *te*-forms are not analyzed as gerunds but as lexical units functioning as adverbs.
2. as a linker connecting a main verb with a so-called auxiliary to form a complex predicate. In this category, the verb preceding *te* is semantically the main predicate of the clause and the verb or adjective that follows the *te*-form is an auxiliary. The two most important constructions in this category are *-te iru* and *-te aru*; other constructions are the *te*-form combined with verbs of giving and receiving, with verbs of coming and going and the combinations *V-te miru*, *V-te oku* and *V-te shimau*. These complex verb constructions will all be described in chapter 12.

3. as a linker connecting two phrases or clauses. The semantic relations between the linked constituents in this category are so diverse that no single subtype can be considered central. Various relations can be expressed by this *te*-linking, such as circumstance, additive, temporal sequence, cause, means, contrastive, concessive, and conditional. Hasegawa also points out that the prevailing view is that, because of the diversity of semantic relations, *te*-linkage has no intrinsic meaning of its own and that the interpreter must rather infer the intended semantic relationship based on extra-linguistic knowledge of the described situation. In the ensuing chapters a large number of example sentences with such gerunds will be quoted, showing a variety of meanings.

### Compound verbs

Japanese has a large number of compound verbs; the compounds may consist of two verbs combined, such as *tabe-sugiru* ‘overeat’, which is a combination of the infinitive form *tabe* of the verb *taberu* ‘eat’ and the main verb *sugiru* ‘overdo, do too much’. A compound verb may also consist of a noun and a verb, the verb *suru* ‘to do’ is a verb that is frequently used in this way, in numerous combinations. For instance, from the noun *benkyoo* ‘study’ and the verb *suru*, the compound verb *benkyoo-suru* ‘to study’ is construed, and from *denwa* ‘telephone conversation’ and *suru*, the compound verb *denwa-suru* ‘to make a telephone call’ is formed. Such combinations are so versatile that even today new compounds are still being made, often with modern *katakana* loanwords, such as *fidobakku-suru* ‘to give feedback’, *hitchihaiku-suru* ‘to hitchhike’ and *jogingu-suru* ‘to jog’.

### Polite and honorific forms

In Japanese there are three levels of politeness for the person spoken to and two honorific levels for the persons spoken about. Furthermore, there is a literary, formal writing form that is also used in dictionaries, e.g. the copula *de aru* ‘to be’; verbs *aru* ‘to exist’, *suru* ‘to do’, *iku* ‘to go’; adjective *takai* ‘high’.

The levels of politeness toward the hearer are:

1. informal, non-polite, e.g. the copula *da* ‘to be’; verbs *aru* ‘to exist’, *suru* ‘to do’, *iku* ‘to go’; adjective *takai* ‘high’
2. polite, neutral; e.g. the copula *desu* ‘to be’; for verbs the form *-masu* is attached to the infinitive form of the verb, e.g. *arimasu* ‘to exist’, *shimasu* ‘to do’, *ikimasu* ‘to go’; for adjectives the polite copula *desu* is added, e.g. *takai desu* ‘high’
3. highly polite, e.g. the copula *de gozaimasu* ‘to be’; verbs *gozaimasu* ‘to exist’, *itashimasu* ‘to do’, *irasshaimasu* ‘to go’; adjective *takai gozaimasu* ‘high’

The two honorific levels toward the person spoken about are:

1. *sonkeigo*: expressing respect for the subject of the predicate, e.g. the *matsu* ‘to wait’ in honorific form is: *o-machi ni naru*. The passive form *-rareru* may also be used as a honorific, e.g.: *sensei ga Tookyoo ni korareta* ‘The Professor came to Tokyo.’
2. *kenjoogo*: expressing respect for the (direct or indirect) object of the predicate or expressing the humble position of the person performing the action, e.g.: *watashi ga sensei wo o-machi suru* ‘I wait for the Professor.’

These polite and honorific levels can also be combined, expressing respect for the subject and simultaneously for the hearer, e.g.: *sensei ga Tookyoo ni korare mashita* ‘The Professor came to Tokyo.’ The honorific prefix *o-* (or *go-*) can be attached to verbs, adjectives and nouns, e.g.: *o-wakai* ‘is young’, *o-furo* ‘bath’, *o-sushi*. In the cases where this honorific prefix has become so common that the word rarely appears without it, the combination is analyzed here as a lexical unit, as in the case of *okane* ‘money’ and *ocha* ‘(Japanese) green tea’.

## Negation

Verbs and adjectives in the informal form are negated in Japanese by attaching the suffix *-nai* to their base for negation; this suffix inflects like an adjective. In polite speech, the affirmative *-masu* form of the verb becomes *-masen* when negated. The verb *aru* ‘to exist’ has the irregular negative form *nai* (the regular form *aranai* is not used); for the formal written form *de aru* of the copula the negative is *de wa nai*, which may be contracted to *ja nai*. The negative adjective *nai* has the same inflections as the other *-i* adjectives; however, in addition to these inflections, the negative has two special forms that other adjectives don’t have, namely, the negative subjunctive form *-(r)umai* (used as an alternative for *-nakaroo*) and the negative infinitive form *-(a)zu* (which may be used instead of *-naku*).

## Written Japanese

Japanese is written in a mixture of two types of symbols, which are: *kanji*, pictographic-ideographic characters adopted from Chinese, used for names, substantives, verbs and adjectives, and the phonetic *kana* symbols, representing the sounds of syllables. These *kana* are divided into two groups: *hiragana* symbols, which are used for inflectional endings and native Japanese words that are not written in *kanji*, and *katakana* symbols, used for words of foreign origin. For *romaji*, the transliteration of Japanese words in the Latin alphabet, there are two systems, the *kunrei* system and the Hepburn system. The latter is mainly followed here, with a few changes, such as in the transliteration of the particles (see chapter 3), and long vowels are doubled instead of being written with a macron.

## 2.2 Inflection of verbs and adjectives

The following list of inflections is quoted from Bloch (1970:18-19), with a few changes in terminology, namely, Bloch's category 'presumptive' is listed here as 'subjunctive', and 'provisional' is called 'optative'.

	<b>Verbs</b>	<b>Inflected forms</b>
<b>PR</b>	non-past Indicative:	an event occurs form : <b>-(r)u</b>
<b>PA</b>	past Indicative:	an event occurred form: <b>-ta, -da</b>
<b>SUB</b>	non-past subjunctive:	a future action according to the speaker's expectation ('I assume that the event will occur') form: <b>-(y)oo</b>
<b>PA / SUB</b>	past subjunctive:	a past action according to the speaker's expectation ('I assume that the event occurred') form: <b>-taroo, -daroo</b>
<b>OPT</b>	optative	provided that an event occurs now or in the future form: <b>-(r)eba</b>
<b>COND</b>	conditional:	on condition that an event occurs or occurred form: <b>-tara, -dara</b>
<b>IMP</b>	imperative:	'I want you to...' (a command) form: <b>-ro, -e, -ø</b>
<b>ALT</b>	alternative:	an event occurring among others form: <b>-tari, -dari</b>
<b>INF</b>	infinitive:	the occurring of an event form: <b>-i, -ø</b>
<b>GER</b>	gerund:	an event occurring form: <b>-te, -de</b>
	<b>Adjectives</b>	<b>Inflected forms</b>
<b>PR</b>	non-past Indicative:	form: <b>-i</b>
<b>PA</b>	past Indicative:	form: <b>-katta</b>
<b>SUB</b>	non-past subjunctive:	form: <b>-karoo</b>
<b>PA / SUB</b>	past subjunctive:	form: <b>-kattaroo</b>
<b>OPT</b>	optative:	form: <b>-kereba</b>
<b>COND</b>	conditional:	form: <b>-kattara</b>
<b>ALT</b>	alternative:	form: <b>-kattari</b>
<b>INF</b>	infinitive:	form: <b>-ku</b>
<b>GER</b>	gerund:	form: <b>-kute</b>

### 3 Applying the theory to Japanese

In the process of trying to find correct descriptions for the Japanese example sentences, many problems were encountered and various solutions were found, some of which had to be discarded later. In the beginning of the project the number of possible variations seemed overwhelming, but gradually as the research went on it became clear that in the end only few possible choices remained to be considered. A great number of example sentences were analyzed, and only the descriptions that matched all the occurrences of a particular word, phrase or construction, were maintained. In some cases when more than one option seemed possible, a choice was made for one over the other. The options and the arguments for the choices that were made and other specific issues and ways of adapting the mathematical descriptions to Japanese constructions and phrases will be discussed in this chapter as well as in the ensuing chapters. All the example sentences that are analyzed in this work are Modern Japanese. Therefore, when I refer to Japanese in the text, Modern Japanese is implied.

For the construction of the descriptions for the Japanese example sentences, several choices have been made since the beginning of this project. Firstly, it was decided to put the Japanese words directly into the mathematical descriptions, since translating them would entail interpretation and a consequent loss of meaning. Proper names are distinguished by the capitalizing of their first letters. All the example sentences in this work are quoted together with the original translations from their sources between single quotation marks. Textual semantic descriptions that have been construed for this work are given between round brackets. In addition, in order to make the semantic descriptions of the Japanese sentences also accessible to non-Japanese speakers or students of Japanese, the decision was made to put the Japanese inflected words in the present Indicative form inside the description; this has the advantage that one can identify a word (or, if necessary, look it up in a dictionary) more easily than could have been done from the base of the inflected form, especially so since Japanese has different bases for inflection. In this way all the lexical meanings of the individual words remain easy to find. The correct tense marking can still be detected, since its abbreviation is put behind the ‘ $\Sigma$ ’-symbol in the description. For the classification of tenses Bloch’s lists of the verb and adjective inflections, as quoted in section 2.2, has been used as reference in this study.

#### 3.1 Particles

For the transliteration of the particles, it had to be decided how to render the particles in romaji, since in the sources different notations are used. Whereas some sources use the transliteration corresponding to the pronunciation, others write the particles in the Latin alphabet in the same way as they are written in the Japanese *hiragana* syllable system. Thus, the accusative particle, which is pronounced as *o*, is transliterated as *such* by some authors, whereas others write *wo* as in the *hiragana* character. Similarly, the directive particle, which is pronounced as *e*, is *he* in Japanese writing. In this work it has been decided to use the transliteration following the Japanese form, i.e. *wo* and *he*. The only exception is made for the particle *wa*, which as a topical particle is written in Modern Japanese as *ha*, whereas for the sentence final particle the *hiragana* character *wa* is used. Since in both cases this particle is pronounced as *wa* and in this study it is argued that *wa* has the same meaning in both functions, the most common transliteration *wa* is used here in all cases.

The first Japanese sentences that were analyzed for this research were simple sentences. Since most sentences in Japanese contain one particle or more than one and these particles are essential for determining the specific functions of the noun phrases that are marked by them, the particles were the main issue at the start of this project and constitute the largest part of this work. It is commonly stated that Japanese particles are postpositions, which are similar in function and meaning to English prepositions. However, although this seems to hold true in some cases, there are also particles, which do not bear such a resemblance to prepositions of other languages. During the course of this study it soon became clear that there are different kinds of particles; therefore, the particles have been divided into different categories according to their function.

The first category consists of the basic case particles, which are nominative *ga* and accusative *wo* in their functions of denoting, respectively, the subject and direct object of the sentence, and the genitive particle *no*. These particles are analyzed as particles which, apart from indicating the function of the preceding noun phrases, add no extra meaning of their own to the sentence or clause. That's why these particles are left out of the mathematical descriptions after the noun phrases marked by them have been placed in the proper positions for their respective functions.

After the basic case particles, other groups of particles will be discussed. All these particles do add an extra meaning of their own to the sentence, and consequently, they are placed inside the descriptions linked by relation symbols to the noun phrases marked by them, so that their specific meanings can be taken into account. For instance, locative *ni*, apart from marking the preceding noun phrase as a place or time adjunct, can add the extra meaning of 'in', as opposed to *kara* 'from' with the same function. Another example is the lexical difference in meaning between the coordinative particles *to* and *ya*; by placing these particles inside the descriptions this lexical difference can be recognized.

### 3.2 Word order

As has been mentioned in the previous section, the word order in Japanese is generally considered to be 'free'. It is important to establish what exactly is meant by that assertion; if its only implication is that Japanese sentences can be uttered in different ways as for word order, it holds true. However, if it is meant to imply that word order is not important to the meaning of the sentence, the statement is not correct. The fact that words and phrases in various functions may appear in different positions inside Japanese sentences does not imply that, when the word order is changed, the respective meanings of the corresponding sentences remain exactly the same. On the contrary, as dictated by the rule 'one form, one meaning', any change in the form, including the word order, renders a difference in meaning, however slight that difference sometimes may seem to be. Seen in that light 'a free word order' is a relative concept. In the semantic descriptions proposed in this work, the word order of adjuncts is maintained by placing them in the order determined by their proximity to the predicate; as a result, the adjunct that immediately precedes the predicate, directly follows the predicate in the description; after that the second closest one, etc.

After describing a number of simple sentences, more complex Japanese sentences were analyzed. One major problem that came up in the mathematical description of complex sentences was the fact that in Japanese the main clause always appears at the end of the sentence, with sub-clauses preceding it. Following Ebeling's method, the main clause would have to be put first, with the sub-clauses branching down from it connected by the various



relation symbols and particles. For Japanese sentences this would entail that, when starting with the main clause on the left and the sub-clauses linked behind it, the original word order of the sentence would have to be reversed inside the mathematical descriptions. This did not make the descriptions as clear and easy to understand as aimed for and besides, it presented a new problem: with more than one sub-clause, should the word order be completely reversed (mirrored) inside the descriptions or should one start with the main clause, followed by the first sub-clause of the sentence and then the other sub-clause(s), thus keeping all clauses of the sentence in their original word order except for the main clause? Moreover, it has already been argued that in spite of the fact that the Japanese word order is relatively free, any change in word order results in a difference of meaning as well. Therefore, it would be preferable to maintain the original word order of the sentence in the descriptions, so that the added meaning of that particular word order, too, could be maintained. In this way the semantic descriptions of highly complex sentences could become more transparent. The solution that was found for this problem was to reverse the symbols instead of reversing the word order. This method yielded new relation symbols, which were noted down as having the same meaning as their original mirrored versions, but with the added meaning of a reversed word order. This solution has the advantage that in the descriptions the sub-clauses of the sentence can be placed in their original order, with reversed symbols connecting them to the main clause. At a later stage it was decided, for practical reasons, to further compress the mathematical descriptions by noting down the clauses connected by the bivalent conjunctive particles on the same line, as can be observed in the complex example sentences in chapter 9.

### 3.3 Predicates

The tense, mood and polite negation of the final predicates are noted on the top line of the mathematical description behind the ‘ $\Sigma$ ’ symbol, which represents the situation. A predicate may consist of one or more verbs, *i*-adjectives or a copula. The copula (informal *da* or polite *desu*) itself is left out of the description, since its function is expressed by the ‘=’ symbol between the subject and the nominal part of the predicate. For the polite form *desu* the abbreviation ‘POL’ is inserted, e.g.:

- (1a) *Ken ga gakusei da*  
 ‘Ken is a student.’

$$\Sigma / \text{PR}$$

$$\text{Ken} = \text{gakusei}$$

- (1b) *Ken ga gakusei desu*  
 ‘Ken is a student.’

$$\Sigma / \text{POL} / \text{PR}$$

$$\text{Ken} = \text{gakusei}$$

Compound verbs are closely connected, and are notated with the relation symbol for reversed close knitting ‘ $\cap$ ’ between the two parts; it is reversed because the main word is the second part, which is the word that inflects, e.g. *benkyoo*  $\cap$  *suru*.

### 3.4 Negation

For the negation of Japanese predicates, two separate descriptions have been construed, one for the informal inflected forms and one for the polite forms. The latter can only occur in the final and main predicate of a Japanese sentence, as such being of consequence to the sentence as a whole. For that reason, the abbreviation ‘POL’ is inserted behind the ‘ $\Sigma$ ’ symbol, followed by the tense marking. When the polite *-masu* form is negated, the abbreviation ‘NON’ is inserted on the same line as the polite and tense markings, e.g.:

- (2) *kare ga ikimasen*  
‘He doesn’t go.’

$$\Sigma / \text{POL} / \text{NON} / \text{PR}$$

*kare = iku*

- (3) *kare ga ikimasen deshita*  
‘He didn’t go.’

$$\Sigma / \text{POL} / \text{NON} / \text{PA}$$

*kare = iku*

The informal verbal or adjective forms can occur in predicates of sub-clauses as well as in main predicates; moreover, in complex predicates negative inflections can be combined with affirmative forms, which consequently rules out the notation of the negation behind the ‘ $\Sigma$ ’-symbol, since the negation need not be consistent with the complex predicate as a whole. Therefore, informal forms of negations are placed inside the situation, linked to the verb or adjective that they are attached to by the relation symbol for gradation ‘>’. Consistent with the decision to use only Japanese words inside the mathematical description for the situation, instead of the abbreviation ‘NON’, the negative adjective *nai* is notated in the non-past Indicative form, e.g.:

- (4) *kare ga ikanai*  
‘He doesn’t go.’

$$\Sigma / \text{PR}$$

*kare = nai > iku*

The two special forms for the informal negative are the negative subjunctive (*r*)*umai* and the literary negative infinitive (*a*)*zu*, e.g.:

- (5) *ikumai to omotta* (Martin, 2004:611)  
‘I thought I wouldn’t go.’

$$\Sigma / \text{PA}$$

$X = omou > to < \Sigma / \text{NON} / \text{SUB}$   
 $X = iku$

- (6) *tabezu ni neta*  
 ‘I slept without eating.’

$$\begin{aligned} & \sum / \text{PA} \\ X = \text{neru} > [ni_1] \\ & [ni_2]; \sum / \text{NON} / \text{INF} \\ & X = \text{taberu} \end{aligned}$$

### 3.5 Adjectives and the noun-modifying particle *na*

As has already been explained in section 2.1, Japanese adjectives are commonly classified in two categories, the *i*-adjectives and the *na*-adjectives. In this work Bloch’s analysis that there is only one group of inflected adjectives, namely, the *i*-adjectives, is supported. These adjectives are analyzed as inflected words forming a nexus. The combination of ‘quality noun + *na*’ will be analyzed in a different way.

To establish the correct semantic descriptions for Japanese *i*-adjectives and *na*-combinations, first their predicative uses were analyzed. This did not pose too many problems since the Japanese *i*-adjectives form nominal predicates in the same way as the English adjectives do, the only difference being that the copula is already contained in them.

(7) ‘Ken is (a) doctor.’  $\sum / \text{PR}$   
*Ken = doctor*

(8) *Ken ga isha da*  $\sum / \text{PR}$   
*Ken = isha*

(9) ‘(The) book is red.’  $\sum / \text{PR}$   
*book = red*

(10) *hon ga akai*  $\sum / \text{PR}$   
*hon = akai*

The quality nouns from the *na*-combinations are used predicatively by replacing *na* with the copula *da* (or *desu*), thus forming the regular nominal predicate ‘noun + *da*’, e.g.:

(11) ‘(The) woman is beautiful.’  $\sum / \text{PR}$   
*woman = beautiful*

(12) *onna ga kirei da*  $\sum / \text{PR}$   
*onna = kirei*





have the Infinitive *-ku* form but, consistent with the decision to place inflected words in their dictionary form in the descriptions, the adverbs are notated in the mathematical descriptions in the original dictionary form of the adjectives they derive from; the position of the adverb (behind the predicate) and the relation symbol ‘>’ show that the word is used in an adverbial function, whereas in the adjectival function the adjective is connected to its main word by the limitation symbol ‘-’.

The ‘noun + *na*’ combinations are adverbialized to ‘noun + *ni*’, as in example (16).

- (13) *o-sake wa mada arimasu ka* (Makino&Tutsui,1995:224)  
 ‘Do you still have *sake*?’

$$\text{HON} \cap \textit{sake} > \textit{wa} < \sum / \text{POL} / \text{PR} > \textit{ka}$$

$$\text{X} = \textit{aru} > \textit{mada}$$

- (14) *watashi wa moo hirugohan wo tabeta* (Makino&Tutsui,1995:254)  
 ‘I have already eaten my lunch.’

$$\textit{watashi} > \textit{wa} < \sum / \text{PA}$$

$$\text{X} = [\textit{taberu}_1] > \textit{moo}$$

$$[\textit{taberu}_2]; \textit{hiru} \cap \textit{gohan}$$

- (15) *hana wo utsukushiku omou* (Martin, 2004:997)  
 ‘I think the flowers beautiful.’

$$\sum / \text{PR}$$

$$\text{X} = [\textit{omou}_1] > \textit{utsukushii}$$

$$[\textit{omou}_2]; \textit{hana}$$

- (16) *sore wo fushigi ni kangaeru* (Martin, 2004:469)  
 ‘I find that strange.’

$$\sum / \text{PR}$$

$$\text{X} = [\textit{kangaeru}_1] > [\textit{ni}_1]$$

$$[\textit{kangaeru}_2]; \textit{sore} \mid [\textit{ni}_2]; \textit{fushigi}$$

- (17) *tanin no koto wo yoku iu* (Martin, 2004:468)  
 ‘He speaks well of others.’

$$\sum / \text{PR}$$

$$\text{X} = [\textit{i}_u_1] > \textit{yoi}$$

$$[\textit{i}_u_2]; \textit{koto} \downarrow$$

$$- \textit{ta} \cap \textit{nin}$$

The following examples from Martin (2004:468) show that adverbs can be negated, as in sentences (18a) and (19), which have affirmative final predicates; whereas in example (18b) the final predicate is negated:

- (18a) *utsukushiku naku kaita*  
 ‘He wrote unbeautifully.’

$$\sum / \text{PA}$$

$$X = \textit{kaku} > \textit{nai} > \textit{utsukushii}$$

- (18b) *utsukushiku kakanai*  
 ‘He does not write beautifully.’

$$\sum / \text{PR}$$

$$X = \textit{nai} > \textit{kaku} > \textit{utsukushii}$$

- (19) *hi wo omoshiroku naku sugoshita*  
 ‘I passed the days in a dull fashion.’

$$\sum / \text{PA}$$

$$X = [\textit{sugosu}_1] > \textit{nai} > \textit{omoshiroi}$$

$$[\textit{sugosu}_2]; \textit{hi}$$

### 3.8 Plural forms and titles

The plural suffixes *-tachi* and *-ra* are notated in the mathematical descriptions with the symbol ‘ $\cup$ ’ for close knitting. Since the headword precedes, this symbol is not reversed, e.g.

*hito-tachi*:  $\textit{hito} \cup \textit{tachi}$

The same notation is used for titles, which are very frequently used in Japanese; the title suffix that is most generally used for people is *-san* ‘Mr., Miss or Mrs.’, which has a more formal version *-sama* and the endearing version *-chan*. The suffix *-kun* is attached to the names of colleagues, usually for men. The title *-sensei* ‘Professor, doctor, teacher, master’ is different in the respect that, apart from its use as a suffix, as in *Yamada-sensei* ‘Professor Yamada’, it can also be used as a noun: *sensei* ‘the professor’ in a similar way as other titles that indicate the profession or official function of a person are used, such as *daitooryoo* ‘the president’. When such title nouns are used in combination with personal names, it is difficult to establish which is the headword of the combination. One could argue that the second word, the title or profession of the person spoken to/about, is the main word, which would result in the use of the reversed symbol for close knitting in the descriptions. The question is: when someone refers to *Yamada-sensei*, does he refer to ‘Yamada, who is a professor’, with *Yamada* as head word, or does he intend to refer ‘the professor, who has the name Yamada’, with ‘*sensei*’ as headword? According to Martin (2004:1058), an explanation for the structure ‘name – title’ can be found in assuming an inversion from something like ‘title *no* [= *de aru*] noun’ ‘noun who is title’, thus *Satoo soori-daijin* ‘Prime Minister Sato’ is considered to be derived from *soori-daijin no Satoo* ‘Sato who is prime minister’, rather than taken as a

straight ellipsis of *Satoo [no] Soori-daijin* ‘the prime minister who is Sato’. Martin adds: “of course, with a straight ellipsis (and no inversion), *soori-daijin Satoo* can be used to mean ‘Sato as a prime minister’, with the role taken as an epithet rather than a title.”

In this work it has been decided to choose the first interpretation, namely that in *Satoo soori-daijin* ‘Sato’ is the head word, and for the same reasons the combination *Yamada-sensei* is analyzed as having the meaning ‘Yamada, who is a professor’, and not the meaning ‘the professor, who has the name Yamada’. As a result the first words of the combinations of ‘personal name – title’ are analyzed as the headwords and the words of the combination are connected with the symbol for close knitting in the mathematical descriptions. Within the closely linked word *soori-daijin* the second word *daijin* ‘minister’ is the head word, therefore it is connected with the reversed close knitting symbol to the preceding noun *soori* ‘leader, supervisor’.

- (20a) *Tanaka-san ga kimashita*  
‘Mr. Tanaka came.’

$$\sum / \text{POL} / \text{PA}$$

$$\text{Tanaka} \cup \text{san} = \text{kuru}$$

- (20b) *Satoo sensei ga kimashita*  
‘Professor Sato came.’

$$\sum / \text{POL} / \text{PA}$$

$$\text{Satoo} \cup \text{sensei} = \text{kuru}$$

- (21a) *Satoo soori-daijin ga kimashita*  
‘Prime Minister Sato came.’

$$\sum / \text{POL} / \text{PA}$$

$$\text{Satoo} \cup \text{soori} \cap \text{daijin} = \text{kuru}$$

- (21b) *soori-daijin no Satoo ga kimashita*  
‘Sato who is prime minister came.’

$$\sum / \text{POL} / \text{PA}$$

$$\text{Satoo} \downarrow = \text{kuru}$$

$$- \text{soori} \cap \text{daijin}$$



#### 4. Basic case particles

For the classification of these case particles various sources have been studied. In the classification of Martin (2004:29), the core case particles are: nominative *ga*, accusative *wo* and dative *ni* in their functions of marking, respectively, the subject, the direct object and the indirect object of a predicate. Tsujimura (1996:165) makes a similar distinction, i.e. between the ‘case particles’ *ga* (nominative), *wo* (accusative), *ni* (dative) and *no* (genitive), and the other particles, which she classifies as postpositions. She analyzes the particles of the first category as part of the noun phrase in which they occur and the postpositions as forming separate nodes. For this present study the decision was made to classify nominative *ga*, accusative *wo*, and genitive *no* as basic case particles and to reject such a classification for the dative particle *ni*, in favor of analyzing *ni* in all its occurrences as a peripheral case particle. There are two reasons for not including *ni* in the category of basic case particles. Firstly, in Martin’s classification the dative particle *ni* occurs in two separate categories, i.e. as a core case particle (marking the indirect object) and as a peripheral case particle (marking a time or place), which would require two different descriptions for one particle. Secondly, since the form of *ni* is the same in all these occurrences, one would have to establish by which criteria a choice could be made for one category over the other. After examining a number of example sentences and arguments from various sources, which will be described in section 5.1.11, I have come to the conclusion that there are no consistent and objective criteria for making such a distinction.

##### 4.1 The nominative particle *ga*

The nominative particle *ga* marks the first valence of the predicate. This predicate can be complex or simple, but must always contain an inflected word. In Japanese this may be a verb, a verbal adjective or a copula. In the mathematical descriptions the noun phrase marked by *ga* is linked to the predicate by the relation symbol ‘=’; the particle *ga* itself is left out of the description since *ga* in the function of marking the preceding noun phrase as the subject adds no extra meaning to the sentence. The verbs are put in the non-past Indicative in the descriptions, with their tense-marking behind the ‘ $\Sigma$ ’ symbol representing the situation. In the case of a nominal predicate, the copula itself is left out of the descriptions since its meaning is already expressed by the fact that the NP marked by *ga* as a first valence of the predicate is put on the left side of the ‘=’ symbol, with the nominative part of the predicate on the right.

The particle *ga* can also occur in another function, namely, as a conjunctive particle, which will be discussed in section 9.1.

Shibatani (2001:307) gives the following examples for simple sentences with different kinds of predicates:

- (1a) *Ken ga hashitta* (verbal predicate)  
‘Ken ran.’

$\Sigma$ /PA  
*Ken = hashiru*

- (1b) *Ken ga kashikoi* (adjectival predicate)  
 ‘Ken is smart.’

$$\sum / \text{PR}$$

*Ken = kashikoi*

- (1c) *Ken ga gakusei da* (nominal predicate)  
 ‘Ken is a student.’

$$\sum / \text{PR}$$

*Ken = gakusei*

The subject-marking function of *ga* in such simple sentences is not a point of discussion among linguistic researchers of the Japanese language, but a problem arises for the cases where a sentence contains two *ga*-marked noun phrases and only one predicate. Then opinions start to differ considerably, where some linguists maintain that all the noun phrases marked by *ga* are subjects, there are others who hold the view that *ga*-marked NP’s can also function as (underlying) objects (or objectives).

In this section a number of these conflicting theories and arguments will be presented in order to explain how multiple subject sentences have come to be analyzed in this work, as expressed in the following rule:

In sentences where there are two (or more) *ga*-marked noun phrases with only one predicate, these noun phrases all function as subjects. They differ in the way that the last *ga*-marked NP, i.e. the one closest to the predicate, directly relates to that predicate as a subject, and the first *ga*-marked NP relates to the entire part of the sentence that follows and carries the features of that sentence-part as an entity.

For this entity the symbol ‘Y’ is used. Thus, for ‘A *ga* B *ga* PRED’ the following mathematical description is proposed:

$$\sum$$

$$A = Y$$

$$B = \text{PRED}$$

Kuno is the first linguist whose arguments will be discussed here in this respect. He is a strong advocate of the theory that a *ga*-marked noun phrase can also function as the object of a predicate. In the fourth chapter of his book (1973:79-95), with the suggestive title: “*Ga* for object marking”, Kuno analyses a number of example sentences and writes: “It is usually said that *ga* marks the subject, and *wo* the object, of a sentence. (...) However, in certain constructions, *ga* appears where *wo* is expected.” The first examples quoted by Kuno in this respect are sentences with a ‘NP<sub>1</sub> *wa* NP<sub>2</sub> *ga* PRED’ -structure. He seems to take it for granted that the *wa*-marked NP’s are also the subjects in these example sentences, and consequently that these sentences pose the same problem of whether the second noun phrase marked by *ga*, should be analyzed as a subject or as an object. However, this presupposition about *wa* is not shared here, as will be explained in the analysis of these sentences in section 7.1.

The next example presented by Kuno does have a ‘NP<sub>1</sub> *ga* NP<sub>2</sub> *ga* PRED’-structure:

- (2) *watakushi ga eiga ga suki desu*  
‘I like movies.’

According to Kuno the problem with this sentence is that, if we accept the analysis that *eiga* is the subject of *suki desu*, then we have to say that the sentence has two subjects, *watakushi* on the one hand, and *eiga* on the other hand. I agree so far, but unfortunately, he goes on to say: “This would be a very peculiar analysis, to say the least.” To prove his point Kuno compares this example sentence with the following sentence, which he does admit to be a double-subject sentence:

- (3) *bunmeikoku ga dansei no heikin-jumyoo ga mijikai*  
‘It is the civilized countries that males’ average life-span is short in.’

He quotes two reasons for accepting sentence (3) as a double-subject sentence, contrary to the example (2) quoted above. His first argument is that from (3) a “non-elliptical” sentence remains after omitting the first subject,

- (4) *dansei no heikin-jumyoo ga mijikai*  
‘The average life-span of males is short.’

whereas for sentence (2), according to Kuno, deletion of the first *ga*-marked NP would result in an “elliptical” sentence (5), with the implication that the subject is omitted.

- (5) *eiga ga suki desu*  
‘(I am, he is, etc.) fond of movies.’

This argument, however, seems to be based mainly on the English translation; but if we look up the word *suki* in the dictionary *Kenkyuusha Shin-daijiten*, we find: ‘(a) liking; (a) fondness; love; (a) taste; (a) fancy’; so it is also possible to describe the meaning of this last sentence as: ‘Movies are a fancy (of mine)’ or ‘Movies are (to my) taste’, in which case there is no elliptical sentence. Moreover, as already has been mentioned in the introduction, in this work the view that words are supposed to be “omitted” from a sentence is not supported, because the sentences should be analyzed in the very form in which they are uttered or written.

The second argument from Kuno is that for (3) there is a corresponding single-subject sentence,

- (6) *bunmeikoku no dansei no heikin-jumyoo ga mijikai*  
‘It is the average life-span of males of civilized countries that is short.’

whereas for sentence (2) Kuno rejects such an alternative:

- (7) \**watakushi no/ni eiga ga suki desu*  
\*‘I am fond of movies.’

Although example (7) is indeed not correct if the meaning of Kuno’s translation is intended, the sentence itself is not ungrammatical either with *watakushi no* in the meaning

of, respectively, ‘My movies are a fancy’, or with *watakushi ni*, meaning ‘To me, movies are a fancy’. Therefore a single subject sentence is possible, albeit with a different meaning compared to the corresponding double subject sentence. This is in accordance with the rule ‘one form, one meaning’, which stipulates that if the form is changed, the meaning also changes.

Another reason to reject Kuno’s reasoning is the fact that, if in sentence (2) the second *ga* marked noun phrase is indeed analyzed as the direct object, it would follow that the mathematical description for the sentence with *watakushi ga* as subject and *eiga ga* as second valence of the predicate would be exactly the same as for sentence (2b) with *eiga wo*, which is not consistent with the rule ‘one form, one meaning’ either, and therefore, is not acceptable.

(2b) *watakushi ga eiga wo suki desu*  
 ‘I like movies.’

$$\begin{aligned} & \sum / \text{POL} / \text{PR} \\ \text{watakushi} &= [ \text{suki}_1 ] \\ & [ \text{suki}_2 ]; \text{eiga} \end{aligned}$$

I maintain that the example sentences (2) and (3) should be analyzed in the same way, viz. that all *ga*-marked noun phrases are subjects, with the understanding that the *ga*-marked noun phrase that is closest to the predicate is directly associated with the event expressed by the predicate, and the other *ga*-marked noun phrase relates as a subject to the entire sentence part that follows, as can be observed in the mathematical descriptions for these sentences here below.

(2) *watakushi ga eiga ga suki desu*  
 (I carry the features of the situation that movies are likable)

$$\begin{aligned} & \sum / \text{POL} / \text{PR} \\ \text{watakushi} &= \quad \text{Y} \\ & \text{eiga} = \text{suki} \end{aligned}$$

(3) *bunmeikoku ga dansei no heikin-jumyoo ga mijikai*  
 (the civilized countries carry the features of the situation that the average life span of males is short)

$$\begin{aligned} & \sum / \text{PR} \\ \text{bunmeikoku} &= \quad \text{Y} \\ & \text{heikin} \cap \text{jumyoo} \downarrow = \text{mijikai} \\ & \quad \quad \quad - \text{dansei} \end{aligned}$$

- (4) *dansei no heikin-jumyoo ga mijikai*  
(the average life span of males is short)

$$\begin{array}{rcl} & \Sigma / \text{PR} & \\ \text{heikin} \cap \text{jumyoo} \downarrow & = & \text{mijikai} \\ & - & \text{dansei} \end{array}$$

- (5) *eiga ga suki desu*  
(movies are a fancy (of mine))

$$\begin{array}{rcl} & \Sigma / \text{POL} / \text{PR} & \\ \text{eiga} & = & \text{suki} \end{array}$$

- (6) *bunmeikoku no dansei no heikin-jumyoo ga mijikai*  
(the average life span of males of civilized countries is short)

$$\begin{array}{rcl} & \Sigma / \text{PR} & \\ \text{heikin} \cap \text{jumyoo} \downarrow & = & \text{mijikai} \\ & - & \text{dansei} \downarrow \\ & - & \text{bunmeikoku} \end{array}$$

- (7) *watakushi no eiga ga suki desu*  
(my movies are a fancy (of mine))

$$\begin{array}{rcl} & \Sigma / \text{POL} / \text{PR} & \\ \text{eiga} \downarrow & = & \text{suki} \\ & - & \text{watakushi} \end{array}$$

Takeuchi (1999:133) points out that sentence (3) can even be rephrased into a triple-subject sentence (8) and remarks that “The pragmatic-semantic nuances are unclear apart from the leftmost ‘NP *ga*’ with the widest scope being interpreted as focus, but perhaps the point about repeating *ga* is to give more weight to each element as in a deliberate, full intonation.”

- (8) *bunmeikoku ga dansei ga heikin-jumyoo ga mijikai*  
‘It is in civilized countries, that males have a short lifespan.’  
(civilized countries carry the features of a situation that males carry the features of the situation that average life-span is short)

$$\begin{array}{rcl} & \Sigma / \text{PR} & \\ \text{bun} \cap \text{meikoku} = & \text{Y} & \\ & \text{dansei} = & \text{Y} \\ & & \text{heikin} \cap \text{jumyoo} = \text{mijikai} \end{array}$$

The next linguist whose views are discussed in this respect is Martin (2004:256-258) who, unlike Kuno, is not in favor of denoting *ga* as an object marker, but supports the double-subject theory. He states that: “A number of Japanese sentences come to the surface with more than one “subject”, i.e. the predicate seems to have two or more adjuncts marked with the particle *ga*.” Martin argues that these sentences have two subjects and finds the explanation for such occurrences in an “underlying structure” and he classifies two different constructions, i.e. those with possessive and quasi-possessive predicates with the grammar *dare ni/ga nani ga* (possessor...possessed) and those with desiderative and quasi-desiderative predicates, which have the grammar *dare ga nani ga/wo*. For the first case Martin explains that: “Apparently what has happened is this: the underlying semantic subject is retained in the surface structure, while the underlying semantic object is converted to subject marking by the originally intransitive nature of the Japanese predicates that were co-opted to express possessive meanings.” For the second construction, Martin maintains that the underlying (=semantic) object is optionally converted to a surface subject, under the influence of the surface grammar of the adjective or adjectival noun.

In this work sentences are analyzed in the form in which they are uttered or written (which, in fact, would be what Martin calls the “surface structure”) and by the way in which the meanings of their immediate constituents are linked. Therefore the origins of any underlying structures will not be described here. However, there is a strong similarity between Martin’s division of subjects and the one proposed in this work. The first subject in a double subject sentence, the one that Martin claims to be the (original) subject retained from an underlying structure, takes the position of the main subject in the nexus, and is therefore put on the left side of the first symbol ‘=’ in the descriptive formula. It refers to the entire sentence part that follows, which as an entity is represented by the symbol ‘Y’ and is placed on the right side of this symbol ‘=’. The second subject, which in Martin’s view has been the object of the predicate in the underlying structure, is analyzed here as the subject that relates directly to the predicate. This construction can be observed in the mathematical descriptions of the following example sentences:

- (9) *Ken ga eigo ga wakaru*  
 ‘Ken can understand English.’  
 (Ken carries the features of a situation that English is understandable)

$$\sum / PR$$

$$Ken = \quad Y$$

$$eigo = wakaru$$

- (10) *Pochi ga nomi ga ooi* (Takeuchi, 1999:131)  
 ‘Pochi has lots of fleas.’  
 (Pochi carries the features of a situation where fleas are many)

$$\sum / PR$$

$$Pochi = \quad Y$$

$$nomi = ooi$$

- (11) *boku wa supootsukaa ga hoshii* (Makino&Tutsui, 1995:120)  
 ‘I want a sport scar.’  
 (as for me, a sports car is desirable)

$$boku > wa < \sum / PR$$

$$supootsu \cap kaa = hoshii$$

According to Martin (2004:360) for the next sentence (12): “The fact that, in general, word order is free can lead to ambiguity because it may also mean ‘The dog is afraid of the child.’” Although Martin acknowledges that “under neutral circumstances the former interpretation is more likely”, I would go even further than that and claim that, based on my analysis, this second translation of (12) is unacceptable. I have already argued that the so-called “free word order” in Japanese certainly does not imply that changing the word order would not change the meaning. This sentence is a perfect example of the fact that changing the word order would result in a difference in meaning. For (12) the translation can only be ‘The child is afraid of the dog’, while the second translation given by Martin: ‘The dog is afraid of the child’ would render the Japanese sentence *inu ga kodomo ga kowai*. As a result of the analysis that the noun phrase marked by *ga* that is closest to the predicate always relates directly to it and the first *ga* marked noun phrase relates to the rest of the sentence, there can be no ambiguity here.

- (12) *kodomo ga inu ga kowai*  
 ‘The child is afraid of the dog.’  
 (The child carries the features of the situation that the dog is feared)

$$\sum / PR$$

$$kodomo = Y$$

$$inu = kowai$$

Kuroda (1992:235) also acknowledges the possibility of double-subject structures but, like Kuno, he makes a distinction: “I assume there are two different ‘double subject’ structures, one resulting from the Chomsky adjunction of the ‘major’ subject, the other from the sister adjunction of the ‘major’ subject.” For the first category Kuroda quotes sentence (13), for which he gives the following structure:  $[[zoo\ ga]\ [hana\ ga]\ nagai]$ . This structure is consistent with the mathematical description proposed here, i.e.:

- (13) *zoo ga hana ga nagai*  
 (The elephant carries the features of a situation that the trunk is long)

$$\sum / PR$$

$$zoo = Y$$

$$hana = nagai$$

For his second kind of double subject structure, Kuroda quotes sentence (14), which he analyzes as having a different structure, namely:  $[[kono\ koma\ ga]\ [iro\ ga]\ kirei\ da]$ .

This second notation of Kuroda is not supported here, instead it is maintained that both sentences (13) and (14) should be analyzed in the same way, which for the latter would yield the following structure:  $[[kono\ koma\ ga]\ [iro\ ga]\ kirei\ da]]$

- (14) *kono koma ga iro ga kirei da*  
 ‘This top has a beautiful color.’  
 (this top carries the features of the situation that the color is beautiful)

$$\begin{array}{l} \sum / PR \\ koma - kono = \quad Y \\ \quad \quad \quad iro = kirei \end{array}$$

Kuroda’s argument: “As reason for this distinction let me only mention at this moment that if the color of the top is beautiful, the top is beautiful, while an elephant is not long because its trunk is long”, does not seem to be very convincing, since the thought that the top could be ugly while its color is beautiful is certainly plausible. In other words, there do not seem to be any strong arguments in favor of analyzing the semantic constructions of the sentences (13) and (14) in two different ways.

When analyzing non-canonical constructions Shibatani (2001:312) gives a number of example sentences with double nominative noun phrases, e.g.:

- (15) *Ken ga atama ga ookii*  
 ‘Ken has a big head.’  
 (Ken carries the feature of the situation that the head is big)

$$\begin{array}{l} \sum / PR \\ Ken = \quad \quad Y \\ \quad \quad \quad atama = ookii \end{array}$$

- (16) *boku ga kono hon ga hoshii*  
 ‘I want this book.’  
 (I carry the features of the situation that this book is desirable)

$$\begin{array}{l} \sum / PR \\ boku = \quad \quad \quad Y \\ \quad \quad \quad hon - kono = hoshii \end{array}$$

- (17) *Ken ga eigo ga tokui da*  
 ‘Ken is good at English.’  
 (Ken carries the features of the situation of English being his forte)

$$\begin{array}{l} \sum / PR \\ Ken = \quad \quad Y \\ \quad \quad \quad eigo = tokui \end{array}$$



Furthermore, Shibatani (2001:321-322) argues that: “Analyzing dative subject constructions and double nominative constructions as transitive clauses with a nominative object weakens the generalization that what is marked by *ga* is a subject.” He gives another argument for not analyzing the second *ga* marked noun phrase as an object by pointing out that the nominative nominals in question can participate in the honorification process as well as in reflexive binding in Japanese, properties uniquely associated with the nominative subject and the dative subject. Shibatani concludes that there is a good deal of evidence that the second nominal of the non-canonical DAT/NOM-NOM frame is a subject, as in sentence (18) here below. In this case, the second *ga* marked noun phrase is the antecedent of the reflexive pronoun, and its referent is also indexed by the honorific verbal ending. So it is clear that the second *ga*-marked NP directly relates as a subject to the predicate.

- (18) *Yamada-san ga okusan ga jibun no kaisha wo keiei-nasatte iru.*  
 ‘It is Mr. Yamada whose wife is managing her own company.’  
 (Yamada has the features of the situation that his wife is managing her own company)

$$\begin{array}{l}
 \Sigma / \text{PR} \\
 \text{Yamada} \cup \text{san} = \quad \quad \quad \text{Y} \\
 \text{oku} \cup \text{san} = \text{iru} \supset [\text{keiei} \cap \text{nasaru}_1] \\
 \quad \quad \quad \quad \quad \quad \quad \quad \quad [\text{keiei} \cap \text{nasaru}_2]; \text{kaisha} \downarrow \\
 \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad - \text{jibun}
 \end{array}$$

To summarize, the arguments put forward by Kuno for analyzing the case particle *ga* as marking the object of a sentence are rejected in favor of the view that all *ga*-marked NP’s are subjects. Furthermore a distinction between different kinds of double subject sentences as both Kuno and Kuroda have suggested is not supported here, instead it is maintained that these structures should all be analyzed in the same way. However, a distinction is made in the way that the multiple subjects of a sentence relate to the predicate of that sentence, viz. that the last subject that is closest to the predicate directly relates to the predicate, and the first subject refers to the entire part of the sentence that follows.

## 4.2 The accusative particle *wo*

The accusative particle *wo* is analyzed as the direct object marker, in other words, the noun phrase marked by *wo* functions as the second valence of the predicate. This implies that the predicates referring to ‘NP *wo*’ are bivalent with the subject corresponding to the first valence of the predicate. If the subject is not mentioned, it is represented in the mathematical descriptions by the symbol ‘X’. Since besides this function of denoting the direct object, the particle *wo* does not add any specific meaning to the sentence, it is left out of the mathematical descriptions, e.g.:

$$\begin{array}{l} A \text{ ga } B \text{ wo PRED :} \\ \sum \\ A = [\text{PRED}_1 \\ \text{[PRED}_2]; B \end{array}$$

This description is used for all occurrences of the particle *wo*, which implies that *wo* is established as the marker of the second valence of the predicate, whether this predicate is classified as transitive or as intransitive. This view appears to be accepted by most researchers of the Japanese language, in spite of the fact that such an analysis is at odds with the traditional rules and definitions of transitivity. In traditional grammars the distinction between transitive and intransitive predicates is mostly made on the basis of whether the verbs can have a pure passive and/or a resultative conversion. Based on this distinction, predicates that do not have such conversions are usually analyzed as intransitive verbs. For Japanese, however, this theory does not hold, as will be explained in this section while analyzing a number of example sentences and arguments from Martin (2004), Takeuchi (1999), Kuno (1973) and Jacobsen (1992).

Martin (2004:40,188-189) classifies all noun phrases marked by *wo* as direct objects. He lists a broad range of possible objects as quoted here below. The first two categories do not constitute a problem, since the predicates that they relate to are commonly classified as transitive. Traversal objects, ablative objects and temporal objects, however, relate to predicates that are traditionally classified as intransitive.

1. affective objects, which are the direct objects of transitive actions (e.g. *tsukuru* ‘make’, *kau* ‘write’) and of verbs expressing a perception (e.g. *miru* ‘see’, *omou* ‘think’)
2. cathectic objects, which are the direct objects of transitive emotion (e.g. *konomu* ‘like’, *kirau* ‘dislike’)
3. traversal objects, which are the direct objects of transitive motion, i.e. the place across or along which the motion takes place, either totally or partially (the predicates in such structures are named “quasi-intransitive verbs” by Martin), (e.g. *wataru* ‘cross over’, *tooru* ‘pass by/through’)
4. ablative objects, which are intransitive verbs of movement that permit the ablative (the place departed from) to be marked by *wo* as an optional substitute for *kara* (e.g. *deru* ‘leave’)
5. temporal objects, which indicate the time spent (e.g. *Tookyoo de isshoo wo kurasu* ‘live all one’s life in Tokyo’)

Furthermore, Martin (2004:186) divides the verbs that can occur with a noun adjunct that is marked by the accusative particle *wo* into three groups:

1. Action verbs, transitive, which will permit the pure passive conversion ( $A\ ga\ X\ wo\ V\text{-}ru \rightarrow X\ ga\ A\ ni\ V\text{-}rare\text{-}ru$ ) and the resultative conversion ( $X\ wo\ V\text{-}ru \rightarrow X\ ga\ V\text{-}te\ aru$ ).
2. Emotion verbs, transitive, which will permit the pure passive conversion (which reverses the subject marking from the source of the emotion to the object toward which it is directed), but not the resultative conversion.
3. Motion verbs, quasi-transitive, which require a place noun for the *wo*-marked object and will take neither the resultative conversion nor the pure passive, although - like intransitive verbs - they are subject to the adversative passive and the passive-potential and behave like action and emotion verbs with respect to the marking of adjuncts in desiderative sentences. For instance, Martin's example sentence (1) cannot be converted into the pure passive: *\*michi ga hito ni arukareru* 'The road gets walked by people':

- (1) *hito ga michi wo aruku*  
'People walk the road.'

$$\sum / PR$$

$$hito = [aruku_1]$$

$$[aruku_2]; michi$$

However, it can be converted into:

- a. the adversative passive, with *watakushi-tachi* as negatively affected  
*watakushitachi ga hito ni michi wo arukareru*  
'We suffer from having the road walked by people'
- b. the passive-potential  
*hito ga michi ga aruk[ar]eru*  
'People can walk the road.'
- c. the desiderative construction  
*watashi ga michi wo/ga arukitai*  
'I want to walk the road.'

These constructions will be described in section 11.1.

In Japanese the concept of transitivity is complicated in another respect, too. Martin (2004:308-310) points out that there are a number of verbs in Japanese that appear in shape-related pairs that show "paired transitivity", which means that of each set of two similar verbs, one verb is intransitive or quasi-intransitive and the other represents a corresponding transitive meaning, e.g. *naoru* 'get improved' and *naosu* 'improve it'; *deru* 'get out' and *dasu* 'take out'; *okiru* 'get up' and *okosu* 'wake up'; *ochiru* 'fall' and *otosu* 'drop'; *kimaru* 'be decided' and *kimeru* 'decide'. Whenever a given word has two forms, transitive and intransitive, only the transitive form is inflected in the passive, although forms like *kimarareru* can be used as adversative passives. Martin also provides examples of verbs with "ambivalent transitivity", which are verbs where the same shape represents both transitive and intransitive, e.g. *fuku* may either mean '(the wind) blows' or 'one blows (a whistle)'; *masu* 'it increases' or '(one) increases it'.

Martin (2004:189) points out that there are occurrences of transitive verbs with multiple grammars, i.e. those that allow more than one kind of semantic relationship with their affected objects, as in:

- (2a) *kodomo wo oshieru*  
 ‘[I] teach children.’

$$\sum / \text{PR}$$

$$X = [\textit{oshieru}_1]$$

$$[\textit{oshieru}_2]; \textit{kodomo}$$

- (2b) *kodomo ni eigo wo osieru*  
 ‘[I] teach children English.’

$$\sum / \text{PR}$$

$$X = [\textit{oshieru}_1] > [\textit{ni}_1]$$

$$[\textit{oshieru}_2]; \textit{eigo} \mid [\textit{ni}_2]; \textit{kodomo}$$

Takeuchi (1999:145-146) argues that locative verbs, which denote an initial movement encoded by *wo*, merely imply non-presence at the place of the ‘initial location’, e.g. *yo wo satta* ‘left the world’ (died) in its actualized reading implies *yo ni inai* ‘is not in the world’ or *yo wo satte iru* ‘has left the world’. And she points out that an initial locative, e.g. *machi wo deta* ‘I left town’ and a final locative, e.g. *soto ni deta* ‘I moved outside’, cannot appear at the same time; therefore, the sentence *\*uchi wo soto ni deru* ‘move out of the house to the outside’ is not correct. Furthermore, Takeuchi maintains that ‘transversal’ verbs, which denote the mode rather than the direction of movement, have no particular locative implication, as can be observed in the following sentence (3), where there is no indication about the bird’s whereabouts as a result of its flight, the bird may still be in the sky. The same implication holds for her examples (4) and (5).

- (3) *tori ga sora wo tonda*  
 ‘A bird flew across the sky.’

$$\sum / \text{PA}$$

$$\textit{tori} = [\textit{tobu}_1]$$

$$[\textit{tobu}_2]; \textit{sora}$$

- (4) *kooen wo aruita*  
 ‘I walked across the park.’

$$\sum / \text{PA}$$

$$X = [\textit{aruku}_1]$$

$$[\textit{aruku}_2]; \textit{kooen}$$

- (5) *kumo ga sora wo nagareta*  
 ‘Clouds flowed across the sky.’

$$\begin{aligned} & \sum / \text{PA} \\ \textit{kumo} &= [\textit{nagareru}_1] \\ & [\textit{nagareru}_2]; \textit{sora} \end{aligned}$$

Jacobsen (1992:1-10) discusses various standard definitions of transitivity. From his observations and examples it becomes clear that these definitions do not hold for Japanese. One of the definitions quoted by Jacobsen is what he calls the “logical” definition: “A predicate is transitive if at least two noun phrase arguments are necessary for its meaning to be understood. Otherwise it is intransitive.” For Japanese, however, this definition yields several problems. One of these is the fact that in Japanese the subject need not be mentioned, which means that the first noun phrase argument is not always there, and another more important problem is the fact that predicates taking different case patterns would all be treated the same, as long as the number of noun arguments is at least two. In other words, this “logical” definition does not state how the meaning of the predicate is linked with its transitive structure.

If we apply this “logical” definition to Jacobsen’s example sentences (6 -9), we would have to conclude that these sentences all have transitive constructions. However, this is not the case, because only the first of the four constructions contains a noun phrase marked by the accusative particle *wo* corresponding to the second valence of the verb, and as a result, it is the only one with a bivalent predicate.

- (6) *kono shuugoo wa itsutsu no yooiin wo fukunde iru*  
 ‘This set contains five members.’

$$\begin{aligned} \textit{shuugoo} - \textit{kono} > \textit{wa} < \sum / \text{PR} \\ \textit{X} = \textit{iru} &\supset [\textit{fukumu}_1] \\ & [\textit{fukumu}_2]; \textit{yooiin} \downarrow \\ & \quad \quad \quad - \textit{itsutsu} \end{aligned}$$

The predicate of the second example is preceded by a *ga*-marked noun phrase, which should be analyzed as the subject of the predicate *hoshii*, not as a direct object, as already has been explained in the previous section on *ga*.

- (7) *boku wa okane ga hoshii.*  
 ‘I want money.’  
 (as for me, money is a fancy)

$$\begin{aligned} \textit{boku} > \textit{wa} < \sum / \text{PR} \\ \textit{okane} &= \textit{hoshii} \end{aligned}$$

In the example sentences (8) and (9), the noun phrases marked by the particles *ni* and *to* are analyzed as adjuncts, not as objects. The problem with trying to analyze these two structures as transitive is the fact that both predicates, *chigau* and *niru*, can occur with adjuncts marked by different particles, viz. *ni* and *to*. Consequently, this should also yield a semantic difference, which would be lost if *anata no* in (8) and *chichioya* in (9) were analyzed as second valence of the predicates.

- (8) *boku no kangae wa anata no to chigau*  
 ‘My thinking is different from yours.’

$$\begin{aligned} kangae \downarrow > wa < \sum / PR \\ - boku \mid X = chigau > to < X \downarrow \\ - anata \end{aligned}$$

- (9) *Taroo wa chichioya ni nite iru*  
 ‘Taro resembles his father.’

$$\begin{aligned} Taroo > wa < \sum / PR \\ X = iru \supset niru > [ni_1] \\ [ni_2]; chichi \cap oya \end{aligned}$$

Another definition quoted by Jacobsen is the “traditional” definition: “A transitive verb (predicate) is one which expresses an action intentionally initiated by one entity and directed toward another entity so as to effect a direct, real, and perceptible change in that entity.” Just as in the “logical” definition, there are two entities (participants) involved in this definition, but in addition they must be related to each other in a particular way, namely as the initiator of an action and the entity affected by the action, as can be seen in the following example:

- (10) *sagyooiin ga furui tatemono wo kowashita.*  
 ‘The workers broke (tore down) the old building.’

$$\begin{aligned} \sum / PA \\ sagyooiin = [kowasu_1] \\ [kowasu_2]; tatemono - furui \end{aligned}$$

Based on this “traditional” definition the predicates (*chigau* ‘be different’, *niru* ‘resemble’, *fukumu* ‘include’, and *hoshii* ‘want’) in the above-mentioned example sentences (6 - 9) do not qualify as transitive predicates, because they do not express any action directed by one participant toward another and they do not effect a change. Although (for other reasons) the conclusion that *chigau*, *niru* and *hoshii* in these examples do not refer to a second valence is supported, the outcome that *fukumu* is intransitive is not acceptable. Therefore, this “traditional” definition is also rejected here.

For the Sino-Japanese verbs (= verbs which have their origin in Chinese), Jacobsen makes a three-way distinction:

1. verbs that allow more than one argument structure and can be interpreted equally coherently with either one or two noun phrase arguments, which can be transitive and intransitive, e.g.:

- (11a) *untenshu ga kuruma wo idoo-shita*  
 ‘The driver moved the car.’

$$\sum / \text{PA}$$

$$\text{untenshu} = [\text{idoo} \cap \text{suru}_1]$$

$$[\text{idoo} \cap \text{suru}_2]; \text{kuruma}$$

- (11b) *kuruma ga idoo-shita*  
 ‘The car moved.’

$$\sum / \text{PA}$$

$$\text{kuruma} = \text{idoo} \cap \text{suru}$$

2. verbs that can only occur with two noun arguments, which can only be transitive, e.g.:

- (12a) *Rengoogun ga teki wo hooi-shita*  
 ‘The allied army surrounded the enemy.’

$$\sum / \text{PA}$$

$$\text{rengoogun} = [\text{hooi} \cap \text{suru}_1]$$

$$[\text{hooi} \cap \text{suru}_2]; \text{teki}$$

- (12b) *\*teki ga hooi-shita*  
 ‘The enemy surrounded.’

3. those verbs that can have only one noun argument, which can only be intransitive, e.g.:

- (13a) *kodomo ga seichoo-shita*  
 ‘The child grew.’

$$\sum / \text{PA}$$

$$\text{kodomo} = \text{seichoo} \cap \text{suru}$$

- (13b) *\*oya ga kodomo wo seichoo-shita*  
 ‘The parents grew the child.’

Another feature of the Sino-Japanese verbs is that they can occur either as a compound verb or as a simple verb accompanied by a direct object, as demonstrated by example (14).

- (14a) *watashi ga nihongo wo benkyoo shite iru*  
 ‘I study Japanese.’

$$\begin{array}{l} \sum / \text{PR} \\ \text{watashi} = \text{iru} \supset [\text{benkyoo} \cap \text{suru}_1] \\ [\text{benkyoo} \cap \text{suru}_2]; \text{nihon} \cap \text{go} \end{array}$$

- (14b) *watashi ga nihongo no benkyoo wo shite iru*  
 ‘I am doing the study of Japanese.’

$$\begin{array}{l} \sum / \text{PR} \\ \text{watashi} = \text{iru} \supset [\text{suru}_1] \\ [\text{suru}_2]; \text{benkyoo} \downarrow \\ - \text{nihon} \cap \text{go} \end{array}$$

Another question that came up in the course of this research was the fact that there are occurrences of two *wo* marked noun phrases relating to one predicate. This seemed to indicate that the decision to analyze ‘NP *wo*’ in all its occurrences as second valence of the predicate was incorrect, since a predicate can only have one ‘second valence’. However, it soon became clear that the predicates in these sentences all consisted of causative constructions. So far example sentences with a ‘double *wo*’ - construction without a causative have not been found. With causative constructions the presence of two noun phrases marked by *wo* can be explained by analyzing one noun phrase marked by *wo* as the second valence of the causative and the other as the second valence of the main verb. Examples of such constructions will be given in section 11.2.

To recapitulate, it is argued here that each noun phrase marked by the accusative particle *wo* should be analyzed as the second valence of the predicate, regardless of the fact whether this predicate is lexically and grammatically classified as ‘transitive’ or as ‘intransitive’. A number of these predicates can have a pure passive and/or resultative conversion, others cannot. Furthermore there are verbs that can have multiple grammars, relating to ‘NP *wo*’ as well as to ‘NP *ni*’ or ‘NP *de*’, albeit with a difference in meaning as stipulated by the rule ‘one form, one meaning’. In section 5.2 the semantic differences between such locative constructions will be further explained.



### 4.3 The genitive particle *no*

The genitive particle *no* marking a noun phrase can have various meanings, such as possession, material, color, product, attribute or relationship, category, location, and time. Since the function of *no* is basically the same for all these occurrences, i.e. the first noun modifies the second, and the nature of that modification is lexically determined by the noun phrases involved, one notation can suffice for all occurrences of this genitive particle *no*. For this notation Ebeling's relation symbol for 'divergent limitation' has been chosen:

$$A \text{ no } B : \quad \begin{array}{c} B \downarrow \\ - A \end{array}$$

The particle *no* in nominalizations will be described in section 13.3.2.

For the following descriptions of the genitive particle *no* the classifications and example sentences of Kawashima (1999:143-154) are quoted.

#### 4.1.1 possession, meaning: 'of' or 'belonging to'

- (1) *kore wa anata no hon da*  
'This is your book.'

$$\begin{array}{c} kore > wa < \sum / PR \\ X = hon \downarrow \\ - anata \end{array}$$

#### 4.1.2 material, meaning: 'made of'

- (2) *watashi wa kinoo kawa no tebukuro wo kaimashita*  
'I bought a pair of leather gloves yesterday.'

$$\begin{array}{c} watashi > wa < \sum / POL / PA \\ X = [kau_1] > kinoo \\ [kau_2]; tebukuro \downarrow \\ - kawa \end{array}$$

#### 4.1.3 color, transforms the noun into an adjective

- (3) *are wa midori no kuruma desu*  
'That is a green car.'

$$\begin{array}{c} are > wa < \sum / POL / PR \\ X = kuruma \downarrow \\ - midori \end{array}$$

#### 4.1.4 product, meaning: ‘created by’

- (4) *kore wa Kawabata Yasunari no shoosetsu desu*  
‘This is a novel written by Kawabata Yasunari.’

*kore* > *wa* <  $\sum$  / POL / PR  
X = *shoosetsu* ↓  
– *Kawabata•Yasunari*

The next example sentence contains two genitive particles, the first indicates material and the second marks a product:

- (5) *ano buronzu no zoo wa dare no saku desu ka*  
‘Whose work is that bronze statue?’

*zoo* ↓ – *ano* > *wa* <  $\sum$  / POL / PR > *ka*  
– *buronzu* | X = *saku* ↓  
– *dare*

#### 4.1.5 attribute or relationship

- (6) *watashi wa koochoo no Bando to mooshimasu*  
‘I am Bando, the principal of this school.’

*watashi* > *wa* <  $\sum$  / POL / PR  
X = *moosu* > *to* < *Bando* ↓  
– *koochoo*

- (7) *kanojo wa shachoo no hisho desu*  
‘She is secretary to the president.’

*kanojo* > *wa* <  $\sum$  / POL / PR  
X = *hisho* ↓  
– *shachoo*

- (8) *ano hito wa watashi no inochi no onjin desu*  
‘That person is the one who saved my life.’

*hito* – *ano* > *wa* <  $\sum$  / POL / PR  
X = *onjin* ↓  
– *inochi* ↓  
– *watashi*

- (9) *ano hito wa watashi no oji desu*  
 ‘That person is my uncle.’

$$\begin{aligned} hito - ano > wa < \sum / \text{POL} / \text{PR} \\ X = oji \downarrow \\ - watashi \end{aligned}$$

#### 4.1.6 category

- (10) *Matsuoka-sensei wa rika no sensei desu*  
 ‘Mr. Matsuoka is a science teacher.’

$$\begin{aligned} Matsuoka \cup sensei > wa < \sum / \text{POL} / \text{PR} \\ X = sensei \downarrow \\ - rika \end{aligned}$$

- (11) *kore wa nihongo no kyookasho desu*  
 ‘This is a Japanese language textbook.’

$$\begin{aligned} kore > wa < \sum / \text{POL} / \text{PR} \\ X = kyookasho \downarrow \\ - nihon \cap go \end{aligned}$$

#### 4.1.7 location

- (12) *Nyuuyooku no fuyu wa samui deshoo ne*  
 ‘Winter in New York must be very cold.’

$$\begin{aligned} fuyu \downarrow > wa < \sum / \text{POL} / \text{SUB} > ne \\ - Nyuuyooku \mid X = samui \end{aligned}$$

- (13) *teeburu no shita ni inu ga imasu*  
 ‘There is a dog under the table.’

$$\begin{aligned} \sum / \text{POL} / \text{PR} \\ inu = iru > [ni_1] \\ [ni_2]; shita \downarrow \\ - teeburu \end{aligned}$$

In the following sentence the first genitive particle *no* indicates possession and the second *no* marks a location:

- (14) *watashi no kaban no naka ni chizu ga arimasu*  
 ‘There is a map in my briefcase.’

$$\begin{array}{l} \sum / \text{POL} / \text{PR} \\ \text{chizu} = \text{aru} > [ni_1] \\ \quad [ni_2]; \text{naka} \downarrow \\ \quad \quad - \text{kaban} \downarrow \\ \quad \quad \quad - \text{watashi} \end{array}$$

#### 4.1.8 time

- (15) *kore wa juunen mae no shinbun da yo*  
 ‘This is a newspaper from ten years ago.’

$$\begin{array}{l} \text{kore} > \text{wa} < \sum / \text{PR} > \text{yo} \\ \quad \quad \quad X = \text{shinbun} \downarrow \\ \quad \quad \quad \quad - \text{juunen} \cap \text{mae} \end{array}$$

- (16) *kore kara nijuppun no kyuukei ga arimasu*  
 ‘We’ll have a twenty-minute intermission now.’

$$\begin{array}{l} \sum / \text{POL} / \text{PR} \\ \text{kyuukei} \downarrow \quad \quad = \text{aru} > [kara_1] \\ \quad - \text{nijuu} \cap \text{pun} \quad \quad | [kara_2]; \text{kore} \end{array}$$

Kawashima’s next example demonstrates that the genitive particle *no* can occur many times in one sentence:

- (17) *asoko no hondana no ue no tana no migi no hoo no ookii jibiki no tonari no hon*  
 ‘the book next to the big dictionary on the right side of the upper shelf of the book shelves over there’

$$\begin{array}{l} \text{hon} \downarrow \\ \quad - \text{tonari} \downarrow \\ \quad \quad - \text{jibiki} - \text{ookii} \downarrow \\ \quad \quad \quad - \text{hoo} \downarrow \\ \quad \quad \quad \quad - \text{migi} \downarrow \\ \quad \quad \quad \quad \quad - \text{tana} \downarrow \\ \quad \quad \quad \quad \quad \quad - \text{ue} \downarrow \\ \quad \quad \quad \quad \quad \quad \quad - \text{hondana} \downarrow \\ \quad \quad \quad \quad \quad \quad \quad \quad - \text{asoko} \end{array}$$

## 5 Other case particles

In this chapter the peripheral case particles, dative *ni*, instrumental *de*, directive *he*, ablative *kara*, and allative *made* will be described. All these particles, except *he*, can occur in other functions as well, and will therefore reappear in other chapters. The particles in this section are all analyzed as bivalent peripheral particles and in the mathematical descriptions the first valences of these particles are linked to the preceding words by the relation symbol for gradation '>', while the second valence is connected to the particle by the symbol ' ; ' denoting 'convergence with the dominating element'.

### 5.1. The dative particle *ni*

The dative particle *ni* can have various functions, such as marking location, time, direction, purpose, and coordination. As has already been stated in chapter 4, the classification of the particle *ni* as a basic case particle marking the indirect object is not supported here; further arguments for this view will be given here below in section 5.1.11.

The example sentences that are analyzed in this section for the occurrences of 'NP *ni*' are mainly quoted from Makino&Tutsui (1995:289-303), with added commentaries and examples from other sources, which will be mentioned as they appear in the text.

#### 5.1.1 specific time, indicating a point or specific period of time at which something takes place

Time expressions in Japanese can occur with or without particles. Certain time expressions that take *ni* express more specific points of time and directly relate to the action, while others, occurring either with or without *ni* (or another particle) are considered to be more general time expressions relating to the whole event.

- (1) *watashi wa rokujihan ni okita*  
'I got up at six thirty.'

$$\begin{aligned} \textit{watashi} > \textit{wa} < \sum / \textit{PA} \\ X = \textit{okiru} > [ni_1] \\ [ni_2]; \textit{roku} \cap \textit{ji} \cup \textit{han} \end{aligned}$$

When there are two or more adjuncts of time, the time adjunct that is closest to the predicate is put directly behind the predicate in the mathematical description with the other adjunct(s) following it, consistent with the word order of the sentence.

- (2) *maiasa rokujihan ni okiru*  
'I get up at six thirty every morning.'

$$\begin{aligned} \sum / \textit{PR} \\ X = \textit{okiru} > [ni_1] > \textit{mai} \cap \textit{asa} \\ [ni_2]; \textit{roku} \cap \textit{ji} \cup \textit{han} \end{aligned}$$

- (3) *shigatsu tsuitachi ni umaremashita*  
 ‘I was born on April 1<sup>st</sup>.’

$$\sum / \text{POL} / \text{PA}$$

$$X = \text{umareru} > [ni_1] > \text{shi} \cap \text{gatsu}$$

$$[ni_2]; \text{tsuitachi}$$

Makino&Tutsui inform us that there are a number of time expressions that cannot take *ni*, such as *asa* ‘morning’, *ashita* ‘tomorrow’ and *kinoo* ‘yesterday’. Furthermore, they quote examples with various time expressions that can occur either with or without *ni*, such as *natsu* ‘summer’, *toki* ‘time’, *aida* ‘interval’, and *uchi* ‘time space within’, and remark that there is a slight difference in meaning, the version with *ni* stresses the point of time more than the version without *ni* does. These time adjuncts, whether marked by *ni* or not, relate to a whole period of time rather than to a specific point in time. The time expression *aida* is used without a particle when the event in the main clause continues for the entire duration of the event in the subordinate clause; if this is not the case *aida ni* is used. (see also Makino&Tutsui,1995:69)

- (4a) *rainen no natsu gaikoku-ryokoo wo shimasu*  
 ‘Next summer I shall make a trip abroad.’

$$\sum / \text{POL} / \text{PR}$$

$$X = [\text{suru}_1] > \text{natsu} \downarrow$$

$$[\text{suru}_2]; \text{gaikoku} \cap \text{ryokoo} \mid - \text{rai} \cap \text{nen}$$

- (4b) *rainen no natsu ni gaikoku-ryokoo wo shimasu*  
 ‘Next summer I shall make a trip abroad.’

$$\sum / \text{POL} / \text{PR}$$

$$X = [\text{suru}_1] > [ni_1]$$

$$[\text{suru}_2]; \text{gaikoku} \cap \text{ryokoo} \mid [ni_2]; \text{natsu} \downarrow$$

$$- \text{rai} \cap \text{nen}$$

- (5a) *Hiroshi wa shiken no toki kaze wo hiita* (Makino&Tutsui,1995:491)  
 ‘Hiroshi caught cold at exam time.’

$$\text{Hiroshi} > \text{wa} < \sum / \text{PA}$$

$$X = [\text{hiku}_1] > \text{toki} \downarrow$$

$$[\text{hiku}_2]; \text{kaze} \mid - \text{shiken}$$

- (5b) *Hiroshi wa shiken no toki ni kaze wo hiita*  
 ‘Hiroshi caught cold at exam time.’

$$\begin{aligned}
 & \text{Hiroshi} > \text{wa} < \sum / \text{PA} \\
 & \text{X} = [\text{hiku}_1] > [\text{ni}_1] \\
 & \quad [\text{hiku}_2]; \text{kaze} \mid [\text{ni}_2]; \text{toki} \downarrow \\
 & \qquad \qquad \qquad - \text{shiken}
 \end{aligned}$$

- (6) *Sumisu-san wa Nihon ni iru aida eigo wo oshiete imashita*  
 ‘Mr. Smith was teaching English (all during the time) while he was in Japan.’

$$\begin{aligned}
 & \text{Sumisu} \cup \text{san} > \text{wa} < \sum / \text{POL} / \text{PA} \\
 & \text{X} = \text{iru} \supset [\text{oshieru}_1] > \text{aida} \downarrow \\
 & \quad [\text{oshieru}_2]; \text{eigo} \mid - \sum / \text{PR} \\
 & \qquad \qquad \qquad \text{X} = \text{iru} > [\text{ni}_1] \\
 & \qquad \qquad \qquad \quad [\text{ni}_2]; \text{Nihon}
 \end{aligned}$$

- (7) *Takahashi-san wa Amerika ni iru aida ni gorufu wo oboemashita*  
 ‘Mr. Takahashi learned golf while he was in America.’

$$\begin{aligned}
 & \text{Takahashi} \cup \text{san} > \text{wa} < \sum / \text{POL} / \text{PA} \\
 & \text{X} = [\text{oboeru}_1] > [\text{ni}_1] \\
 & \quad [\text{oboeru}_2]; \text{gorufu} \mid [\text{ni}_2]; \text{aida} \downarrow \\
 & \qquad \qquad \qquad - \sum / \text{PR} \\
 & \qquad \qquad \qquad \text{X} = \text{iru} > [\text{ni}_1] \\
 & \qquad \qquad \qquad \quad [\text{ni}_2]; \text{Amerika}
 \end{aligned}$$

In the mathematical description for example (8a), the clause referred to by *aida* is placed outside the situation because the topical particle *wa* after *Yamada-san* separates the entire preceding part from the rest of the sentence.

- (8a) *watashi ga gohan wo tabete iru aida Yamada-san wa terebi wo mite ita*  
 ‘While I was eating my meal, Mr. Yamada was watching TV.’

$$\begin{aligned}
 & \text{aida} \downarrow < \text{Yamada} \cup \text{san} > \text{wa} < \sum / \text{PA} \\
 & \quad - \sum / \text{PR} \qquad \qquad \mid \text{X} = \text{iru} \supset [\text{miru}_1] \\
 & \text{watashi} = \text{iru} \supset [\text{taberu}_1] \qquad \mid \quad [\text{miru}_2]; \text{terebi} \\
 & \qquad \qquad \qquad \quad [\text{taberu}_2]; \text{gohan}
 \end{aligned}$$

- (8b) *watashi ga gohan wo tabete iru aida ni Yamada-san ga kita*  
 ‘While I was eating my meal, Mr. Yamada came in.’

$$\begin{array}{l}
 \sum / \text{PA} \\
 \text{Yamada} \cup \text{san} = \text{kuru} > [ni_1] \\
 [ni_2]; \text{aida} \downarrow \\
 - \sum / \text{PR} \\
 \text{watashi} = \text{iru} \supset [taberu_1] \\
 [taberu_2]; \text{gohan}
 \end{array}$$

Makino&Tutsui (1995:512-515) point to the fact that unlike *aida*, which refers to the ‘time space’ between two points from beginning to end, *uchi* does not refer to such measurable time space, it simply means ‘time space within’. *Uchi ni* expresses the general time during which a given action or state occurs; the tense before *uchi ni* is always non-past, regardless of the tense in the main clause and the verb before *uchi ni* is frequently negated.

- (9) *Maeda-san wa Amerika ni iru uchi ni eigo ga joozu ni natta*  
 ‘Mr. Maeda’s English improved while he was in America.’

$$\begin{array}{l}
 \text{Maeda} \cup \text{san} > \text{wa} < \sum / \text{PA} \\
 \text{eigo} = \text{naru} > [ni_1] > [ni_1] \\
 [ni_2]; \text{joozu} \mid [ni_2]; \text{uchi} \downarrow \\
 - \sum / \text{PR} \\
 \text{X} = \text{iru} > [ni_1] \\
 [ni_2]; \text{Amerika}
 \end{array}$$

- (10) *ame ga furanai uchi ni tennis wo shite kimasu*  
 ‘I’ll go and play tennis (and come back) before it rains.’

$$\begin{array}{l}
 \sum / \text{POL} / \text{PR} \\
 \text{X} = \text{kuru} \supset [suru_1] > [ni_1] \\
 [suru_2]; \text{tenisu} \mid [ni_2]; \text{uchi} \downarrow \\
 - \sum / \text{PR} \\
 \text{ame} = \text{nai} > \text{furu}
 \end{array}$$

(In section 12.3 constructions with verbs expressing ‘coming and going’ are described)



**5.1.2 static location**, indicating the location where someone or something exists

- (11) *koko ni denwa ga aru*  
‘Here is a telephone.’

$$\begin{array}{l} \sum / \text{PR} \\ \text{denwa} = \text{aru} > [ni_1] \\ [ni_2]; \textit{koko} \end{array}$$

- (12) *Katoo-san wa Oosaka ni sunde imasu*  
‘Mr. Kato lives in Osaka.’

$$\begin{array}{l} \text{Katoo} \cup \text{san} > \text{wa} < \sum / \text{POL} / \text{PR} \\ \text{X} = \text{iru} \supset \text{sumu} > [ni_1] \\ [ni_2]; \textit{Oosaka} \end{array}$$

- (13) *niwa ni sakura no ki ga tatte iru*  
‘There is a cherry tree standing in the yard.’

$$\begin{array}{l} \sum / \text{PR} \\ \text{ki} \downarrow = \text{iru} \supset \text{tatsu} > [ni_1] \\ - \text{sakura} \mid [ni_2]; \textit{niwa} \end{array}$$

When something else than a place name occurs in the position of the location, the noun phrase marked by *ni* is usually translated into English as the subject of the predicate, because the sentence seems to express possession rather than existence, as in the following examples from Makino&Tutsui (1995:74-76). However, for the semantic analysis of the original Japanese sentence this is a somewhat misleading translation. In Japanese the verb *aru* means ‘to exist’, not ‘to have’, and the NP marked by *ga* is the subject of the predicate, not the direct object, as the literal translations and the descriptions show. These noun phrases marked by *ni* are therefore analyzed in the same way as the occurrences of ‘NP *ni*’ marking a place, even when the NP is a human being, as in (14b). Because of the use of the topical particle *wa*, the adjunct marked by *ni* precedes the sigma, which makes a ‘X’-symbol necessary for representing the first valence of the bivalent particle *ni*.

- (14a) *kono kuruma ni wa kaasutereo ga aru*  
‘(Lit. There is a car stereo in this car.) = This car has a car stereo.’  
(as for in this car, a car stereo exists)

$$\begin{array}{l} \text{X} > [ni_1] > \text{wa} < \sum / \text{PR} \\ [ni_2]; \textit{kuruma} - \textit{kono} \mid \textit{kaa} \cap \textit{sutereo} = \textit{aru} \end{array}$$

- (14b) *watashi ni wa kuruma ga aru*  
 ‘(Lit. There is a car with me.) = I have a car.’  
 (as for with me, a car exists)

$$X > [ni_1] > wa < \sum / PR$$

$$[ni_2]; \textit{watashi} \mid \textit{kuruma} = \textit{aru}$$

Makino&Tutsui also point out that when the thing possessed in such cases is animate, it must be someone who has a very close relationship with the possessor, such as a family member, a relative or a friend; thus (15a) is acceptable, but (15b) is odd. When the idea indicates existence, as in (15c), this construction cannot be used.

- (15a) *watashi ni wa kodomo ga sannin aru*  
 ‘I have three children.’

$$X > [ni_1] > wa < \sum / PR$$

$$[ni_2]; \textit{watashi} \mid \textit{kodomo} / \textit{san} \cap \textit{nin} = \textit{aru}$$

- (15b) \**watashi ni wa untenshu ga aru*  
 ‘I have a chauffeur.’

- (15c) \**watashi ni wa haha ga moo arimasen*  
 ‘I don’t have my mother now.’

### 5.1.3 dative of direction, indicating the target or goal toward which someone or something moves

- (16) *watashi wa Rondon ni itta*  
 ‘I went to London.’

$$\textit{watashi} > wa < \sum / PA$$

$$X = \textit{iku} > [ni_1]$$

$$[ni_2]; \textit{Rondon}$$

- (17) *Jimu wa rainen Amerika ni kaeru*  
 ‘Jim is going back to America next year.’

$$\textit{Jimu} > wa < \sum / PR$$

$$X = \textit{kaeru} > [ni_1] > \textit{rai} \cap \textit{nen}$$

$$[ni_2]; \textit{Amerika}$$

- (18) *karera wa kado no resutoran ni haitta*  
 ‘They entered the restaurant around the corner.’

$$\begin{aligned}
 & kare \cup ra > wa < \sum / PA \\
 & X = hairu > [ni_1] \\
 & \quad [ni_2]; resutoran \downarrow \\
 & \quad \quad \quad - kado
 \end{aligned}$$

In example (19) from Kawashima (1999:121) initially two different descriptions were considered to be possible. The first description (a) is based on the analysis that *ni* expresses the location or target where *tegami* ‘a letter’ is destined to go to, as an adjunct to *kaku* ‘write’. The second analysis, i.e. to regard *otoosan* as an adjunct to *tegami*, would yield description (b). However, this latter description has been rejected, since it would entail the meaning: ‘I was writing a ‘to father’ letter’. In other words, the implication would be that I was writing a letter (of the kind) that was already addressed/written to father.

- (19) *boku wa otoosan ni tegami wo kaita*  
 ‘I wrote a letter to my father.’

(a)

$$\begin{aligned}
 & boku > wa < \sum / PA \\
 & X = [kaku_1] > [ni_1] \\
 & \quad [kaku_2]; tegami \mid [ni_2]; otoosan
 \end{aligned}$$

\*(b)

$$\begin{aligned}
 & boku > wa < \sum / PA \\
 & X = [kaku_1] \\
 & \quad [kaku_2]; tegami > [ni_1] \\
 & \quad \quad [ni_2]; otoosan
 \end{aligned}$$

#### 5.1.4 change of position (mutative-locative), the place where something ends up being, as a result of some action

- (20) *ueetoresu ga watashi no mae ni koohii wo oita* (Kenkyuusha shin-daijiten)  
 ‘The waitress put a cup of coffee in front of me.’

$$\begin{aligned}
 & \sum / PA \\
 & ueetoresu = [oku_1] > [ni_1] \\
 & \quad [oku_2]; koohii \mid [ni_2]; mae \downarrow \\
 & \quad \quad \quad - watashi
 \end{aligned}$$

- (21) *Hiroshima de shinkansen ni notta*  
 ‘I got on the *shinkansen* (bullet train) at Hiroshima.’

$$\sum / \text{PA}$$

$$X = \text{noru} > [ni_1] \quad > [de_1]$$

$$[ni_2]; \text{shinkansen} \mid [de_2]; \text{Hiroshima}$$

- (22) *kokuban ni e wo kaita*  
 ‘I drew a picture on the blackboard.’

a)

$$\sum / \text{PA}$$

$$X = [kaku_1] \quad > [ni_1]$$

$$[kaku_2]; e \mid [ni_2]; \text{kokuban}$$

It could be argued that for this last sentence, too, there is a second possible analysis, as expressed in description (b) with ‘NP *ni*’ as an adjunct to *e* ‘picture’. However, this analysis is not correct, since it would imply that what is being drawn is an ‘on the blackboard-picture’, whereas the true meaning is that a picture is drawn, which ends up being on the blackboard.

\*b)

$$\sum / \text{PA}$$

$$X = [kaku_1]$$

$$[kaku_2]; e > [ni_1]$$

$$[ni_2]; \text{kokuban}$$

- (23) *herikoputaa ga yama no ue ni orimashita*  
 ‘A helicopter landed on the top of the mountain.’

$$\sum / \text{POL} / \text{PA}$$

$$\text{herikoputaa} = \text{oru} > [ni_1]$$

$$[ni_2]; \text{ue} \downarrow$$

$$-\text{yama}$$

### 5.1.5 change of state (mutative), so as to be something new

Often used with the verbs *naru* ‘become’ and *suru* ‘to do/make’, as in the following examples by Jacobsen (1992:114). (see also the construction *to naru* in section 6.1.6)

- (24) *ii tenki ni natta*  
 ‘It’s turned into nice weather.’

$$\sum / \text{PA}$$

$$X = \text{naru} > [ni_1]$$

$$[ni_2]; \text{tenki} - ii$$

- (25) *Tanaka no musuko wa isha ni natta*  
 ‘Tanaka’s son became a doctor.’

$$\text{musuko} \downarrow > \text{wa} < \sum / \text{PA}$$

$$- \text{Tanaka} \mid X = \text{naru} > [ni_1]$$

$$[ni_2]; \text{isha}$$

- (26) *Tanaka wa musuko wo isha ni shita*  
 ‘Tanaka made his son into a doctor.’

$$\text{Tanaka} > \text{wa} < \sum / \text{PA}$$

$$X = [\text{suru}_1] > [ni_1]$$

$$[\text{suru}_2]; \text{musuko} \mid [ni_2]; \text{isha}$$

**5.1.6 purpose, ‘for’, ‘in order to’; is expressed by:**

- a) constructions with (*no*) *tame* (*ni*), as in the following examples from Makino&Tutsui (1995:448)

- (27) *gakusei wa shiken no tame ni benkyoo suru*  
 ‘Students study in preparation for exams.’

$$\text{gakusei} > \text{wa} < \sum / \text{PR}$$

$$X = \text{benkyoo} \cap \text{suru} > [ni_1]$$

$$[ni_2]; \text{tame} \downarrow$$

$$- \text{shiken}$$

- (28a) *watashi wa Nihon no koto wo shiru tame ni Nihon he iku*  
 ‘I’ll go to Japan (in order) to learn about Japan.’

$$\begin{array}{l}
 \textit{watashi} > \textit{wa} < \sum / \textit{PR} \\
 \text{X} = \textit{iku} > [\textit{he}_1] > [\textit{ni}_1] \\
 [\textit{he}_2]; \textit{Nihon} \mid [\textit{ni}_2]; \textit{tame} \downarrow \\
 - \sum / \textit{PR} \\
 \text{X} = [\textit{shiru}_1] \\
 [\textit{shiru}_2]; \textit{koto} \downarrow \\
 - \textit{Nihon}
 \end{array}$$

- (28b) *watashi wa Nihon no koto wo shiru tame Nihon he iku*  
 ‘I’ll go to Japan (in order) to learn about Japan.’

$$\begin{array}{l}
 \textit{watashi} > \textit{wa} < \sum / \textit{PR} \\
 \text{X} = \textit{iku} > [\textit{he}_1] > \textit{tame} \downarrow \\
 [\textit{he}_2]; \textit{Nihon} \mid - \sum / \textit{PR} \\
 \text{X} = [\textit{shiru}_1] \\
 [\textit{shiru}_2]; \textit{koto} \downarrow \\
 - \textit{Nihon}
 \end{array}$$

- b) *ni* after a verb in the infinitive form to express the purpose of an action when someone moves from one place to another

The sample sentences with this construction each contain one *ga* marked subject and two verbs. The analysis that the two verbs form one complex predicate cannot be maintained because of the fact that the verbs are separated by the bivalent particle *ni*. The first verb is in the conjunctive (infinitive) form and the last predicate of the sentence carries the final tense marking. This final verb is therefore analyzed as the main predicate, while the preceding verb is analyzed as the predicate of the subordinate clause; the particle *ni* connects the two situations. Since the subject word appears only once in the original sentence, it cannot be put twice into the mathematical description, therefore the symbol ‘X’ is used to represent the first valence of the verb in the subordinate clause.

- (29) *gakusei ga shitsumon wo shi ni kita*  
 ‘A student came to ask questions.’

$$\begin{aligned} & \sum / \text{PA} \\ \text{gakusei} &= \text{kuru} > [ni_1] \\ & [ni_2]; \sum / \text{INF} \\ \text{X} &= [\text{suru}_1] \\ & [\text{suru}_2]; \text{shitsumon} \end{aligned}$$

- (30) *boku wa sake wo nomi ni itta*  
 ‘I went (somewhere) to drink [sake].’

$$\begin{aligned} \text{boku} > \text{wa} < \sum / \text{PA} \\ \text{X} &= \text{iku} > [ni_1] \\ & [ni_2]; \sum / \text{INF} \\ \text{X} &= [\text{nomu}_1] \\ & [\text{nomu}_2]; \text{sake} \end{aligned}$$

### 5.1.7 manner, subject-adverbial

- (31) *nishi no sora ga kin-iro ni hikatte iru*  
 ‘The western sky is shining golden.’ (Martin, 2004:467)

$$\begin{aligned} & \sum / \text{PR} \\ \text{sora} \downarrow & = \text{iru} \supset \text{hikaru} > [ni_1] \\ - \text{nishi} \downarrow & [ni_2]; \text{kin} \cap \text{iro} \end{aligned}$$

### 5.1.8 numerative, meaning: ‘and (additionally)’; placed between two nouns creates a pair

- (32) *maiasa misoshiru ni gohan wo taberu*  
 ‘I eat *miso* soup and rice every morning.’ (Makino&Tutsui, 1995:475)

$$\begin{aligned} & \sum / \text{PR} \\ \text{X} &= [\text{taberu}_1] > \text{mai} \cap \text{asa} \\ & [\text{taberu}_2]; \text{gohan} > [ni_1] \\ & [ni_2]; \text{miso} \cap \text{shiru} \end{aligned}$$

### 5.1.9 dative of reference, ‘taking it as being (with reference to)’

- (33) *toshiyori ni wa muzukashii deshoo*  
 ‘For old people it is probably too hard.’ (Martin, 2004:41)

$$X > [ni_1] > wa < \sum / \text{POL} / \text{SUB} \\ [ni_2]; toshiyori \mid X = muzukashii$$

### 5.1.10 corelational mutative

- (34) *yuumei-jin wo yuujin ni motsu*  
 ‘[He] has a celebrity for a friend.’ (Martin, 2004:41)

$$\sum / \text{PR} \\ X = [motsu_1] > [ni_1] \\ [motsu_2]; yuumei \cap jin \mid [ni_2]; yuu \cap jin$$

### 5.1.11 the classification of “indirect object”

This function of *ni* proved to be a problematic one. In nearly all the sources that were studied, this function of *ni* is classified as marking the indirect object of a predicate, with *ni* in the function of a core case particle. Therefore, in the initial stages of this project occurrences of ‘NP *ni*’ that were commonly classified in this function were analyzed as the third valence of the predicate and *ni* itself was left out in the mathematical descriptions, similar to *ga* marking the first valence and *wo* denoting the second valence of a predicate.

This analysis seemed to be consistent with the description that Ebeling (2006:254) gives for “trivalent” predicates, as in his example (E104a) ‘Ik gaf mijn broer de boeken’ (I gave my brother the books); the three participants are analyzed as three valences of the verb. However, for his next example (E104b) ‘Ik gaf de boeken aan mijn broer’ (I gave the books to my brother), where the receiver is marked by a preposition, Ebeling gives a different analysis, namely, only two participants, ‘ik’ and ‘boeken’, are described as valences of the verb ‘geven’, whereas the third participant ‘mijn broer’ is analyzed as the second valence of the bivalent preposition ‘aan’. In Japanese such a distinction between two kinds of constructions with verbs of giving cannot be made. There are no prepositions in Japanese and the postpositions or particles in such constructions cannot be omitted, the receiver is always marked by *ni*. Therefore, when choosing between Ebeling’s two constructions as quoted above, certainly the latter would be the logical one to compare the Japanese constructions with.

Moreover, in the course of studying the arguments that were given for analyzing noun phrases as indirect objects in Japanese, it became more and more clear to me that the denotation of *ni* as marking the third valence of the predicate is one that was difficult to maintain and in the end this classification was completely rejected. Instead it was decided to analyze *ni* in all its occurrences as a bivalent particle marking an adjunct. As a result of this decision a two-way analysis for ‘NP *ni*’, viz. in some occurrences as the third valence of the predicate and for other cases as an adjunct with the bivalent particle *ni*, could be avoided and the rule ‘one form, one meaning’ can be maintained. Further arguments for this choice will be



given here below while discussing example sentences and comments from various sources. In the cases where at first two semantic descriptions seemed to be possible, both will be given together with the reasons for the ultimate choice for the one over the other; the descriptions that have been rejected are marked by an asterisk.

Of the sources that were studied on this subject, Bloch (1970:53) is the only linguist who made no reference to indirect objects in Japanese; he gave no other classification for the particle *ni* than that of a ‘referent particle’ which can have ‘a great variety of meanings’.

Kaiser et al.(2001:564) define valence as a term referring to how many obligatory arguments a predicate takes and classifies verbs in three categories, namely, a ‘one-place V’ (usually intransitive, taking just one obligatory NP), a ‘two-place V’ (usually transitive, taking two NP’s) and a ‘three-place V’ (sometimes called ditransitive, taking three NP’s). This last category of verbs is presented as the one that refers to an indirect object. The only examples of ‘three-place verbs’ that Kaiser et al. give are *ageru* and other verbs of giving. Martin (2004:191) analyzes several verbs that can relate to indirect objects, stating that: “Verbs that express giving, sending, imparting of information, showing, etc., imply the designation of a ‘recipient’ or ‘beneficiary’, usually marked by *ni*.” Martin lists the verbs that have such a dative valence as: *yaru/ageru/kureru/kudasaru* ‘give’, *okuru* ‘send’, *kasu* ‘lend’, *uru* ‘sell’, *dasu* ‘pay’, *miseru* ‘show’, *shimesu* ‘reveal’, *oshieru* ‘instruct’, *iu* ‘say’, *tsutaeru* ‘transmit, pass on’, *hanasu* ‘speak to’, and *chuumon-suru* ‘order’. Along the same line, Makino&Tutsui (1995:292, 303) categorize the following examples as belonging to this category of *ni* as an indirect object marker remarking that: “The verb is typically transitive and is related to an action that involves something that can be transferred from one person to another”.

Consistent with these classifications initially the mathematical descriptions (a) were construed for the following sentences. However, as will be explained here below, in a later stage of this research the analyses have led to a different conclusion and ultimately the description (b) was preferred for all these cases.

For Makino&Tutsui’s first example sentences (35-38), their own conditions and those of Kaiser et al. are clearly met, and the predicates concerned also appear on Martin’s list.

(35) *chichi wa boku ni tokei wo kureta*  
 ‘My father gave me a watch.’

\*a)

$$\begin{aligned}
 \text{chichi} > \text{wa} < \sum / \text{PA} \\
 \text{X} &= [\text{kureru}_1] \\
 &[\text{kureru}_2]; \text{tokei} \\
 &[\text{kureru}_3]; \text{boku}
 \end{aligned}$$

b)

$$\begin{aligned}
 \text{chichi} > \text{wa} < \sum / \text{PA} \\
 \text{X} &= [\text{kureru}_1] > [\text{ni}_1] \\
 &[\text{kureru}_2]; \text{tokei} \mid [\text{ni}_2]; \text{boku}
 \end{aligned}$$

(36) *Katoo-sensei wa amerikajin no gakusei ni nihonbungaku wo oshiete iru*  
 ‘Prof. Kato is teaching Japanese literature to American students.’

\*a)

$Katoo \cap sensei > wa < \sum / PR$

$X = iru \supset [oshieru_1]$   
 $[oshieru_2]; nihon \cap bungaku$   
 $[oshieru_3]; gakusei \downarrow$   
 – Amerika  $\cap$  jin

b)

$Katoo \cap sensei > wa < \sum / PR$

$X = iru \supset [oshieru_1] > [ni_1]$   
 $[oshieru_2]; nihon \cap bungaku \mid [ni_2]; gakusei \downarrow$   
 – Amerika  $\cap$  jin

(37) *Ookawa-sensei wa gakusei ni iroiro na jisho wo miseta*  
 ‘Prof. Okawa showed various dictionaries to his students.’

\*a)

$Ookawa \cap sensei > wa < \sum / PA$

$X = [miseru_1]$   
 $[miseru_2]; jisho - Y$   
 $[miseru_3]; gakusei \mid iro \bullet iro$

b)

$Ookawa \cap sensei > wa < \sum / PA$

$X = [miseru_1] > [ni_1]$   
 $[miseru_2]; jisho - Y \mid [ni_2]; gakusei$   
 $iro \bullet iro$

(38) *Taroo wa Hanako ni hon wo kashita*  
 ‘Taro lent a book to Hanako.’

\*a)

$Taroo > wa < \sum / PA$

$X = [kasu_1]$   
 $[kasu_2]; hon$   
 $[kasu_3]; Hanako$

b)

$Taroo > wa < \sum / PA$

$X = [kasu_1] > [ni_1]$   
 $[kasu_2]; hon \mid [ni_2]; Hanako$

For the next example (39) that Makino&Tutsui give in this category, the analysis of the noun phrase marked by *ni* as an indirect object is more problematic; this particular predicate *denwa suru* is not included in Martin’s classification although he does include the verbs *iu* and *hanasu*, which are similar in meaning. Kaiser et al.’s condition that three obligatory arguments are necessary for the predicate (assuming that *denwa-suru* is the shorter version of *denwa wo suru*) is met, but Makino&Tutsui’s definition for the direct object as being “something that can be transferred from one person to another” seems difficult to maintain in this case. The *denwa* ‘telephone conversation’ can be regarded as a mutual exchange rather than as something being “transferred” from the ‘giver’ to the ‘receiver’, which would imply that it moves from one place to another. This is clearly not the case, and the fact that the particle *ni* can be replaced by *to* in this sentence is another indication that analyzing *Imai-san* as an indirect object is not correct.

(39) *Imai-san ni denwa shimashita ga imasen deshita*  
 ‘(I) called Mr. Imai, but he wasn’t there.’

\*a)

$$\begin{array}{l} \sum / \text{POL} / \text{PA} > \text{ga} < \sum / \text{POL} / \text{NON} / \text{PA} \\ X = [\text{denwa} \cap \text{suru}_1] \quad | \quad X = \text{iru} \\ [\text{denwa} \cap \text{suru}_3]; \text{Imai} \cup \text{san} \end{array}$$

b)

$$\begin{array}{l} \sum / \text{POL} / \text{PA} > \text{ga} < \sum / \text{POL} / \text{NON} / \text{PA} \\ X = \text{denwa} \cap \text{suru} > [ni_1] \quad | \quad X = \text{iru} \\ [ni_2]; \text{Imai} \cup \text{san} \end{array}$$

By the same arguments the denotation of the verbs *iu* and *hanasu* as occurring with an indirect object marked by *ni*, as classified by Martin, is rejected. Furthermore, the noun phrases marked by *ni*, which Martin terms: “the dative of contact or confrontation”, with verbs such as *au* ‘meet’, *butsukaru* ‘collide’, *hanasu* ‘speak’, and *soodan suru* ‘consult’, are all analyzed with the mathematical description (b). These ‘three-way’ verbs can also appear with noun phrases marked by *to*; the difference in meaning is generally considered to be that the use of *to* indicates that both persons concerned in the action are moving toward each other, while the use of the particle *ni* indicates that only one person, i.e. the initiator of the action, is moving in the direction of the other. This is consistent with what Martin (2004:203) writes: “Intransitive verbs that refer to meeting or coming in contact (such as *au*) seem to have two grammars, one involving a dative of confrontation (*ni*), and the other a subject-reciprocal (*to*)”. Examples of this difference between ‘NP *ni*’ and ‘NP *to*’ will be given in section 6.1.

There is another category of verbs, which seem to comply with the definition of “ditransitivity”, i.e. verbs expressing receiving, such as *morau* and *itadaku*, which are transitive and, like the verbs of giving, also need three arguments for their meaning to be understood. When there is a ‘receiver’, there must also be a ‘giver’, whether expressed or not. Nevertheless none of the sources quoted in this section include these Japanese verbs of receiving in the category of verbs that may refer to indirect objects. Maybe this is due to the fact that a comparison was made with the English constructions with verbs of receiving,

where the ‘giver’ is always preceded by a preposition, contrary to the ‘receiver’ in constructions with the verbs of giving, who may appear with or without a preposition. Yet, in Japanese such a difference between the constructions of verbs of giving and verbs of receiving does not exist. When analyzing the following example sentences (40) and (41) of Makino&Tutsui (1995:293) with the predicates *morau* and *narau*, two possible descriptions could be construed in the same way as for the sentences (35-38); the only difference seems to be that in the following sentences the ‘indirect object’ is not the ‘receiver’, but the ‘giver’ (agent or source).

(40) *Bobu wa Mearii ni kippu wo moratta*  
 ‘Bob received a ticket from Mary.’

\*a)

$$Bobu > wa < \sum / PA$$

$$X = [morau_1]$$

$$[morau_2]; kippu$$

$$[morau_3]; Mearii$$

b)

$$Bobu > wa < \sum / PA$$

$$X = [morau_1] > [ni_1]$$

$$[morau_2]; kippu | [ni_2]; Mearii$$

(41) *Jeen wa Yamano-sensei ni ikebana wo naratta*  
 ‘Jane took lessons in flower arranging from Mrs. Yamano.’

\*a)

$$Jeen > wa < \sum / PA$$

$$X = [narau_1]$$

$$[narau_2]; ikebana$$

$$[narau_3]; Yamano \cup sensei$$

b)

$$Jeen > wa < \sum / PA$$

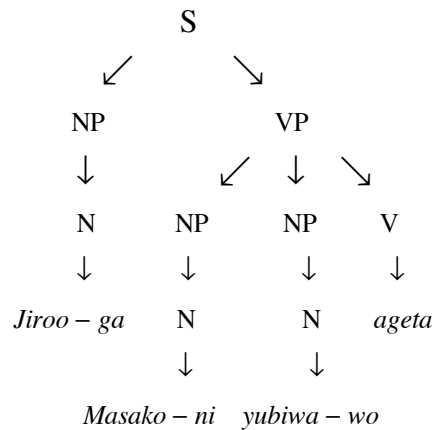
$$X = [narau_1] > [ni_1]$$

$$[narau_2]; ikebana | [ni_2]; Yamano \cup sensei$$

A comparison between the mathematical description (b) as proposed in this present study and the (a) description as given by Tsujimura (1996:168) for her example sentence (42), clearly demonstrates a fundamental difference of opinion. Tsujimura classifies *ni* as a case particle, which is part of the node, whereas in my description *ni* is classified as a (bivalent) peripheral case particle, which in Tsujimura’s terms and methodology would be a postposition and would be depicted by description (c).

(42) *Jiroo ga Masako ni yubiwa wo ageta*  
 ‘Jiro gave Masako a ring.’

a)



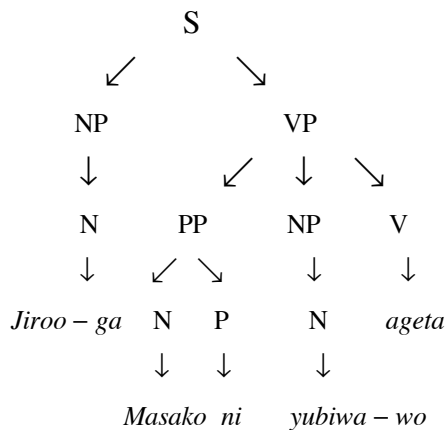
b)

$$\sum /PA$$

$$Jiroo = [ageru_1] > [ni_1]$$

$$[ageru_2]; yubiwa \mid [ni_2]; Masako$$

c)



All things considered, I have come to the conclusion that the arguments for the designation of ‘NP *ni*’ as an indirect object proved to be weak and subjective. Arguments for analyzing some predicates as being ‘trivalent’, or ‘ditransitive’, excluding others, were found to be inconsistent and unconvincing. Too many of these arguments seem to be based on a comparison of the Japanese sentences with their English counterparts and to be based on the English translations rather than on the original Japanese sentences. The semantic analyses as proposed here, which are based purely on the original Japanese sentences, have led to the final decision to use one mathematical description for all the occurrences of ‘NP *ni*’.

## 5.2 The instrumental particle *de*

The occurrences of the particle *de* marking instrument, means, material, location, time, cause or reason, will all be analyzed in this section. The function of the instrumental particle *de* is analyzed in the same way as has been described for the particle *ni* in section 5.1. This is consistent with the fact that these two particles share the same function, namely, they are both bivalent particles marking an adjunct, albeit with a difference in meaning. This semantic difference must remain to be determinable, which is the reason why these particles cannot be omitted from the mathematical descriptions.

The various meanings of ‘NP *de*’ will be explained while following the classification of Martin (2004:42-44) and analyzing a number of example sentences of Kuno (1973:96-102), Makino&Tutsui (1995:105-111), Kawashima (1999:18), Takeuchi (1999:146), and Masuda (2002:32, 38).

**5.2.1 means**, the use of something for doing something; this can be an instrument, a vehicular means, a means of communication, etc.

- (1) *nihonjin wa hashi de gohan wo taberu*  
 ‘Japanese people eat rice with chopsticks.’

$$\begin{aligned} & nihon \cap jin > wa < \sum / PR \\ & X = [taberu_1] > [de_1] \\ & [taberu_2]; gohan \mid [de_2]; hashi \end{aligned}$$

- (2) *watashi wa kono hon wo juudoru de katta*  
 ‘I bought this book for ten dollars.’

$$\begin{aligned} & watashi > wa < \sum / PA \\ & X = [kau_1] > [de_1] \\ & [kau_2]; hon - kono \mid [de_2]; juu \cap doru \end{aligned}$$

- (3) *watashitachi wa nihongo de hanashita*  
 ‘We talked in Japanese.’

$$\begin{aligned} & watashi \cup tachi > wa < \sum / PA \\ & X = hanasu > [de_1] \\ & [de_2]; nihon \cap go \end{aligned}$$

- (4) *watashi wa sono eiga wo terebi de mimashita*  
 ‘I saw the movie on TV.’

$$\begin{aligned}
 \textit{watashi} > \textit{wa} < \sum / \text{POL} / \text{PA} \\
 \text{X} = [\textit{miru}_1] > [\textit{de}_1] \\
 [\textit{miru}_2]; \textit{eiga} - \textit{sono} \mid [\textit{de}_2]; \textit{terebi}
 \end{aligned}$$

In the example sentences (5a) and (5b) the influence of the word order on the meaning can clearly be observed. Each of the two sentences contains two adjuncts, one adjunct marked by the particle *de* expressing the means or tool that is used to perform the action, and the other marked by *ni* expressing the direction or goal of the action. Since in Japanese the word order is ‘free’ in the sense that the placement of adjuncts can vary and it has already been argued that such a variation entails a difference in meaning, these variations in word order have been maintained in the descriptions. The adjunct that is closest to the predicate in the sentence is put first in the description, with the other adjunct(s) following it. The difference in meaning between (5a) and (5b) is that in the first sentence the ‘going to the office’ is done ‘by bus’, whereas in the latter case the ‘going by bus’ has the direction or goal ‘to the office’.

- (5a) *Miyamoto-san wa mainichi basu de kaisha he iku*  
 ‘Mr. Miyamoto goes to his company by bus everyday.’

$$\begin{aligned}
 \textit{Miyamoto} \cup \textit{san} > \textit{wa} < \sum / \text{PR} \\
 \text{X} = \textit{iku} > [\textit{he}_1] > [\textit{de}_1] > \textit{mai} \cap \textit{nichi} \\
 [\textit{he}_2]; \textit{kaisha} \mid [\textit{de}_2]; \textit{basu}
 \end{aligned}$$

- (5b) *Miyamoto-san wa mainichi kaisha he basu de iku*  
 ‘Mr. Miyamoto goes by bus to his company everyday.’

$$\begin{aligned}
 \textit{Miyamoto} \cup \textit{san} > \textit{wa} < \sum / \text{PR} \\
 \text{X} = \textit{iku} > [\textit{de}_1] > [\textit{he}_1] > \textit{mai} \cap \textit{nichi} \\
 [\textit{de}_2]; \textit{basu} \mid [\textit{he}_2]; \textit{kaisha}
 \end{aligned}$$

### 5.2.2 material, what something is made (out) of

- (6) *toofu wa daizu de tsukurimasu*  
 ‘We make *tofu* from soybeans.’

$$\begin{aligned}
 \textit{toofu} > \textit{wa} < \sum / \text{POL} / \text{PR} \\
 \text{X} = \textit{tsukuru} > [\textit{de}_1] \\
 [\textit{de}_2]; \textit{daizu}
 \end{aligned}$$

This sentence (6) is a good example of the fact that the noun phrase marked by *wa* is not always the subject of the predicate that follows. In this case, therefore, ‘X’ does not refer back to *tofu*, but to a subject that is not mentioned.

- (7) *watashi wa keito de kutsushita wo anda*  
‘I knit socks with wool.’

$$\begin{aligned} \text{watashi} > \text{wa} < \sum / \text{PA} \\ \text{X} = [\text{amu}_1] & > [\text{de}_1] \\ & [\text{amu}_2]; \text{kutsushita} \mid [\text{de}_2]; \text{keito} \end{aligned}$$

### 5.2.3 general locative of place, dynamic location

- (8) *Yuriko wa depaato de hataraite imasu*  
‘Yuriko is working at a department store.’

$$\begin{aligned} \text{Yuriko} > \text{wa} < \sum / \text{POL} / \text{PR} \\ \text{X} = \text{iru} \supset \text{hataraku} > [\text{de}_1] \\ & [\text{de}_2]; \text{depaato} \end{aligned}$$

Makino&Tutsui point out that the particle *de* cannot be used for location of existence, in which case *ni* is used instead:

- (9) *Hiru-san wa ima Jonson-san no apaato ni (\*de) imasu*  
‘Mr. Hill is at Mr. Johnson’s apartment now.’

$$\begin{aligned} \text{Hiru} \cup \text{san} > \text{wa} < \sum / \text{POL} / \text{PR} \\ \text{X} = \text{iru} > [\text{ni}_1] > \text{ima} \\ & [\text{ni}_2]; \text{apaato} \downarrow \\ & \quad \quad \quad - \text{Jonson} \cup \text{san} \end{aligned}$$

However, when the existential verb *aru* (for inanimate things) occurs with an event, *de* is used:

- (10) *konban Jimu no ie de paatii ga arimasu*  
‘There’s a party at Jim’s tonight.’

$$\begin{aligned} & \sum / \text{POL} / \text{PR} \\ \text{paatii} = \text{aru} > [\text{de}_1] > \text{konban} \\ & [\text{de}_2]; \text{ie} \downarrow \\ & \quad \quad \quad - \text{Jimu} \end{aligned}$$

- (11) *kinoo kono heya de Puraisu-sensei no kooen ga atta*  
‘We had Prof. Price’s lecture in this room yesterday.’

$$\begin{aligned} & \sum / \text{PA} \\ \text{kooen} \downarrow & = \text{aru} > [\text{de}_1] > \text{kinoo} \\ - \text{Puraisu} \cup \text{sensei} \mid & [\text{de}_2]; \text{heya} - \text{kono} \end{aligned}$$



It has already been pointed out in previous sections that the particles *wo*, *ni* and *de* can all be used to denote a location. In order to demonstrate the differences in meaning between the adjuncts of place marked by these three particles, a number of example sentences from various sources will be compared here below.

Kuno (1973:96-102) defines the differences between *ni*, *de* and *wo* in this respect as follows:

- ‘NP *wo*’ indicates that the motion designated by the verb takes place covering the entire dimension (or the major portion thereof) of the NP, continuously and unidirectionally
- ‘NP *ni*’ indicates that the NP is the goal of the motion designated by the verb
- ‘NP *de*’ indicates that the motion designated by the verb takes place in a location or locations within the dimension of the NP, not necessarily continuously or unidirectionally

To illustrate this view, Kuno gives the following examples:

- (12a) *michi wo aruku*  
 ‘to walk along the street’

$$\begin{array}{l} \sum / \text{PR} \\ X = [\textit{aruku}_1] \\ \quad [\textit{aruku}_2]; \textit{michi} \end{array}$$

- (12b) *michi ni aruku*  
 ‘to walk to the street’

$$\begin{array}{l} \sum / \text{PR} \\ X = \textit{aruku} > [\textit{ni}_1] \\ \quad [\textit{ni}_2]; \textit{michi} \end{array}$$

- (12c) *michi de aruku*  
 ‘to walk on the street (probably back and forth, and across)’

$$\begin{array}{l} \sum / \text{PR} \\ X = \textit{aruku} > [\textit{de}_1] \\ \quad [\textit{de}_2]; \textit{michi} \end{array}$$

The mathematical descriptions of these sentences clearly show the difference in function between the accusative particle *wo*, marking the direct object or second valence of the verb, and the bivalent particles *ni* and *de* who share the same function of denoting adjuncts, although with a semantic difference. Kuno’s next examples show the same differences in function and meaning between the three particles:

*sora wo tobu*  
 ‘to fly through the sky’

*rooka wo hashiru*  
 ‘to run along the hallway for some distance’

*sora ni tobu*  
 ‘to fly to the sky’

*rooka ni hashiru*  
 ‘to run to the hallway, probably from inside the room’

*sora de tobu*  
‘to fly in the sky’

*rooka de hashiru*  
‘to run in the hallway, not necessarily along the hallway for some distance’

For the following examples Kuno explains that in sentence (13a) the mountain is the goal of ‘climbing’ and it is not the case that the movement of climbing has covered the whole dimension of the mountain, therefore, *yama wo* cannot be used; whereas in (13b) both *yama ni* and *yama wo* are acceptable because the mountain is the goal of ‘climbing’, but the motion of climbing has also covered the whole dimension of the mountain.

(13a) *herikoputaa de yama ni nobotta*  
‘I climbed (to the top of) the mountain by helicopter.’

$$\begin{array}{l} \sum / \text{PA} \\ X = \text{noboru} > [ni_1] > [de_1] \\ [ni_2]; yama \mid [de_2]; \text{herikoputaa} \end{array}$$

(13b) *jiipu de yama wo nobotta*  
‘I climbed the mountain by Jeep.’

$$\begin{array}{l} \sum / \text{PA} \\ X = [\text{noboru}_1] > [de_1] \\ [\text{noboru}_2]; yama \mid [de_2]; \text{jiipu} \end{array}$$

Makino&Tutsui (1995:296) give the following examples to show the differences between *ni* and *de*; in (14a) the use of *ni* indicates ‘direct contact’, whereas the particle *de* in (14b) indicates a location in which the action takes place:

(14a) *michi ni e wo kaita*  
‘I drew a picture on the street.’  
(The picture is drawn on the surface of the street)

$$\begin{array}{l} \sum / \text{PA} \\ X = [\text{kaku}_1] > [ni_1] \\ [\text{kaku}_2]; e \mid [ni_2]; \text{michi} \end{array}$$

(14b) *michi de e wo kaita*  
‘I drew a picture in the street.’  
(The street is the location where the action of drawing takes place)

$$\begin{array}{l} \sum / \text{PA} \\ X = [\text{kaku}_1] > [de_1] \\ [\text{kaku}_2]; e \mid [de_2]; \text{michi} \end{array}$$

Kawashima's next examples (1999:18) also demonstrate that *de* indicates where the action takes place, whereas *ni* indicates the direction of the action:

- (15a) *ofisu de denwa wo kakeru*  
'(I) make a call at the office.'

$$\begin{array}{l} \sum / \text{PR} \\ X = [kakeru_1] > [de_1] \\ [kakeru_2]; denwa \mid [de_2]; ofisu \end{array}$$

- (15b) *ofisu ni denwa wo kakeru*  
'(I) telephone the office.'

$$\begin{array}{l} \sum / \text{PR} \\ X = [kakeru_1] > [ni_1] \\ [kakeru_2]; denwa \mid [ni_2]; ofisu \end{array}$$

In order to explain the difference between locative adjuncts that are encoded by *de* or by *ni*, Takeuchi (1999:146) quotes the following example sentences, pointing out that a locative adjunct is encoded by *de*, if not contingent on any locative feature of the predicate, e.g. *Nihon de* 'in Japan', as opposed to the final locative *hanarejima ni* 'in/to isolated islands' with a dynamic final locative predicate in (16a), and in (16b) the stative locative predicate, implied by (16a). Because of the presence of the topical particle *wa* in (16a), the place adjunct *Nihon de* is placed before the sigma in the description of this sentence, necessitating an extra symbol 'X' to connect to the first valence of *de*. In the description of (16b) the adjunct standing closest to the predicate, *hanarejima ni*, is placed directly behind the predicate with the other place adjunct *Nihon de* following it.

- (16a) *Nihon de wa mukashi zainin wo hanarejima ni nagashita*  
'In Japan long ago they exiled offenders to isolated islands.'

$$\begin{array}{l} X > [de_1] > wa < \sum / \text{PA} \\ [de_2]; Nihon \mid X = [nagasu_1] > [ni_1] > mukashi \\ [nagasu_2]; zainin \mid [ni_2]; hanare \cap jima \end{array}$$

- (16b) *mukashi Nihon de runin ga oozei hanarejima ni ita*  
'Long ago in Japan there were many exiles in isolated islands.'

$$\begin{array}{l} \sum / \text{PA} \\ runin = iru > [ni_1] > oozei > [de_1] > mukashi \\ [ni_2]; hanare \cap jima \mid [de_2]; Nihon \end{array}$$

Takeuchi also explains that transversal verbs which entail no locative implication beyond the duration of the action regularly construct with *de*, as in sentence (17), where nothing about where the mermaids rested when they stopped swimming is implied.

- (17) *ningyohime wa umi de oyoida*  
 ‘The mermaids swam in the sea.’

$$\begin{aligned} & \text{ningyo} \cap \text{hime} > \text{wa} < \sum / \text{PA} \\ & \text{X} = \text{oyogu} > [de_1] \\ & [de_2]; \text{umi} \end{aligned}$$

Furthermore, Takeuchi points out that sometimes *de* and *ni* alternate depending on the locative implications: for the occurrence with *ni* the final location is implied, as in (18), which implies (19). If, however, snowing is perceived as a locatively indeterminate event, *de* is used, as in (20). Although *san* in *Fuji-san* is not the same word as the title suffix *-san*, but is the Sino reading for mountain (Jap. *yama*), the combination *Fuji-san* ‘Mount Fuji’ gets the same notation with the reversed close knitting symbol as the ‘noun + title’-combination, since in this case the speaker/writer is referring to one particular mountain by name.

- (18) *Fuji-san no choojoo ni yuki ga futta*  
 ‘It snowed/snow fell on the top of Mount Fuji.’

$$\begin{aligned} & \sum / \text{PA} \\ & \text{yuki} = \text{furu} > [ni_1] \\ & [ni_2]; \text{choojoo} \downarrow \\ & \quad \quad \quad - \text{Fuji} \cup \text{san} \end{aligned}$$

- (19) *Fuji-san no choojoo ni yuki ga aru*  
 ‘There is snow on the peak of Mount Fuji’.

$$\begin{aligned} & \sum / \text{PR} \\ & \text{yuki} = \text{aru} > [ni_1] \\ & [ni_2]; \text{choojoo} \downarrow \\ & \quad \quad \quad - \text{Fuji} \cup \text{san} \end{aligned}$$

- (20) *kinoo yama de wa ooyuki ga futta*  
 ‘Yesterday in the mountains, there was heavy snowfall.’

$$\begin{aligned} & \text{kinoo} < \text{X} > [de_1] > \text{wa} < \sum / \text{PA} \\ & [de_2]; \text{yama} \cap \text{oo} \cap \text{yuki} = \text{furu} \end{aligned}$$

Masuda (2002:32, 38) quotes the following examples to explain the difference between *ni* and *de*:

- (21a) *kono heya ni piano ga aru* (space + thing, spatial location)  
 ‘There is a piano in this room.’

$$\begin{array}{l} \sum / \text{PR} \\ \text{piano} = \text{aru} > [ni_1] \\ [ni_2]; \text{heya} - \text{kono} \end{array}$$

- (21b) *kono heya de kaigi ga aru* (space + event, temporal location)  
 ‘There is a meeting in this room.’

$$\begin{array}{l} \sum / \text{PR} \\ \text{kaigi} = \text{aru} > [de_1] \\ [de_2]; \text{heya} - \text{kono} \end{array}$$

Masuda explains that in sentence (22) *daigaku byooin* ‘the university hospital’ marked by *de* means the concrete place (building) where Taro was born. In example (23b), too, *ie* ‘the house’ is the concrete place (building) where Taro’s birth happened, whereas in (23a), as a result of the fact that the place *adjunct* is marked by *ni*, the meaning of *ie* is not a building but ‘the family’ that Taro was born into.

- (22) *Taroo wa daigaku byooin de umareta*  
 ‘Taro was born in a university hospital.’

$$\begin{array}{l} \text{Taroo} > \text{wa} < \sum / \text{PA} \\ \text{X} = \text{umareru} > [de_1] \\ [de_2]; \text{daigaku} \cap \text{byooin} \end{array}$$

- (23a) *Fukuzawa Yukichi wa bushi no ie ni umareta*  
 ‘Fukuzawa Yukichi was born into a samurai family.’

$$\begin{array}{l} \text{Fukuzawa} \cdot \text{Yukichi} > \text{wa} < \sum / \text{PA} \\ \text{X} = \text{umareru} > [ni_1] \\ [ni_2]; \text{ie} \downarrow \\ - \text{bushi} \end{array}$$

- (23b) *Fukuzawa Yukichi wa bushi no ie de umareta*  
 ‘Fukuzawa Yukichi was born in the house of a samurai.’

$$\begin{aligned}
 & \text{Fukuzawa} \cdot \text{Yukichi} > \text{wa} < \sum / \text{PA} \\
 & \text{X} = \text{umareru} > [de_1] \\
 & \quad [de_2]; ie \downarrow \\
 & \quad \quad \quad - \text{bushi}
 \end{aligned}$$

#### 5.2.4 impersonal (group) subject or exclusive agent

According to Martin (2004:43), in this category *de* is used more frequently than *ga* when the subject is an institution or a moral entity.

- (24) *Ano mise de kookoku wo dashite imasu*  
 ‘That shop is putting out ads.’

$$\begin{aligned}
 & \sum / \text{POL} / \text{PR} \\
 & \text{X} = \text{iru} \supset [dasu_1] > [de_1] \\
 & \quad [dasu_2]; kookoku \mid [de_2]; \text{mise} - \text{ano}
 \end{aligned}$$

- (25) *minna de ikoo*  
 ‘Let’s all go together.’

$$\begin{aligned}
 & \sum / \text{OPT} \\
 & \text{X} = \text{iku} > [de_1] \\
 & \quad [de_2]; \text{minna}
 \end{aligned}$$

For this last example there is another possible analysis, namely, that it is being suggested that the ‘going’ should only take place when ‘all are being (together)’; in that case *de* is the gerund form of the copula *da/desu*, which would yield the following description:

$$\begin{aligned}
 & \sum / \text{GER} \subset \sum / \text{OPT} \\
 & \text{X} = \text{minna} \mid \text{X} = \text{iku}
 \end{aligned}$$

#### 5.2.5 within or by a time or limit, indicating the time when something terminates or the amount of time of a period of activity

- (26) *harugakki wa gogatsu tooka de owaru*  
 ‘The spring term ends on May 10.’

$$\begin{aligned}
 & \text{haru} \cap \text{gakki} > \text{wa} < \sum / \text{PR} \\
 & \text{X} = \text{owaru} > [de_1] > \text{go} \cap \text{gatsu} \\
 & \quad [de_2]; \text{too} \cap \text{ka}
 \end{aligned}$$

In this sentence (26) *gogatsu* is analyzed as the general time expression, referring to the whole situation, while *tooka* is considered to be the more specific time adjunct, relating directly to the predicate. In the following sentence (27), however, a similar time adjunct, *rokugatsu*, is the only time expression; it is marked by a particle and relates directly to the predicate.

- (27) *watashi no pasupooto wa rokugatsu de kireru*  
 ‘My passport expires in June.’

$$\begin{aligned}
 \textit{pasupooto} \downarrow > \textit{wa} &< \sum / \text{PR} \\
 - \textit{watashi} \mid X = \textit{kireru} &> [de_1] \\
 &[de_2]; \textit{roku} \cap \textit{gatsu}
 \end{aligned}$$

**5.2.6 cause or reason**, indicating a weak causal relationship; the noun phrase preceding *de* commonly expresses something that is beyond human control (such as illness, accident, rain or fire)

Makino&Tutsui write that the particle *de* in the following examples is apparently derived from the *te*-form of the copula *desu* and indicates a weak causal relationship. For each of these sentences two descriptions are given, (a) for the analysis of *de* as a particle and (b) for *de* as a gerund form of the copula. When the subject of the first part of the sentence is also the subject of the predicate, as is the case in example (28), analyzing *de* as a gerund is the more likely choice and the meaning could be described as: ‘be ~ and’, description (b). However, for the sentences (29) en (30) the descriptions (a) with *de* as a bivalent particle are preferred, since in (29) the situation ‘being eggs’ is not considered to be referring to the situation ‘become allergic’ and in sentence (30) the subject of ‘being a traffic accident’ is not the same as the subject of ‘was hospitalized’.

- (28) *Yamaguchi-san wa byooki de gakkoo wo yasunda*

- a) ‘Because Mr. Yamaguchi was ill, he didn’t come to school.’  
 (as for Mr. Yamaguchi, because of illness [he] was absent from school)

$$\begin{aligned}
 \textit{Yamaguchi} \cup \textit{san} > \textit{wa} &< \sum / \text{PA} \\
 X = [\textit{yasumu}_1] &> [de_1] \\
 &[\textit{yasumu}_2]; \textit{gakkoo} \mid [de_2]; \textit{byooki}
 \end{aligned}$$

- b) ‘Mr. Yamaguchi was ill, and absented himself from school.’  
 (as for Mr. Yamaguchi, being ill, [he] was absent from school)

$$\begin{aligned}
 \textit{Yamaguchi} \cup \textit{san} > \textit{wa} &< \sum / \text{GER} \subset \sum / \text{PA} \\
 X = \textit{byooki} \mid X = &[\textit{yasumu}_1] \\
 &[\textit{yasumu}_2]; \textit{gakkoo}
 \end{aligned}$$

(29) *tamago de arerugii ni naru*  
 ‘I’m allergic to eggs.’

a) (because of the eggs [I] become allergic)

$$\sum / \text{PR}$$

$$X = naru > [ni_1] > [de_1]$$

$$[ni_2]; arerugii \mid [de_2]; tamago$$

\*b) ([it] being eggs, [I] become allergic)

$$\sum / \text{GER} \subset \sum / \text{PR}$$

$$X = tamago \mid X = naru > [ni_1]$$

$$[ni_2]; arerugii$$

(30) *chichi wa kootsuujiko de nyuuin-shimashita*  
 ‘My father was hospitalized due to a traffic accident.’

a) (as for my father, because of a traffic accident [he] was hospitalized)

$$chichi > wa < \sum / \text{POL} / \text{PA}$$

$$X = nyuuin \cap suru > [de_1]$$

$$[de_2]; kootsuu \cap jiko$$

\*b) (as for my father, [it] being a traffic accident, [he] was hospitalized)

$$chichi > wa < \sum / \text{GER} \subset \sum / \text{POL} / \text{PA}$$

$$X = kootsuu \cap jiko \mid X = nyuuin \cap suru$$



### 5.3 The directive particle *he*

The particle *he* has only one function, namely, to indicate the direction toward which some directional movement or action proceeds. In all its occurrences *he* is analyzed as a bivalent particle marking an adjunct of place and as such gets the same description as the particles *ni* and *de* in this function.

Makino&Tutsui (1995: 116) and Martin (2004:207) state that the difference between the particles *ni* and *he* is that, generally speaking, *he* focuses more on the direction of a movement or action, whereas *ni* is considered to imply the ‘direction to’ as well as the ‘arrival at’ or ‘contact with’ the target or destination. However, as Makino&Tutsui point out, this difference between *ni* and *he* is often neglected by native speakers, who use *he* and *ni* for the point of contact interchangeably, except for the cases where the particle *no* directly follows, as in example (6). Kawashima (1999:32-33) classifies the use of the particle *he* into four categories; this classification that is quoted here, except for the fourth category, the combination *tokoro he*, which will be described in section 13.4.2.

#### 5.3.1 *he* indicating the **direction** where an action is headed

- (1) *watashi wa Oosaka he ikimasu*  
‘I’m going to Osaka.’

$$\begin{aligned} \text{watashi} > \text{wa} < \sum / \text{POL} / \text{PR} \\ \text{X} = \text{iku} > [\text{he}_1] \\ [\text{he}_2]; \text{Oosaka} \end{aligned}$$

Martin (2004: 220) remarks that certain verbs, such as *tatsu* ‘stand’ and *suwaru* ‘sit’, can be described as each having two grammars: one with the static-locative ‘is upright/seated in a place’, the other with the mutative-locative ‘(changes position so that one) stands/sits to occupy a place’.

- (2) *atchi he tatte kudasai*  
‘Move over here and stand.’

$$\begin{aligned} \sum / \text{INF} \\ \text{X} = \text{kudasaru} \supset \text{tatsu} > [\text{he}_1] \\ [\text{he}_2]; \text{atchi} \end{aligned}$$

- (3) *Hamako-san, kon'ya wa, koko he nete*  
‘Hamako, tonight sleep over here (beside me).’

$$\begin{aligned} \text{Hamako} \cup \text{san} :: \text{kon} \cap \text{ya} > \text{wa} < \sum / \text{GER} \\ \text{X} = \text{neru} > [\text{he}_1] \\ [\text{he}_2]; \text{koko} \end{aligned}$$

**5.3.2** *he* indicating the **ending point or destination** of an action

- (4) *watashi wa ima kuukoo he tsukimashita*  
 ‘I arrived at the airport just now.’

$$\begin{aligned}
 & \text{watashi} > \text{wa} < \sum / \text{POL} / \text{PA} \\
 & \quad \text{X} = \text{tsuku} > [\text{he}_1] > \text{ima} \\
 & \quad \quad \quad [\text{he}_2]; \text{kuukoo}
 \end{aligned}$$

**5.3.3** *he* indicating the **person or thing** to which an action is directed  
 When *he* is followed by *no* it cannot be replaced by *ni*, as in example (6)

- (5a) *watashi no haha he purezento wo okurimashita*  
 ‘I sent my mother a present.’

$$\begin{aligned}
 & \sum / \text{POL} / \text{PA} \\
 & \text{X} = [\text{okuru}_1] > [\text{he}_1] \\
 & \quad [\text{okuru}_2]; \text{purezento} \mid [\text{he}_2]; \text{haha} \downarrow \\
 & \quad \quad \quad - \text{watashi}
 \end{aligned}$$

- (5b) *watashi no haha ni purezento wo okurimashita*  
 ‘I sent my mother a present.’

$$\begin{aligned}
 & \sum / \text{POL} / \text{PA} \\
 & \text{X} = [\text{okuru}_1] > [\text{ni}_1] \\
 & \quad [\text{okuru}_2]; \text{purezento} \mid [\text{ni}_2]; \text{haha} \downarrow \\
 & \quad \quad \quad - \text{watashi}
 \end{aligned}$$

- (6) *kore wa haha he no purezento desu*  
 ‘This is a present for my mother.’

$$\begin{aligned}
 & \text{kore} > \text{wa} < \sum / \text{POL} / \text{PR} \\
 & \quad \text{X} = \text{purezento} \downarrow \\
 & \quad \quad \quad - [\text{he}_1] \\
 & \quad \quad \quad \quad [\text{he}_2]; \text{haha}
 \end{aligned}$$

## 5.4 The ablative particle *kara*

The particle *kara* marking a noun phrase may indicate a source, a starting point or a material. Martin (2004:209) states that the particles *kara* and *made* differ from the other case markers in that they can be followed by the subject marker *ga* and the object marker *wo*, as can be observed in the example sentences in section 5.4.8. The conjunctive particle *kara* marking a clause or sentence will be described in section 9.2.

For the following descriptions of ‘NP *kara*’ the classifications and example sentences of Martin (2004:44), Makino&Tutsui (1995:176) and Kawashima (1999:53) have been analyzed.

### 5.4.1 *kara* indicating a **starting point from a place**

- (1) *kono basu wa Nyuuyooku kara kita*  
‘This bus came from New York.’

$$\begin{aligned} basu - kono > wa < \sum / PA \\ X = kuru > [kara_1] \\ [kara_2]; Nyuuyooku \end{aligned}$$

- (2) *kare wa poketto kara kuruma no kagi wo toridashita*  
‘He took his car keys out of his pocket.’

$$\begin{aligned} kare > wa < \sum / PA \\ X = [tori \cap dasu_1] > [kara_1] \\ [tori \cap dasu_2]; kagi \downarrow \quad | [kara_2]; poketto \\ - kuruma \end{aligned}$$

### 5.4.2 *kara* indicating a **starting point from a time**

- (3) *paatii wa hachiji kara hajimaru*  
‘The party starts at (lit. from) eight o’clock.’

$$\begin{aligned} paatii > wa < \sum / PR \\ X = hajimaru > [kara_1] \\ [kara_2]; hachi \cap ji \end{aligned}$$

- (4) *raishuu kara chikatetsu ga ne-age ni naru*  
‘From next week, the subway fare will go up.’

$$\begin{aligned} \sum / PR \\ chikatetsu = naru > [ni_1] > [kara_1] \\ [ni_2]; ne \cap age | [kara_2]; rai \cap shuu \end{aligned}$$

### 5.4.3 *kara* indicating a **starting point from a person**

- (5) *watashi wa sono hanashi wo sensei kara kikimashita*  
‘I heard that story from my teacher.’

$$\begin{aligned} \text{watashi} > \text{wa} < \sum / \text{POL} / \text{PA} \\ \text{X} = [kiku_1] & > [kara_1] \\ [kiku_2]; \text{hanashi} - \text{sono} \mid [kara_2]; \text{sensei} \end{aligned}$$

- (6) *sono hon wo dare kara karimashita ka?*  
‘From whom did you borrow the book?’

$$\begin{aligned} \sum / \text{POL} / \text{PA} > \text{ka} \\ \text{X} = [kariru_1] & > [kara_1] \\ [kariru_2]; \text{hon} - \text{sono} \mid [kara_2]; \text{dare} \end{aligned}$$

### 5.4.4 *kara* indicating a **starting point from a viewpoint or emotion**

- (7) *kono tegami no naiyoo kara handan-suru to (...)*  
‘Judging from the contents of this letter, ...’

$$\begin{aligned} \sum / \text{PR} > \text{to} \\ \text{X} = \text{handan} \cap \text{suru} > [kara_1] \\ [kara_2]; \text{naiyoo} \downarrow \\ - \text{tegami} - \text{kono} \end{aligned}$$

- (8) *kare wa sekinin-kan kara jishoku-shita*  
‘He resigned from his office out of a sense of responsibility.’

$$\begin{aligned} \text{kare} > \text{wa} < \sum / \text{PA} \\ \text{X} = \text{jishoku} \cap \text{suru} > [kara_1] \\ [kara_2]; \text{sekinin} \cap \text{kan} \end{aligned}$$

- (9) *watashi wa ureshisa kara tobiagatta*  
‘I jumped for joy.’

$$\begin{aligned} \text{watashi} > \text{wa} < \sum / \text{PA} \\ \text{X} = \text{tobi} \cap \text{agaru} > [kara_1] \\ [kara_2]; \text{ureshisa} \end{aligned}$$

#### 5.4.5 *kara* indicating a **starting point from an order in a sequence**

- (10) *oo-nami ga tsugi kara tsugi he to oshi-yosete kita*  
 ‘One after another, great waves came rolling in.’

$$\begin{aligned} & \sum / \text{PA} \\ \text{oo} \cap \text{nami} = \text{kuru} \supset \text{oshi} \cap \text{yoseru} > \text{to} < \text{X} > [\text{he}_1] > [\text{kara}_1] \\ & [\text{he}_2]; \text{tsugi} \mid [\text{kara}_2]; \text{tsugi} \end{aligned}$$

#### 5.4.6 *kara* indicating a **starting point from an approximate amount/number**

- (11) *sen-nin kara no kankoo-kyaku ga mainichi koko wo otozureru*  
 ‘As many as one thousand tourists visit this place everyday.’

$$\begin{aligned} & \sum / \text{PR} \\ \text{kankoo} \cap \text{kyaku} \downarrow & = [\text{otozureru}_1] > \text{mai} \cap \text{nichi} \\ -[\text{kara}_1] & \mid [\text{otozureru}_2]; \text{koko} \\ [\text{kara}_2]; \text{sen} \cap \text{nin} & \end{aligned}$$

- 5.4.7 *kara* indicating the **leaving or removing** from a place, with verbs such as *deru* ‘leave’, *tatsu* ‘depart’ or *oriru* ‘descend from’.

This use of *kara* alternates with the use of the particle *wo*. According to Makino&Tutsui (1995:351-352), the basic difference in such cases between *wo* and *kara* is that *wo* marks the location from which some movement begins, and *kara* marks the initial location in movement from one location to another. Thus, when focusing on both the new and old location of something or someone *kara* should be used instead of *wo*, as can be seen in the examples (12a and 12b). This reasoning is supported by Takeuchi’s observation, as quoted in section 4.3, that ‘NP *wo*’ marking the initial location cannot be combined with ‘NP *ni*’ marking the final location.

- (12a) *watashi wa kesa hachiji goro ie wo (\*kara) deta*  
 ‘This morning I left my house about eight.’

$$\begin{aligned} \text{watashi} > \text{wa} < \sum / \text{PA} \\ \text{X} = [\text{deru}_1] > \text{hachi} \cap \text{ji} > \text{goro} > \text{kesa} \\ & [\text{deru}_2]; \text{ie} \end{aligned}$$

- (12b) *kinoo wa uchi kara (\*wo) soto ni denakatta*  
 ‘Yesterday I didn’t go outside.’

$$\begin{aligned} \text{kinoo} > \text{wa} < \sum / \text{PA} \\ \text{X} = \text{nai} > \text{deru} > [\text{ni}_1] > [\text{kara}_1] \\ & [\text{ni}_2]; \text{soto} \mid [\text{kara}_2]; \text{uchi} \end{aligned}$$

**5.4.7** *kara* indicating **material**, what something is composed or made out of

- (13) *sake wa kome kara tsukuru*  
 ‘*Sake* is made out of rice.’

$$\begin{aligned}
 sake > wa < \sum / PR \\
 X = tsukuru > [kara_1] \\
 [kara_2]; kome
 \end{aligned}$$

**5.4.8** ‘NP *kara*’ in the first or second valence of the predicate

- (14) *sore kara ga taisetsu da*  
 ‘The important part is from there on.’

$$\begin{aligned}
 \sum / PR \\
 [kara_1] = taisetsu \\
 [kara_2]; sore
 \end{aligned}$$

- (15) *kore kara wo yoku kiite kudasai*  
 ‘Listen carefully from this point on.’

$$\begin{aligned}
 \sum / INF \\
 X = kudasaru \supset [kiku_1] > yoi \\
 [kiku_2]; [kara_1] \\
 [kara_2]; kore
 \end{aligned}$$

## 5.5 The allative particle *made*

The particle *made* marking a noun phrase expresses a limit in time, space or quantity, in the meaning ‘until’ or ‘up to’. As already mentioned in section 5.4, the particles *kara* and *made* may be followed by the case markers *ga* or *wo*; other particle combinations also occur, such as *made he*, *he made*, *made ni* and *ni made*. The clause conjunctive particle *made* will be analyzed in section 9.3 and the particle *made* as a topic-marker in section 7.4.

The various occurrences of ‘NP *made*’ will be described while analyzing the classifications and example sentences of Martin (2004:46), Makino&Tutsui (1995:225-233) and Kawashima (1999:83-90).

### 5.5.1 *made* indicating a temporal limit

- (1) *boku wa kyuu-sai made Rooma de sodatta*  
‘I was raised in Rome until I was nine years old.’

$$\begin{aligned} boku > wa < \sum / PA \\ X = sodaru > [de_1] & > [made_1] \\ & [de_2]; Rooma \mid [made_2]; kyuu \cap sai \end{aligned}$$

Makino&Tutsui (1995:228) mention the fact that simply translating *made* with ‘until’ is not always correct, since ‘X *made*’ and ‘until X’ do not have the same meaning when X represents a duration of time; this difference in meaning is illustrated by the example sentence (2), where *getsuyoobi made* has the meaning ‘up to and including Monday’.

- (2) *watashi wa raishuu no getsuyoobi made yasumimasu*  
‘I’ll be absent until next Tuesday.’

$$\begin{aligned} watashi > wa < \sum / POL / PR \\ X = yasumu > [made_1] \\ & [made_2]; getsuyoobi \downarrow \\ & \quad \quad \quad - rai \cap shuu \end{aligned}$$

In example (3) an ablative phrase ‘NP *kara*’ is conjoined with a similar allative phrase ‘NP *made*’ to delimit a span of time. The three adjuncts are placed in the mathematical description in a reversed order as compared to the original sentence, so that the order of their proximity to the predicate is retained.

- (3) *kinoo wa sanji kara goji made tomodachi to tennis wo shita*  
‘Yesterday I played tennis from three to five with my friend.’

$$\begin{aligned} kinoo > wa < \sum / PA \\ X = [suru_1] > to < tomo \cup dachi > [made_1] & > [kara_1] \\ & [suru_2]; tennis \quad \quad \quad \mid [made_2]; go \cap ji \mid [kara_2]; san \cap ji \end{aligned}$$

### 5.5.2 *made* indicating a spatial limit

- (4) *kono kisha wa Aomori made ikimasu*  
 ‘This train will go to Aomori.’

$$kisha - kono > wa < \sum / \text{POL} / \text{PR}$$

$$X = iku > [made_1]$$

$$[made_2]; Aomori$$

‘NP *kara*’ can be conjoined with ‘NP *made*’ to delimit a span of place, in the same way as in time expressions, e.g.:

- (5) *Tookyoo kara Kyooto made shinkansen de sanjikan kakaru*  
 ‘It takes three hours by bullet train from Tokyo to Kyoto.’

$$\sum / \text{PR}$$

$$X = kakaru > san \cap jikan > [de_1] > [made_1] > [kara_1]$$

$$[de_2]; shinkansen \mid [made_2]; Kyooto \mid [kara_2]; Tookyoo$$

For the start and the end of a set not only simple nouns but also case-marked nouns can be used. In such cases *kara* and *made* will follow the other particles, as in the following example sentence from Martin (2004:213):

- (6) *Hokkaidoo he kara Okinawa he made hooboo he ryokoo shita*  
 ‘I made all sort of trips, from [going] to Hokkaido to [going] to Okinawa’  
 ([I] traveled up to the direction of Okinawa from the direction of Hokkaido)

$$\sum / \text{PA}$$

$$X = ryokoo \cap suru > [he_1] > [made_1] > [kara_1]$$

$$[he_2]; hooboo \mid [made_2]; [he_1] \mid [kara_2]; [he_1]$$

$$[he_2]; Okinawa \mid [he_2]; Hokkaidoo$$

On the other hand, a case marker may be added to a set with a somewhat loosely conjoined start and end, as in his next example:

- (7) *kita wa Hokkaidoo kara minami wa Okinawa made he ryokoo shita*  
 ‘I took trips to (places) all the way from Hokkaido in the north to Okinawa in the south.’

$$kita > wa < X > [kara_1] < minami > wa < \sum / \text{PA}$$

$$[kara_2]; Hokkaidoo \mid X = ryokoo \cap suru > [he_1]$$

$$[he_2]; [made_1]$$

$$[made_2]; Okinawa$$



### 5.5.3 *made* indicating quantitative limit

- (8) *kono hooru wa nisennin made haireru*  
‘This hall can hold up to 2000 people.’

$$\begin{aligned} \text{hooru} - \text{kono} > \text{wa} < \sum / \text{PR} \\ \text{X} = \text{eru} > \text{Y} \\ \text{hairu} > [\text{made}_1] \\ [\text{made}_2]; \text{nisen} \cap \text{nin} \end{aligned}$$

- (9) *hon no kashi-dashi wa ikkai sansatsu made desu*  
‘You may borrow up to three books at a time.’

$$\begin{aligned} \text{kashi} \cap \text{dashi} \downarrow > \text{wa} < \sum / \text{POL} / \text{PR} \\ - \text{hon} \quad | \quad \text{X} = [\text{made}_1] > \text{ik} \cap \text{kai} \\ [\text{made}_2]; \text{san} \cap \text{satsu} \end{aligned}$$

### 5.5.4 *made ni* indicating a time limit on/for an action

- (10) *watashi wa juuji made ni kaeru*  
‘I’ll be home by 10 o’clock.’

$$\begin{aligned} \text{watashi} > \text{wa} < \sum / \text{PR} \\ \text{X} = \text{kaeru} > [\text{ni}_1] \\ [\text{ni}_2]; [\text{made}_1] \\ [\text{made}_2]; \text{juu} \cap \text{ji} \end{aligned}$$

- (11) *nanji made ni kuukoo ni ikeba ii deshoo ka*  
‘By what time should I go to the airport?’

$$\begin{aligned} \sum / \text{OPT} & < \sum / \text{POL} / \text{SUB} > \text{ka} \\ \text{X} = \text{iku} > [\text{ni}_1] & > [\text{ni}_1] \quad | \quad \text{X} = \text{ii} \\ [\text{ni}_2]; \text{kuukoo} & | [\text{ni}_2]; [\text{made}_1] \\ & [\text{made}_2]; \text{nan} \cap \text{ji} \end{aligned}$$

### 5.5.5 ‘NP *made*’ in the first or second valence of the predicate

In the following sentences quoted from Martin (2004:209) *made* is immediately followed by the case particles *ga* and *wo*; as a result, ‘NP *made*’ is part of the first or second valence of the predicates.

- (12) *juuniji made ga gendo desu*  
 ‘The limit is up to 12 o’clock.’

$$\begin{array}{l} \sum / \text{POL} / \text{PR} \\ [made_1] \quad = \text{gendo} \\ [made_2]; juuni \cap ji \end{array}$$

- (13) *juuniji made wo gendo ni shite imasu*  
 ‘They’ve set the limit at up to 12 o’clock.’

$$\begin{array}{l} \sum / \text{POL} / \text{PR} \\ X = iru \supset [suru_1] \quad > [ni_1] \\ [suru_2]; [made_1] \quad | [ni_2]; \text{gendo} \\ [made_2]; juuni \cap ji \end{array}$$

## 6 Coordinative particles

Martin (2004:154) classifies four coordinative particles as “nominal conjoining markers”, i.e. *to* ‘and (inclusive)’, *ya* ‘and (among others)’, *ni* ‘and (additionally)’, and *ka* ‘or (alternative)’. Because of the difference in meaning between *ni* on the one hand, and the other three particles on the other hand, I have decided not to include the particle *ni* in this chapter of coordinatives and have already described the enumerative particle *ni* in section 5.1.8. The difference between *ni* and the coordinative particles *to*, *ya* and *ka* is that enumerative *ni* marks one phrase, which is the second valence of the bivalent particle *ni*, as being added to another phrase, which functions as subject, object or adjunct; whereas the function of coordinative *to*, *ya*, and *ka* is to connect noun phrases in such a way that they are combined into one subject, object or adjunct. This difference in function can be observed in the examples (6) and (7) here below. In the mathematical descriptions the phrases that are conjoined by coordinative particles are all put on the same line, between the relation symbols ‘>’ for gradation, and the reversed gradation symbol ‘<’, thus indicating that these particles are bivalent in that they connect two sentence parts, but these parts are coordinate and not subordinate.

### 6.1 The coordinative particle *to*

The particle *to* marking a noun phrase is commonly analyzed as having various functions. Martin (2004:203) classifies these functions as: reciprocal (meaning: ‘to’), comitative (meaning: ‘with’), and conjoining (meaning: ‘and’). These three functions have in common that the particle *to* connects the preceding noun phrase to another part of the sentence, which may be another noun phrase (conjoining) or the predicate (reciprocal or comitative). This shared feature of connecting sentence parts, namely coordination, enables the use of one mathematical description for all these functions. Other meanings of *to*, such as indicating a goal or new state (e.g. with *naru* ‘become’), the sound or manner something is done with, a quantity, or a name or other designation attached to the noun phrase, are also analyzed in this way. The quotative particle *to* following a phrase or a sentence that constitutes the quotation or thought will be analyzed in section 6.1.8. The conjunctive particle *to* connecting two sentences will be described in section 9.4.

For the following descriptions of the particle *to*, the classifications and example sentences of Makino&Tutsui (1995:473-478), Hinds (1986:96), Kuno (1973:112) and Kawashima (1999:200-208) are quoted.

#### 6.1.1 conjoining

when connecting noun phrases, *to* lists things exhaustively, in the meaning: ‘A and B (and nothing else)’

- (1) *ringo to budoo ga teeburu no ue ni arimasu*  
‘There are apples and grapes on the table.’

$$\begin{array}{c} \sum / \text{POL} / \text{PR} \\ \text{ringo} > \text{to} < \text{budoo} = \text{aru} > [ni_1] \\ [ni_2]; \text{ue} \downarrow \\ - \text{teeburu} \end{array}$$

- (2) *Jon to Mearii to Tomu ga kita*  
 ‘John and Mary and Tom came.’

$$\sum / \text{PA}$$

$$\text{Jon} > \text{to} < \text{Mearii} > \text{to} < \text{Tomu} = \text{kuru}$$

The coordinative particle *to* may be repeated, e.g.:

- (3a) *Maiku to Dikku wa gakusei da*  
 ‘Mike and Dick are students.’

$$\text{Maiku} > \text{to} < \text{Dikku} > \text{wa} < \sum / \text{PR}$$

$$X = \text{gakusei}$$

- (3b) *Maiku to Dikku to wa gakusei da*  
 ‘Mike and Dick are students.’

$$\text{Maiku} > \text{to} < \text{Dikku} > \text{to} > \text{wa} < \sum / \text{PR}$$

$$X = \text{gakusei}$$

- (4) *watashi wa eigo to nihongo wo hanasu*  
 ‘I speak English and Japanese.’

$$\text{watashi} > \text{wa} < \sum / \text{PR}$$

$$X = [\text{hanasu}_1]$$

$$[\text{hanasu}_2]; \text{ei} \cap \text{go} > \text{to} < \text{nihon} \cap \text{go}$$

- (5) *suteeki wa naifu to fooku de taberu*  
 ‘We eat steak with a knife and a fork.’

$$\text{suteeki} > \text{wa} < \sum / \text{PR}$$

$$X = \text{taberu} > [\text{de}_1]$$

$$[\text{de}_2]; \text{naifu} > \text{to} < \text{fooku}$$

In the following example of Makino&Tutsui (1995:475) the difference between connecting two noun phrases with coordinative *to* or with dative *ni* can be observed: in (6a) the use of *to* merely indicates that two things are eaten, whereas in (6b) the use of *ni* indicates that the ‘*miso* soup’ is eaten, with ‘rice’ as an addition:

- (6a) *maiasa misoshiru to gohan wo taberu*  
 ‘I eat *miso* soup and rice every morning.’

$$\sum / \text{PR}$$

$$X = [ \text{taberu}_1 ] > \text{mai} \cap \text{asa}$$

$$[ \text{taberu}_2 ]; \text{miso} \cap \text{shiru} > \text{to} < \text{gohan}$$

- (6b) *maiasa misoshiru ni gohan wo taberu*  
 ‘I eat *miso* soup with rice every morning.’

$$\sum / \text{PR}$$

$$X = [ \text{taberu}_1 ] > \text{mai} \cap \text{asa}$$

$$[ \text{taberu}_2 ]; \text{gohan} > [ \text{ni}_1 ]$$

$$[ \text{ni}_2 ]; \text{miso} \cap \text{shiru}$$

Hinds (1986:96) gives the following example sentences to illustrate this difference between *ni* and *to* and points to the fact that of the two constructions only the coordination with *to* is semantically reversible.

- (7a) *tempura to sake wo kudasai*  
 ‘Let me have *tempura* and *sake*, please.’

$$\sum / \text{INF}$$

$$X = [ \text{kudasaru}_1 ]$$

$$[ \text{kudasaru}_2 ]; \text{tempura} > \text{to} < \text{sake}$$

- (7b) *sake to tempura wo kudasai*  
 ‘Let me have *sake* and *tempura*, please.’

$$\sum / \text{INF}$$

$$X = [ \text{kudasaru}_1 ]$$

$$[ \text{kudasaru}_2 ]; \text{sake} > \text{to} < \text{tempura}$$

- (7c) *tempura ni sake wo kudasai*  
 ‘Let me have some *sake* with an order of *tempura*.’

$$\sum / \text{INF}$$

$$X = [ \text{kudasaru}_1 ]$$

$$[ \text{kudasaru}_2 ]; \text{sake} > [ \text{ni}_1 ]$$

$$[ \text{ni}_2 ]; \text{tempura}$$

- (7d) *sake ni tempura wo kudasai*  
 ‘Let me have some *tempura* with an order of *sake*.’

$$\sum / \text{INF}$$

$$X = [kudasaru_1]$$

$$[kudasaru_2]; tempura > [ni_1]$$

$$[ni_2]; sake$$

Kawashima (1999:200) points out that often in the ‘(noun) *to* (noun) pattern’ *to* contrasts or compares the two nouns, as in her following example:

- (8) *natsu to fuyu to de wa kion wa taihen chigaimasu*  
 ‘Between summer and winter, there is a great difference in temperature.’

$$X > [de_1] > wa < kion > wa < \sum / \text{POL} / \text{PR}$$

$$[de_2]; natsu > to < fuyu > to \mid X = chigau > taihen$$

### 6.1.2 reciprocal

*to* marks the noun phrase that maintains a reciprocal relationship with the subject of a clause; in this function the phrase marked by *to* is analyzed as an adjunct to the predicate.

- (9) *kono kuruma wa boku no kuruma to onaji desu*  
 ‘This car is the same as my car.’

$$kuruma - kono > wa < \sum / \text{POL} / \text{PR}$$

$$X = onaji > to < kuruma \downarrow$$

$$- boku$$

In the following examples from Kuno (1973:114), *to* in the first sentence is reciprocal, whereas *to* in (10b) is conjoining the two nouns as one subject, conveying two possible meanings, i.e. they both married each other or they both married someone else; in the latter case *to* is coordinative.

- (10a) *Mearii ga Jon to kekkon shita*  
 ‘Mary married John.’

$$\sum / \text{PA}$$

$$Mearii = kekkon \cap suru > to < Jon$$

- (10b) *Jon to Mearii ga kekkon shita*  
 ‘John and Mary became man and wife.’ / ‘John married and Mary married.’

$$\sum / \text{PA}$$

$$Jon > to < Mearii = kekkon \cap suru$$

As has been already mentioned in section 5.1.11, there are verbs that can occur with adjuncts marked either by *ni* or by *to*; the difference in meaning is that *to* indicates that the action is bidirectional, whereas with *ni* the movement is unidirectional.

Makino&Tutsui (1995:477-478) give the following examples for such occurrences, and explain that in (12a) the use of *to* implies that both Akira and Kimiko were moving, whereas *ni* in (12b) implies that only Akira was moving. Thus, *to* is unacceptable in (13) because *hashira* ‘the post’ is immobile.

- (11a) *Masao wa sensei to hanashita*  
 ‘Masao talked with his teacher.’

$$\begin{aligned} \text{Masao} > \text{wa} < \sum / \text{PA} \\ \text{X} = \text{hanasu} > \text{to} < \text{sensei} \end{aligned}$$

- (11b) *Masao wa sensei ni hanashita*  
 ‘Masao talked to his teacher.’

$$\begin{aligned} \text{Masao} > \text{wa} < \sum / \text{PA} \\ \text{X} = \text{hanasu} > [\text{ni}_1] \\ [\text{ni}_2]; \text{sensei} \end{aligned}$$

- (12a) *Akira wa Kimiko to butsukatta*  
 ‘Akira bumped into Kimiko.’

$$\begin{aligned} \text{Akira} > \text{wa} < \sum / \text{PA} \\ \text{X} = \text{butsukaru} > \text{to} < \text{Kimiko} \end{aligned}$$

- (12b) *Akira wa Kimiko ni butsukatta*  
 ‘Akira bumped into Kimiko.’

$$\begin{aligned} \text{Akira} > \text{wa} < \sum / \text{PA} \\ \text{X} = \text{butsukaru} > [\text{ni}_1] \\ [\text{ni}_2]; \text{Kimiko} \end{aligned}$$

- (13) *Akira wa hashira ni (\*to) butsukatta*  
 ‘Akira bumped into a post.’

$$\begin{aligned} \text{Akira} > \text{wa} < \sum / \text{PA} \\ \text{X} = \text{butsukaru} > [\text{ni}_1] \\ [\text{ni}_2]; \text{hashira} \end{aligned}$$

### 6.1.3 comitative

*to* indicates that the speaker carries out an action together with the subject that is marked by this particle; often occurring in the combinations *to issho (ni) / to tomo (ni)* ‘together with’; this comitative function gets the same description as reciprocal *to*, namely, as an adjunct to the predicate.

- (14) *kinoo wa otooto to kawa he oyogi ni ikimashita*  
 ‘Yesterday I went swimming in the river with my brother’

$$\begin{aligned} \text{kinoo} > \text{wa} < \sum / \text{POL} / \text{PA} \\ \text{X} = \text{iku} > [\text{ni}_1] & > [\text{he}_1] > \text{to} < \text{otooto} \\ & [\text{ni}_2]; \sum / \text{INF} \mid [\text{he}_2]; \text{kawa} \\ & \text{X} = \text{oyogu} \end{aligned}$$

In the next example sentence from Kawashima, the second particle *to* is comitative, whereas the first *to* connecting *otoosan* and *okaasan* is coordinative.

- (15) *kyoo ohiru ni boku wa otoosan to okaasan to hanbaagaa wo tabemashita*  
 ‘Today for lunch, I had a hamburger with my father and my mother’

$$\begin{aligned} \text{kyoo} > [\text{ni}_1] < \text{boku} > \text{wa} < \sum / \text{POL} / \text{PA} \\ & [\text{ni}_2]; \text{HON} \cap \text{hiru} \mid \text{X} = [\text{taberu}_1] > \text{to} < \text{otoo} \cup \text{san} > \text{to} < \text{okaa} \cup \text{san} \\ & [\text{taberu}_2]; \text{hanbaagaa} \end{aligned}$$

- (16) *watashi wa Andii to issho ni paatii ni itta*  
 ‘I went to the party (together) with Andy.’

$$\begin{aligned} \text{watashi} > \text{wa} < \sum / \text{PA} \\ \text{X} = \text{iku} > [\text{ni}_1] & > [\text{ni}_1] \\ & [\text{ni}_2]; \text{paatii} \mid [\text{ni}_2]; \text{issho} > \text{to} < \text{Andii} \end{aligned}$$

When we compare comitative *to* with the meaning ‘with’ and conjoining *to* in the meaning ‘and’ in the following sentences from Makino&Tutsui (1995:474-475), we find that in (17a) *Yamamoto-san* and *Sumisu-san* both are subjects of the predicate, they each (individually) ‘are playing tennis’ (not necessarily with each other), whereas in (17b) only *Yamamoto-san* is the subject, he is ‘playing tennis (together) with *Sumisu-san*’.

- (17a) *Yamamoto-san to Sumisu-san ga tennis wo shite iru*  
 ‘Mr. Yamamoto and Mr. Smith are playing tennis.’

$$\begin{aligned} & \sum / \text{PR} \\ \text{Yamamoto} \cup \text{san} > \text{to} < \text{Sumisu} \cup \text{san} = \text{iru} \supset [\text{suru}_1] \\ & [\text{suru}_2]; \text{tenisu} \end{aligned}$$



- (17b) *Yamamoto-san wa Sumisu-san to tennis wo shite iru*  
 ‘Mr. Yamamoto is playing tennis with Mr. Smith.’

$$Yamamoto \cup san > wa < \sum / PR$$

$$X = iru \supset [suru_1] > to < Sumisu \cup san$$

$$[suru_2]; tennis$$

Martin (2004:203) gives the following examples of, respectively, reciprocal *to*, comitative *to*, and conjoining *to*. The difference between them is that in (18a) *Taroo* is the single subject, like *Hanako* is in (18b), whereas in (18c) *Taroo* and *Hanako* together are the subject of the verb *kuru*.

- (18a) *Taroo ga Hanako to kekkon shita*  
 ‘Taroo married Hanako.’

$$\sum / PA$$

$$Taroo = kekkon \cap suru > to < Hanako$$

- (18b) *Taroo to issho ni Hanako ga kita*  
 ‘With Taro came Hanako.’

$$\sum / PA$$

$$Hanako = kuru > [ni_1]$$

$$[ni_2]; issho > to < Taroo$$

- (18c) *Taroo to Hanako ga kita*  
 ‘Taro and Hanako came.’

$$\sum / PA$$

$$Taroo > to < Hanako = kuru$$

#### 6.1.4 *to* indicates a sound with/or the manner in which something is done

- (19) *Taroo wa batabata to hashitta*  
 ‘Taro ran with a clattering sound.’

$$Taroo > wa < \sum / PA$$

$$X = hashiru > to < bata \bullet bata$$

- (20) *gorogoro to kaminari ga natte iru*  
 ‘Thunder is rumbling’

$$\sum / PR$$

$$kaminari = iru \supset naru > to < goro \bullet goro$$

- (21) *Ben wa muttsuri to suwatte iru*  
 ‘Ben is sitting sullenly.’

$$\begin{aligned} Ben > wa < \sum / PR \\ X = iru \supset suwaru > to < muttsuri \end{aligned}$$

- 6.1.5** *to* can precede certain incomplete intransitive verbs, such as *iu* ‘call, name’, *yobu* ‘call’, *nazukeru* ‘name’, “to identify someone or something by name, designation, or the like” (Martin, 2004:1003).

In such constructions the symbol ‘Y’ is inserted to indicate the contents of what is expressed by the verb. Thus, in (22) *Tatchan* is not placed on the same line as the first valence of the verb *yobu*, which is consistent with the fact that *Tatchan* is not the one who is calling/naming (someone) nor the one who is being called.

- (22) *tomodachi wa boku no koto wo Tatchan to yobimasu*  
 ‘My friends call me Tatchan.’

$$\begin{aligned} tomo \cup dachi > wa < \sum / POL / PR \\ X = [yobu_1] & > to < Y \\ [yobu_2]; koto \downarrow & | Tat \cup chan \\ & - boku \end{aligned}$$

In the following sentence, the expression *to iu* is used to indicate that a name is given to something (or someone); in occurrences such as this, *to iu* is a fixed expression only used in the present tense and is not an active verb as it would be in the case when it is used to express that someone is actually saying “*Yukiguni*”; therefore it has been decided to describe the fixed expression *to iu* as a phrase, as in description (a), and not as a situation represented by a ‘ $\Sigma$ ’-symbol, as in description (b).

- (23) *Yukiguni to iu shoosetsu wo yonda*  
 ‘I read a novel called Snow Country.’

a)

$$\begin{aligned} \sum / PA \\ X = [yomu_1] \\ [yomu_2]; shoosetsu \downarrow \\ - iu > to < Y \\ Yukiguni \end{aligned}$$

\*b)

$$\begin{array}{l} \sum / \text{PA} \\ X = [\text{yomu}_1] \\ \quad [\text{yomu}_2]; \text{ shoosetsu } \downarrow \\ \quad \quad \quad - \sum / \text{PR} \\ X = \text{iu} > \text{to} < \quad Y \\ \quad \quad \quad \text{Yukiguni} \end{array}$$

### 6.1.6 combined with the verb *naru*

The combination *to naru* indicates that something reaches (or reached) a goal or a new state; in the descriptions the symbol ‘Y’ is inserted because the verb *naru* ‘to become’ indicates that there are two different states, one before *naru* and one after; therefore the two states cannot be on the same line.

- (24) *Takeshita-kun wa koogakubu no gakusei to natta*  
 ‘Takeshita became a student in the engineering department.’

$$\begin{array}{l} \text{Takeshita} \cup \text{kun} > \text{wa} < \sum / \text{PA} \\ X = \text{naru} > \text{to} < \quad Y \\ \quad \quad \quad \text{gakusei} \downarrow \\ \quad \quad \quad - \text{koogaku} \cap \text{bu} \end{array}$$

- (25) *iyo iyo undoo-kai no hi to narimashita*  
 ‘At last the field day has come.’

$$\begin{array}{l} \sum / \text{POL} / \text{PA} \\ X = \text{naru} > \text{to} < \quad Y \quad > \text{iyo} \bullet \text{iyo} \\ \quad \quad \quad \text{hi} \downarrow \\ \quad \quad \quad - \text{undoo} \cap \text{kai} \end{array}$$

- (26) *ano hiroba wa kodomotachi no kooen to natta*  
 ‘That field has now been made into a playground for children.’

$$\begin{array}{l} \text{hiroba} - \text{ano} > \text{wa} < \sum / \text{PA} \\ X = \text{naru} > \text{to} < \quad Y \\ \quad \quad \quad \text{kooen} \downarrow \\ \quad \quad \quad - \text{kodomo} \cup \text{tachi} \end{array}$$

**6.1.7 after a quantity or a number** *to* indicates that something can be done in less than that quantity or number (also emphasizes the negative).

(27) *sonna shigoto wa mikka to kakarimasen*  
 ‘It wouldn’t take more than three days to do that kind of work.’

*shigoto – sonna > wa < ∑ / POL / NON / PR*  
 $X = kakaru > to < mik \cap ka$

**6.1.8 to after a quotation**

When the particle *to* connects two sentences it may be quotational or it may have a conjunctive function; the first function will be analyzed in this section while the use of conjunctive *to* will be described in section 9.4. The quotational particle *to* may be used for a direct or an indirect quotation; this quotation may be a sentence or a phrase which constitutes the contents of what is expressed by the predicate in the main clause. The difference in function between conjunctive *to* and quotational *to* is that the first connects two coordinate sentences, whereas in quotations the first sentence is subordinate to the last sentence with the situation of the quotation being connected to the predicate.

Martin (2004:996-997) writes that a sentence can be quoted by adding the particle *to* ‘(says/thinks) that’ and the sentence quoted can be negative, desiderative, past, subjunctive, etc.; the quotational verb that follows can undergo all conversions independently of the quoted sentence. This verb is typically an “information-processing verb”, having to do with saying, writing, thinking, judging, etc. Furthermore, Martin distinguishes two quotation conversions, namely, the intransitive quotation, as in example (28a), and the transitive quotation, as in (28b); in the first case the thought is the entire clause *hana ga utsukushii* with *hana* as subject, while in (28b) *hana* is the second valence of the verb *omou* and the thought is *utsukushii*. The example sentence (28c) is a transitive construction without *to*.

(28a) *hana ga utsukushii to omou*  
 ‘I feel that the flowers are beautiful.’  
 ([I] think [that] flowers are beautiful)

$\sum / PR$   
 $X = omou > to < \sum / PR$   
*hana = utsukushii*

(28b) *hana wo utsukushii to omou*  
 ‘I feel that the flowers are beautiful.’  
 ([I] think of flowers [that they] are beautiful)

$\sum / PR$   
 $X = [omou_1] > to < \sum / PR$   
 $[omou_2]; hana \mid X = utsukushii$

- (28c) *hana wo utsukushiku omou*  
 ‘I feel the flowers to be beautiful.’  
 ([I] think of flowers to the extent of being beautiful)

$$\sum / \text{PR}$$

$$X = [\text{omou}_1] > Y$$

$$[\text{omou}_2]; \text{hana} \mid \text{utsukushii}$$

Makino&Tutsui (1995:478-480) give the following examples for *to* as a particle which marks a quotation:

- (29) *Tomu wa gakusei da to itta*  
 ‘Tom said that he was a student.’  
 (as for Tom, [he] said [that he] is a student)

$$\text{Tomu} > \text{wa} < \sum / \text{PA}$$

$$X = \text{iu} > \text{to} < \sum / \text{PR}$$

$$X = \text{gakusei}$$

- (30) *Tomu wa Nihon he ikitai to itte iru*  
 ‘Tom says that he wants to go to Japan.’  
 (as for Tom, [he] is saying [that he] wants to go to Japan)

$$\text{Tomu} > \text{wa} < \sum / \text{PR}$$

$$X = \text{iru} \supset \text{iu} > \text{to} < \sum / \text{PR}$$

$$X = \text{tai} > \text{iku} > [\text{he}_1]$$

$$[\text{he}_2]; \text{Nihon}$$

- (31) *watashi wa basu de ikoo to omou*  
 ‘I think I will go by bus.’  
 (as for me, [I] think [that I] will go by bus)

$$\text{watashi} > \text{wa} < \sum / \text{PR}$$

$$X = \text{omou} > \text{to} < \sum / \text{SUB}$$

$$X = \text{iku} > [\text{de}_1]$$

$$[\text{de}_2]; \text{basu}$$

- (32) *Ichiroo wa daijoobu da to omotta*  
 ‘Ichiro thought that there would be no problem.’  
 (as for Ichiro, [he] thought [that it] is all right)

$$\text{Ichiroo} > \text{wa} < \sum / \text{PA}$$

$$X = \text{omou} > \text{to} < \sum / \text{PR}$$

$$X = \text{daijoobu}$$

In a direct quotations when a predicate with a tense marking is absent, as in the following example from Makino&Tutsui (1995:483), the symbol ‘Y’ is used instead of ‘Σ’ to represent the entity.

- (33) *Tomu wa “konnichi wa” to itta*  
 ‘Tom said: “*konnichi wa*”.’  
 (as for Tom, [he] said *konnichi wa*)

$$\begin{aligned} Tomu > wa < \Sigma / PA \\ X = iu > to < Y \\ konnichi > wa \end{aligned}$$

The following example sentences with *to* marking a quotation are quoted by Kawashima (1999:206); in example (35), because of the absence of the copula *da*, which can be omitted before quotational *to*, again the symbol ‘Y’ is used instead of ‘Σ’.

- (34) *itsuka wa daijishin ga aru daroo to omou*  
 ‘I think that someday there will be a big earthquake’  
 (as for someday, [I] think [that there] will be the situation [that] a big earthquake exists)

$$\begin{aligned} itsu > ka > wa < \Sigma / PR \\ X = omou > to < \Sigma / SUB \\ X = \Sigma / PR \\ dai \cap jishin = aru \end{aligned}$$

- (35) *kimatsu-tesuto wa nishuukan saki to kimatta*  
 ‘It’s been decided that the final exam is going to be in two weeks’  
 (as for the final exam, [it] has been decided [that it] will be in two weeks)

$$\begin{aligned} kimatsu \cap tesuto > wa < \Sigma / PA \\ X = kimaru > to < Y \\ nishuu \cap kan \cap saki \end{aligned}$$

## 6.2 The coordinative particle *ya*

The coordinative particle *ya* is used to list noun phrases. Unlike *to*, the particle *ya* cannot be used in a reciprocal or comitative sense, nor can it combine clauses or sentences. For *ya* in its only function of connecting two (or more) noun phrases the same description is used as for the coordinative particle *to* in that function. The difference between them is that *to* lists noun phrases exhaustively, whereas *ya* lists things or persons inexhaustively in the meaning ‘and (among others)’.

The following example sentences are from Makino&Tutsui (1995:536):

- (1) *Yamada-san ya Ogawa-san ga kita*  
 ‘Mr. Yamada and Mr. Ogawa (and others) came.’

$$\sum / PA$$

*Yamada* ∪ *san* > *ya* < *Ogawa* ∪ *san* = *kuru*

- (2) *boku wa biiru ya wain wo nonda*  
 ‘I drank beer, wine and things like that.’

*boku* > *wa* <  $\sum / PA$   
 $X = [nomu_1]$   
 $[nomu_2]; biiru > ya < wain$

- (3) *Tsuchida-san wa Ookawa-san ya Suzuki-san ni tegami wo kaita*  
 ‘Mr. Tsuchida wrote a letter to Mr. Okawa and Mr. Suzuki (and others).’

*Tsuchida* ∪ *san* > *wa* <  $\sum / PA$   
 $X = [kaku_1] > [ni_1]$   
 $[kaku_2]; tegami \mid [ni_2]; Oogawa \cup san > ya < Suzuki \cup san$

Makino&Tutsui (1995:537) remark that ‘N *ya* N’ cannot appear in the position of X in the ‘X *ga* Y *da*’ construction, because *ga* in ‘X *ga* Y *da*’ is “a highly exhaustive listing marker”, and therefore the following sentence is not correct:

- \**Jeen ya Missheru ga gakusei desu*  
 \* ‘Jane and Michelle and only they (and others) are students.’

Instead, in this case the particle *wa* can be used:

- (4) *gakusei wa Jeen ya Missheru desu*  
 ‘The students are Jane and Michelle (and others).’

*gakusei* > *wa* <  $\sum / POL / PR$   
 $X = Jeen > ya < Missheru$

### 6.3 The coordinative particle *ka*

The particle *ka* marking a noun phrase has a coordinative function, connecting two (or more) noun phrases with the meaning ‘or’ expressing uncertainty or stating an alternative. The occurrences of *ka* marking a sentence will be discussed in section 10.1.

Makino&Tutsui (1995:164-165) give the following example sentences for coordinative *ka* and point out that when more than one noun phrase is marked by *ka*, the final *ka* is usually omitted.

- (1a) *watashi wa densha ka basu ka de iku*  
 ‘I will go either by train or bus.’

$$\begin{aligned} \textit{watashi} > \textit{wa} < \sum / \textit{PR} \\ \textit{X} = \textit{iku} > [\textit{de}_1] \\ [\textit{de}_2]; \textit{densha} > \textit{ka} < \textit{basu} > \textit{ka} \end{aligned}$$

- (1b) *watashi wa densha ka basu de iku*  
 ‘I will go either by train or bus.’

$$\begin{aligned} \textit{watashi} > \textit{wa} < \sum / \textit{PR} \\ \textit{X} = \textit{iku} > [\textit{de}_1] \\ [\textit{de}_2]; \textit{densha} > \textit{ka} < \textit{basu} \end{aligned}$$

- (2) *watashi wa maiasa juusu ka miruku wo nomu*  
 ‘I drink either juice or milk every morning.’

$$\begin{aligned} \textit{watashi} > \textit{wa} < \sum / \textit{PR} \\ \textit{X} = [\textit{nomu}_1] > \textit{mai} \cap \textit{asa} \\ [\textit{nomu}_2]; \textit{juusu} > \textit{ka} < \textit{miruku} \end{aligned}$$

- (3) *sore wa Bobu ka Maaku ga shimasu*  
 ‘As for that, either Bob or Mark will do it.’

$$\begin{aligned} \textit{sore} > \textit{wa} < \sum / \textit{POL} / \textit{PR} \\ \textit{Bobu} > \textit{ka} < \textit{Maaku} = \textit{suru} \end{aligned}$$

Kawashima (1999:47-48) quotes sentence (4) with the pattern ‘...*ka...ka*’ for listing a number of choices. She also gives examples (5) and (6) to demonstrate the use of *ka* to mark an approximate number in the pattern ‘...*ka...*’.



- (4) *migi no ka hidari no ka hayaku kimete yo*  
 ‘The one on the right or the one on the left? Make up your mind quickly!’

$$\sum / \text{GER} > yo$$

$$X = kimeru > hayai > X \downarrow > ka < X \downarrow > ka$$

$$- migi \quad | \quad - hidari$$

- (5) *nido ka sando kimi no uchi ni denwa shita kedo, rusu datta*  
 ‘I called you at home two or three times, but no one answered’

$$\sum / \text{PA} > kedo < \sum / \text{PA}$$

$$X = denwa \cap suru > [ni_1] > ni \cap do > ka < san \cap do \mid X = rusu$$

$$[ni_2]; uchi \downarrow$$

$$- kimi$$

- (6) *watashi-tachi wa mikka ka yokka ryokoo ni dekakemasu*  
 ‘We’re going on a trip for three or four days’

$$watashi \cup tachi > wa < \sum / \text{POL} / \text{PR}$$

$$X = dekakeru > [ni_1] > mik \cap ka > ka < yok \cap ka$$

$$[ni_2]; ryokoo$$

## 7 Topical particles

In Martin's classification (2004:70) the particles *wa*, *mo*, *sae* (and its more literary synonym *sura*), *made*, and *shika* are listed as particles of focus. These particles will all be discussed in this chapter, except the particle *shika*, which, although it functions as a topic-marker in most of its occurrences, is similar in function and meaning to the restrictive particles and therefore will be analyzed in chapter 8. The particle *wa* also appears in the sentence final position, which will be described in section 7.1.3.

The topical particles can mark noun phrases or sentences and they may also directly follow any other particle except *ga* and *wo*. Their function is to introduce or emphasize the preceding sentence part, which as a result of this topicalization is placed outside of the situation that follows. In the mathematical descriptions the topical particles and the sentence parts marked by them are placed outside the situation represented by the symbol ' $\Sigma$ ' and the topical particle is connected to the preceding phrase or situation by the relation symbol for gradation '>' and to the following phrase or situation by the reversed gradation symbol '<'.

In the first two sections the particles *wa* and *mo* are analyzed. Martin (2004:52-53) describes the difference between the particles *wa* and *mo* as follows: *wa* and *mo* signal opposite focus, *mo* highlights and *wa* subdues; attention is concentrated by *mo*, it is shifted elsewhere by *wa*; the function of *wa* is backgrounding or "out-focusing", and that of *mo* is foregrounding or "in-focusing". Although *wa* and *mo* seem mutually incompatible and generally do not appear together, there are a few exceptional cases when this does occur, as will be described in section 7.2.8.

### 7.1 The particle *wa*

The topic marked by *wa* is often analyzed as the subject of the predicate that follows, as in Makino&Tutsui's examples (1) and (2) here below. However, the designation of noun phrases marked by *wa* as subjects seems to be based on interpretation and contextual knowledge, for it is not grammatically or semantically determined by *wa* itself. Hinds (1986:157-158) writes: "The primary means to indicate the topic of a sentence in Japanese is to mark the relevant noun phrase with the particle *wa*", and he remarks that these topics do not always function as subjects, but can have other grammatical relations and semantic roles as well, namely, direct object, time, location, source and comitative. (the other role listed by Hinds, i.e. indirect object is not classified here).

What can be established without interpretation or context is that in all its occurrences the function of *wa* is the same: it separates the preceding phrase from the rest of the sentence and places this phrase outside the domain and time frame of the situation that follows. The commonly used English translation 'as for' will be used in this work in the textual descriptions because it is adequate and vague enough for describing the function and meaning of *wa*. Since the exact nature of the grammatical and semantic relation between the noun phrase marked by *wa* and the rest of the sentence can only be established through interpretation or contextual knowledge, which are considered to lie outside the domain of the semantic analyses proposed in this study, such relations will not be notated in the mathematical descriptions proposed here. Consequently, it has been decided not to apply Ebeling's notation of superscripts to link elements of phrases marked by *wa* with elements inside the situation.

In the following sections the particle *wa* will be described while quoting comments and example sentences from various sources; in most of these sources, such as Kuno (1973:38) and Makino&Tutsui (1995:516), *wa* is divided into two different categories: *wa* marking the topic or the theme of the sentence (= what the rest of the sentence is about) and contrastive *wa*. In order to discuss the example sentences and arguments of the sources that are quoted here in their right order, I have divided this section on *wa* into subsections according to this classification, with the understanding, however, that basically there is only one *wa*, which is topical in function and meaning; whether or not *wa* adds a contrastive meaning depends on other constituents of the sentence or on the word order, as examples in section 7.1.2 will show.

As the mathematical descriptions in the sections here below will demonstrate, the phrases marked by the topical particle *wa* are all placed outside of the frame of the sigma representing the situation; *wa* is, so to speak, the division marker between the preceding phrase, which lies outside the domain and time frame of the situation, and the following part of the sentence which belongs to the situation. In the cases where there is more than one particle *wa* followed by one situation, as in example (18), all the phrases marked by *wa* are placed before the situation that follows. When there are two (or more) particles *wa* with two situations (or more), each *wa* marks the preceding phrase as a topic for the situation that directly follows it, as in the example sentences (16) and (17).

### 7.1.1 *wa* as topic-marker

Makino&Tutsui (1995: 516-519) give the following examples for *wa* as a topic-marker. Because of the absence of a noun phrase marked by the nominative particle *ga*, the symbol ‘X’ is inserted into the situation to represent the subject that is not mentioned.

- (1) *watashi wa gakusei da*  
 ‘I am a student.’  
 (as for me, [I] am [a] student)

$$watashi > wa < \sum / PR$$

$$X = gakusei$$

- (2) *Joonzu-san wa ima nihongo wo benkyoo shite iru*  
 ‘Mr. Jones is studying Japanese now.’  
 (as for Mr. Jones, [he] is studying Japanese now)

$$Joonzu \cup san > wa < \sum / PR$$

$$X = iru \supset [benkyoo \cap suru_1] > ima$$

$$[benkyoo \cap suru_2]; nihon \cap go$$

Makino&Tutsui maintain that, in general, *wa* is used to mark information which the speaker assumes to be part of the “hearer’s register”. Thus, when using *wa* the speaker usually assumes that the hearer knows what the noun phrase marked by *wa* refers to. Consequently, *wa* is not commonly used for WH-words since their referents are obviously not known by the hearer, as in the following example:

- (3) *dare ga /\*wa paatii ni kimashita ka*  
 ‘Who came to the party?’

$$\sum / \text{POL} / \text{PA} > ka$$

$$dare = iku > [ni_1]$$

$$[ni_2]; paatii$$

Kawashima (1999:235-239) makes a four-way distinction between:

1. *wa* as a ‘topic marker in an affirmative sentence’, as in her example sentences (4) and (5)
2. *wa* as a ‘topic marker in a negative sentence’, usually indicating a comparison, emphasis or choice, for which she quotes example (6)
3. *wa* as an ‘emphatic particle’, i.e. when the topic followed by *wa* is the object of the verb, a particle, an adverb, a verb or an adjective, as in her examples (7 – 11)
4. *wa* indicating a ‘contrast between two topics’, as in example (15) (section 7.1.2)

- (4) *raion wa moojuu da*  
 ‘As for lions, [they] are ferocious animals.’

$$raion > wa < \sum / \text{PR}$$

$$X = moojuu$$

- (5) *kono hon wa muzukashii*  
 ‘As for this book, [it] is difficult.’

$$hon - kono > wa < \sum / \text{PR}$$

$$X = muzukashii$$

- (6) *watashi wa ikimasen*  
 ‘As for me, [I] won’t go.’ (but someone else probably will)

$$watashi > wa < \sum / \text{POL} / \text{NON} / \text{PR}$$

$$X = iku$$

For the third category, *wa* as an ‘emphatic particle’, Kawashima quotes the following example sentences, where the topic followed by *wa* either refers to the (direct) object of the verb, as in examples (7) and (8), is an adverb, as in example (9), is a particle, as in examples (10) and (11), or is a verb, as in example (12) and the second *wa* in (13).

For the first two of these sentences, where the topics *okane* and *shukudai* are supposed to refer to the direct objects of the verbs *harau* and *sumu*, it could be argued that the second valences of the verbs should be notated inside the mathematical descriptions by using the symbol ‘X’, in a similar way as it has been notated for the subjects in the example sentences (1) and (2) here above. This would yield the mathematical descriptions (b) for these two sentences. However, by inserting the symbol ‘X’ for a direct object, which is not mentioned in the sentence itself, the assumption would be made that a direct object has to be referred to, which need not always be the case, since a bivalent (or transitive) verb may very well appear

without having its second valence filled in. There are utterances where the (direct) objects of the actions expressed by the transitive verbs are not essential to the meaning, i.e. when the speaker's only intention is to express the action itself, as in 'Do not disturb me, I am reading'. Therefore, the descriptions (a) have been preferred. For the subject, however, even when it is not explicitly mentioned, it is a different matter, there is someone (or something) doing what the verb implies.

(7) *okane wa boku ga harau yo*  
 'As for the money, I'll pay [it].'

a)

$$okane > wa < \sum / PR > yo$$

$$boku = harau$$

\*b)

$$okane > wa < \sum / PR > yo$$

$$boku = [harau_1]$$

$$[harau_2]; X$$

(8) *shukudai wa moo sunda*  
 'As for homework, [I] have already finished [it]' (but I haven't finished doing other things)

a)

$$shukudai > wa < \sum / PA$$

$$X = sumu > moo$$

\*b)

$$shukudai > wa < \sum / PA$$

$$X = [sumu_1] > moo$$

$$[sumu_2]; X$$

(9) *itsumo wa basu de ikimasu*  
 'Usually, [I] go by bus.'  
 (as for whenever, [I] go by bus)

$$itsumo > wa < \sum / POL / PR$$

$$X = iku > [de_1]$$

$$[de_2]; basu$$

As already mentioned in the beginning of this chapter, *wa* may follow any other particle, except nominative *ga* and accusative *wo*. Makino&Tutsui point out that the particles *he* and *ni* marking location optionally may drop after inserting *wa*, whereas other case markers, such as *ni* marking time, agent, contact, and the particles *de*, *to*, *kara*, *made* or *yori* usually remain and form a double particle with *wa*.

When *wa* directly follows another particle, the entire phrase ‘NP + particle + *wa*’ is placed outside the situation, e.g.:

- (10) *Tanaka-san to wa yoku aimasu*  
 ‘I see Mr. Tanaka often.’  
 (as for Mr. Tanaka, [I] often meet [him])

$$\text{Tanaka} \cup \text{san} > \text{to} > \text{wa} < \sum / \text{POL} / \text{PR} \\ \text{X} = \text{au} > \text{yoi}$$

- (11) *ano hito to wa moo tsuki-aimasen*  
 ‘I’m not going to associate with that person anymore.’  
 (as for with that person, [I] am not going to associate anymore)

$$\text{hito} - \text{ano} > \text{to} > \text{wa} < \sum / \text{POL} / \text{NON} / \text{PR} \\ \text{X} = \text{tsuki} \cap \text{au} > \text{moo}$$

- (12) *moo nido to tanomi wa shinai kara sa*  
 ‘Look, I won’t ever ask you (for this favor) again, so...’

$$\sum / \text{INF} > \text{wa} < \sum / \text{PR} > \text{kara} > \text{sa} \\ \text{X} = \text{tanomu} > \text{to} < \text{ni} \cap \text{do} > \text{moo} \mid \text{X} = \text{nai} > \text{suru}$$

- (13) *kusuri wa mada nonde wa inai yo*  
 ‘As for the medication, [I] haven’t taken [it] yet.’

$$\text{kusuri} > \text{wa} < \sum / \text{GER} > \text{wa} < \sum / \text{PR} > \text{yo} \\ \text{X} = \text{nomu} > \text{mada} \mid \text{X} = \text{nai} > \text{iru}$$

Makino&Tutsui point out that topical *wa* does not appear in subordinate clauses, as can be observed in the next sentence:

- (14) *watashi ga /\*wa yonda hon wa Yukiguni desu*  
 ‘The book I read was *Snow Country*.’

$$\text{hon} \downarrow > \text{wa} < \sum / \text{POL} / \text{PR} \\ - \sum / \text{PA} \mid \text{X} = \text{Yukiguni} \\ \text{watashi} = \text{yomu}$$

### 7.1.2 contrastive *wa* -marking

Clancy&Downing (1987:26-29) write: “Most scholars who have worked on *wa* have noted cases in which the primary function of *wa* does not seem to be the marking of a thematic element, but rather the marking of a contrastive relation between the *wa*-bearing element and some other element, which may or may not receive explicit linguistic representation”. They

remark that the contrast will be felt more keenly if both participants in the opposition are explicitly expressed or if both participants enjoy roughly equal thematic status.

For the force with which the contrastive relation of *wa* merges Clancy&Downing name three factors:

1. the explicitness with which the participants in the opposition are represented
2. the degree of incompatibility between the activities or states which are opposed
3. the extent to which the participants can be seen as belonging to a group within which an opposition can be perceived

In the following examples from Makino&Tutsui (1995:518) for contrastive *wa*, the contrast is expressed by the fact that one verb is affirmative and the other verb is negated

- (15) *Sugita-san wa ikimasu ga watashi wa ikimasen*  
 ‘Mr. Sugita will go (there) but I won’t go.’  
 (as for Mr. Sugita, [he] will go but, as for me, [I] won’t go)

$$\begin{array}{ccc} \text{Sugita} \cup \text{san} > \text{wa} < \sum / \text{POL} / \text{PR} > \text{ga} < \text{watashi} > \text{wa} < \sum / \text{POL} / \text{NON} / \text{PR} > \\ & \text{X} = \text{iku} & \quad \quad \quad | \text{X} = \text{iku} \end{array}$$

- (16) *watashi wa biiru wa nomimasu ga sake wa nomimasen*  
 ‘I drink beer but don’t drink sake.’  
 (as for me, as for beer, [I] drink but, as for sake, [I] don’t drink)

$$\begin{array}{ccc} \text{watashi} > \text{wa} < \text{biiru} > \text{wa} < \sum / \text{POL} / \text{PR} > \text{ga} < \text{sake} > \text{wa} < \sum / \text{POL} / \text{NON} / \text{PR} > \\ & \text{X} = \text{nomu} & \quad \quad \quad | \text{X} = \text{nomu} \end{array}$$

Kawashima (1999:238-239) quotes the next sentence for the use of *wa* indicating a contrast between two topics which are two opposing states:

- (17) *hiru wa atsuku, yoru wa samui*  
 ‘Days are hot, and nights are cold.’  
 (as for days, [they] are hot, and as for nights, [they] are cold)

$$\begin{array}{ccc} \text{hiru} > \text{wa} < \sum / \text{INF} < \text{yoru} > \text{wa} < \sum / \text{PR} > \\ & \text{X} = \text{atsui} \quad | & \quad \quad \quad \text{X} = \text{samui} \end{array}$$

Makino&Tutsui (1995:518) cite two general rules for determining whether a given *wa* is topical or contrastive:

1. When more than one *wa* appears in a sentence, the first *wa* is usually understood to be the topic marker, the second *wa* is more contrastive than the first one, the third one is more contrastive than the second, and so on. Thus, in example (18), the first *wa* is a topic marker, whereas the second and third particles *wa* are considered to be contrastive. From this follows that a change in the word order of the noun phrases marked by *wa* would result in a shift of contrast.

- (18) *boku wa kyoo wa tenisu wa shinai*  
 ‘I won’t play tennis today.’  
 (as for me, as for today, as for tennis, [I] won’t play)

$$boku > wa < kyoo > wa < tenisu > wa < \sum / PR$$

$$X = nai > suru$$

2. When ‘X wa’ is pronounced with stress, it marks a contrastive element, e.g.:

- (19) *biiru wa nomimasu*  
 ‘(I don’t drink other drinks but) I drink beer.’  
 (as for beer, I do drink [it])

$$biiru > wa < \sum / POL / PR$$

$$X = nomu$$

### 7.1.3 *wa* at the end of a sentence

Although *wa* occurs in the sentence final position, it is not classified amongst the sentence final particles in this work, instead such occurrences of *wa* are analyzed as having the same basic function as other occurrences of *wa*, i.e. marking a topic, in this case a whole sentence; the only difference is that the second element following *wa* is not mentioned. Sentence final *wa* is usually not translated, but in order to refer to the (weak) assertive meaning of *wa* ‘yes’ is used here at the end of the statements in the English textual descriptions. Other sentence final particles such as *ne* and *yo* can co-occur with *wa*, which will be described in chapter 10.

Martin (2004:920-921) writes that the particle *wa* at the end of unstylized sentences is almost exclusively a woman’s item, and it helps to give female speech its characteristic feminine flavor. Makino&Tutsui describe *wa* at the sentence final position as “a sentence particle used in weak assertive and volitional sentences by a female speaker”.

- (20) *watashi mo ashita no paati ni iku wa*  
 ‘I’ll go to tomorrow’s party, too.’  
 (I, too, [I] shall go to tomorrow’s party, yes)

$$watashi > mo < \sum / PR > wa$$

$$X = iku > [ni_1]$$

$$[ni_2]; paati \downarrow$$

$$- ashita$$

- (21) *Ooki-san wa moo kaerimashita wa*  
 ‘Mr. Oki has already gone home.’  
 (as for Mr. Oki, [he] has already gone home, yes)

$$Ooki \cup san > wa < \sum / POL / PA > wa$$

$$X = kaeru > moo$$



Makino&Tutsui point out that *wa* can follow any declarative sentence, but cannot follow the volitional forms of verbs, as in example (22), nor can it be used in questions, as in (23b).

(22) \**watashi ga ikimashoo wa*  
'I will go.'

(23a) *Jakuson-san wa mada gakusei desu wa*  
'Mr. Jackson is still a student.'  
(as for Mr. Jackson, [he] is still a student, yes)

$Jakuson \cup san > wa < \sum / POL / PR > wa$   
 $X = gakusei > mada$

(23b) \**Jakuson-san wa gakusei desu ka wa*  
\* *Jakuson-san wa gakusei desu wa?*  
'Is Mr. Jackson a student?'

## 7.2 The particle *mo*

In the previous section it has been argued that *wa* in all its occurrences marks the topic of a sentence, placing the preceding phrase outside the domain and time frame of the situation that follows. For the particle *mo*, however, such a one-way analysis proved to be difficult, due to the fact that there are occurrences of *mo* which are embedded inside a sentence part in the situation. In such cases the noun phrases marked by *mo* cannot be analyzed as a topic markers. Therefore the decision was made to divide the occurrences of *mo* into two categories, viz. topical and non-topical. ‘NP *mo*’ is analyzed as being non-topical when it is embedded inside a part of the sentence, which only occurs in one construction, namely, when ‘NP *mo*’ is followed by *ga*, thus being part of the first valence of the verb. In all other occurrences ‘NP *mo*’ is analyzed as a topic and the phrase marked by *mo* is placed outside the frame of the situation that follows, with the implication that ‘when the proposition of this situation is true, the proposition of the preceding phrase marked by *mo* is true, too’.

Martin (2004:66-70) remarks that *mo* is usually translated as ‘even’ or ‘also’, with appropriate adjustment of ‘also’ to ‘either/neither’ in negative sentences, and that these two translations seem to correspond to two distinct uses of highlighting, namely, to call attention to the phrase in relationship with some other (‘also, too’) or all other (‘even’) similar phrases which may or may not be explicitly mentioned. Makino&Tutsui (1995:249-250) point out that, although there is a relation between the noun phrase marked by *mo* and the sentence that follows, the noun phrase marked by *mo* does not necessarily replace an element in the presupposed sentence, as can be seen in their example sentence (2b) here below.

This section on *mo* is divided into three sections, one for *mo* marking a topic, the second section is for *mo* in a non-topical function and in the last section the co-occurrence of the topical particles *wa* and *mo* will be described. Furthermore, subdivisions have been made within the first two main sections in order to discuss in their right order the classification and example sentences of Shudo (2002:15-20), with added comments and examples from Makino&Tutsui (1995:247-253) and Martin (2004:52-55).

### 7.2.1. *mo* marking a topic

#### 7.2.1.1 *mo* modifies a noun phrase

For this category Shudo defines three subtypes, namely:

- a) *mo* follows a noun phrase in the subject position, replacing *ga* (example 1c)
- b) *mo* follows a noun phrase in the object position, replacing *wo* (example 3)
- c) *mo* follows a noun phrase in the indirect object position (describes the destination of an activity), replacing *ni* or *he* (example 5)

For the analyses proposed in this work, this classification of Shudo yields two problems. One is the fact that, as has already been explained in section 5.1.11, I maintain that Japanese has no indirect objects, which makes the third subtype in this category unacceptable. The second and main problem that I have with this classification is the notion that something is being “replaced”. In the Introduction it has already been argued that any words that are supposed to be “omitted” from a sentence are not to be taken into account, because sentences should be analyzed in the form in which they are uttered or written, i.e. in what Martin calls the “surface structure”. By the same argument the assertion that one word is supposed to have

replaced another word is rejected. Furthermore, it is not clear to me on what grounds the assumption could be made that *mo* has replaced one particular particle. For instance, if one does accept the notion that *mo* replaces another particle, then why not choose *wa* as the particle that may have been replaced instead of *ga* or *wo*? This certainly seems to be the more logical assumption, since *wa* is also classified as a topical particle and is used in the same kinds of constructions.

In the mathematical description for sentence (1a), the noun phrase *Susan* marked by *ga* is placed in the position of the first valence of the predicate, i.e. to the left of the symbol ‘=’ in the situation; in (1b) *Susan wa* as a topic is placed outside the situation ‘someone goes to New York’, in the same manner as is done with *Susan mo* in example (1c). The only difference between (1b) and (1c) is that *mo* in (1c) adds the extra meaning ‘too’. According to Shudo *Susan mo* in example (1c) is in the “subject position”, however, as the description shows, this view is not supported here; instead *Susan mo* is placed in the topic position.

- (1a) *Susan ga Nyuuyooku ni itta*  
 ‘Susan went to New York.’

$$\sum / PA$$

$$Susan = iku > [ni_1]$$

$$[ni_2]; Nyuuyooku$$

- (1b) *Susan wa Nyuuyooku ni itta*  
 ‘As for Susan, [she] went to New York.’

$$Susan > wa < \sum / PA$$

$$X = iku > [ni_1]$$

$$[ni_2]; Nyuuyooku$$

- (1c) *Susan mo Nyuuyooku ni itta*  
 ‘Susan went to New York, too.’  
 (Susan, too, [she] went to New York)

$$Susan > mo < \sum / PA$$

$$X = iku > [ni_1]$$

$$[ni_2]; Nyuuyooku$$

Makino&Tutsui (1995:249) illustrate their statement that the noun phrase marked by *mo* does not necessarily replace the same element of the presupposed sentence by quoting the next two example sentences. In (2a) the speaker implies that his house is inconvenient (because the living room is small), and this implication is the presupposition of (2b), where the speaker elaborates on the inconvenience by naming something else that is inconvenient, too.

- (2a) *watashi no ie wa ima ga semai*  
 ‘The living room of my house is small.’  
 (as for my house, the living room is small)

$$ie \downarrow > wa < \sum / PR$$

– *watashi* | *ima = semai*

- (2b) *sore ni daidokoro mo fuben da*  
 ‘On top of that, the kitchen is inconvenient, too.’  
 (on top of that, the kitchen, too, [it] is inconvenient)

$$X > [ni_1] < daikoro > mo < \sum / PR$$

[*ni\_2*]; *sore* | X = *fuben*

For the following sentence quoted by Shudo as an example for ‘NP *mo*’ in the “object position” again a different analysis has been chosen here, namely with *sakana mo* in the topic position.

- (3) *sakana mo tabeta*  
 ‘[I] ate fish, too.’  
 (fish, too, [I] ate)

$$sakana > mo < \sum / PA$$

X = *taberu*

The previous sentence can also occur with the combination *sakana wo mo*, as in (4), albeit with a difference in meaning, as the descriptions show. In sentence (3) the topic is ‘fish, too’, whereas in (4) the topic is ‘eating fish, too’. Since *mo* does not precede the accusative particle *wo* it is not embedded in the second valence of the predicate and therefore, the whole phrase is topical. To connect *mo* and *sakana* to the first and second valence of the verb the symbols [ $X_1$ ] and [ $X_2$ ] are inserted, because the verb *taberu* appears only once in the example sentence and has been placed inside the situation in the mathematical description.

- (4) *sakana wo mo tabeta*  
 ‘[I] ate fish, too.’  
 ([eating] fish, too, [I] ate)

$$[X_1] > mo < \sum / PA$$

[ $X_2$ ]; *sakana* | X = *taberu*

As stated above, Shudo’s third subtype of the first category, i.e. *mo* following a noun phrase in the “indirect object” position “replacing” *ni*, is a classification that is rejected here; and besides, Shudo’s own specification of the indirect object position as: “describes the destination of an activity” seems to be more suited for a locative than for an indirect object. Although in the example sentence (5) quoted by Shudo as an example for this occurrence the

particle *ni* is left out, Shudo remarks that *ni* is not usually replaced by *mo* but co-occurs with *mo*, as in her example (8) here below.

- (5) *Yokohama mo itta*  
 ‘[I] went to Yokohama.’  
 (Yokohama, too, [I] went [there])

$$Yokohama > mo < \sum / PA$$

$$X = iku$$

### 7.2.1.2 *mo* follows a postpositional phrase, with five subtypes

In the constructions with these five subtypes the first valence of the bivalent particle *kara* preceding *mo* is not mentioned, therefore the symbol ‘X’ is inserted.

- a) *mo* follows a postpositional phrase which contains *kara*

- (6) *chuugoku kara mo daihyoo ga kita*  
 ‘A representative came from China, too.’  
 (from China, too, a representative came)

$$X > [kara_1] > mo < \sum / PA$$

$$[kara_2]; chuugoku \mid daihyoo = kuru$$

- b) *mo* follows a postpositional phrase which contains *ni*

- (7) *Juuji ni mo oyatsu ga deta*  
 ‘Snack was served at ten o’clock, too.’  
 (at ten o’clock, too, snack was served)

$$X > [ni_1] > mo < \sum / PA$$

$$[ni_2]; juu \cap ji \mid oyatsu = deru$$

- (8) *Yokohama ni mo itta*  
 ‘[I] went to Yokohama, too.’  
 (to Yokohama, too, [I] went [there])

$$X > [ni_1] > mo < \sum / PA$$

$$[ni_2]; Yokohama \mid X = iku$$

- (9) *watashi wa Murayama-san ni mo purezento wo ageru* (Makino&Tutsui 1995:248)  
 ‘I will give a present to Mr. Murayama, too.’  
 (as for me, to Mr. Murayama, too, [I] will give a present)

$$\begin{array}{l} \text{watashi} > \text{wa} < \text{X} > [\text{ni}_1] > \text{mo} < \sum / \text{PR} \\ [\text{ni}_2]; \text{Murayama} \cup \text{san} \mid \text{X} = [\text{ageru}_1] \\ [\text{ageru}_2]; \text{purezento} \end{array}$$

- c) *mo* follows a postpositional phrase which contains *de*

- (10) *Tookyoo de mo shiki wo ageta*  
 ‘We held a ceremony in Tokyo, too.’  
 (in Tokyo, too, [we] held the ceremony)

$$\begin{array}{l} \text{X} > [\text{de}_1] > \text{mo} < \sum / \text{PA} \\ [\text{de}_2]; \text{Tookyoo} \mid \text{X} = [\text{ageru}_1] \\ [\text{ageru}_2]; \text{shiki} \end{array}$$

- d) *mo* follows a postpositional phrase which contains *to*

- (11) *okusama to mo kinoo denwa de hanashita*  
 ‘I spoke with his wife on the phone yesterday, too.’  
 (to his wife, too, [I] spoke on the phone yesterday)

$$\begin{array}{l} \text{oku} \cup \text{sama} > \text{to} > \text{mo} < \sum / \text{PA} \\ \text{X} = \text{hanasu} > [\text{de}_1] > \text{kinoo} \\ [\text{de}_2]; \text{denwa} \end{array}$$

- e) *mo* follows a postpositional phrase which contains *he*

- (12) *Tanaka sensei he mo tegami wo kaita*  
 ‘I wrote a letter to Prof. Tanaka, too.’  
 (to Prof. Tanaka, too, [I] wrote a letter)

$$\begin{array}{l} \text{X} > [\text{he}_1] > \text{mo} < \sum / \text{PA} \\ [\text{he}_2]; \text{Tanaka} \cup \text{sensei} \mid \text{X} = [\text{kaku}_1] \\ [\text{kaku}_2]; \text{tegami} \end{array}$$

### 7.2.1.3 *mo* modifies a verb phrase, with three subtypes

- a) *mo* follows the infinitive form of a verb and is followed by a variant of *suru*

- (13) *nihongo wo yomi mo suru*  
 ‘[He] reads Japanese, too.’  
 (read Japanese, too, [he/she] does [it])

$$\begin{array}{l} \sum / \text{INF} > mo < \sum / \text{PR} \\ X = [yomu_1] \quad | \quad X = suru \\ [yomu_2]; nihon \cap go \end{array}$$

As the mathematical description for the following example sentence from Makino&Tutsui demonstrates, *mo* topicalizes the entire situation that precedes it, separating it from the situation that follows.

- (14) *Nanshi wa watashi no hanashi wo kiki mo shinai*  
 ‘Nancy doesn’t even listen to me.’  
 (as for Nancy, listen to my story, too, [she] does not do [it])

$$\begin{array}{l} Nanshi > wa < \sum / \text{INF} > mo < \sum / \text{PR} \\ X = [kiku_1] \quad | \quad X = nai > suru \\ [kiku_2]; hanashi \downarrow \\ - watashi \end{array}$$

- b) *mo* follows the copulative *de* (the adverbial form of the copula *da*) and is followed by a variant of *aru*

- (15) *gakusei de mo aru*  
 ‘[She] is also a student.’  
 (being a student, too, [he/she] is [it])

$$\begin{array}{l} \sum / \text{GER} > mo < \sum / \text{PR} \\ X = gakusei \quad | \quad X = aru \end{array}$$

- c) *mo* follows the (adverbial or infinitive) *-ku* form of an adjective and is followed by a variant of *aru*

- (16) *ureshiku mo aru*  
 ‘I am also happy.’  
 (being happy, too, [he/she] is [it])

$$\begin{array}{l} \sum / \text{INF} > mo < \sum / \text{PR} \\ X = ureshii \quad | \quad X = aru \end{array}$$

#### 7.2.1.4 *mo* follows the complementizer particle *to*

- (17) *sukoshi ranboo da to mo ieru*  
 ‘[We] can also say that it is a little violent.’  
 ([that] it is a little violent, too, [we] can say)

$$\sum /PR > to > mo < \sum /PR$$

$$X = ranboo > sukoshi \mid X = eru > Y$$

*iu*

#### 7.2.1.5 *mo* follows a subordinate clause

- (18) *kami wo kitte mo kawaii*  
 ‘She is cute having her hair cut.’  
 (having her hair cut, too, [she] is cute)

$$\sum /GER > mo < \sum /PR$$

$$X = [kiru_1] \mid X = kawaii$$

[kiru<sub>2</sub>]; *kami*

#### 7.2.1.6 *mo* appears in repeated usage

Shudo (2002:20) states that: “Although *mo* in the above usage is apparently the same lexical item as *mo* in the single usage, the linguistic construction of the repeated usage is quite different from that of the single usage. While the single usage *mo* indicates [that] the marked element has a corresponding element in the previous context which shares the same or a similar property, in the repeated usage the two elements marked by *mo* do not have such a corresponding element in the previous context, but correspond with each other.” She maintains that a sentence with repeated *mo* represents a set of two propositions.

Thus, in the example sentences (19, 20 and 21), the examples (a) are supposed to represent the set of the examples (b) and (c). From this line of reasoning it would follow that the first noun phrase in (19a), *Jon mo*, does not refer back to a previous context or element; instead it is supposed to correspond to the following noun phrase, whereas the second noun phrase, *Susan mo*, does refer back to *Jon mo*. Consequently, the second *mo* would be a topical particle, and the first non-topical. However, I maintain that there is also a possibility that prior knowledge or context would reveal that the first ‘NP *mo*’ does refer back to a third person who is not mentioned, but who is also doing something similar as going to New York. However, such considerations are interpretations and as such they are not expressed in the semantic descriptions in this work; furthermore, for the descriptions proposed here it makes no difference, since due to the fact that the last *mo* is topical, all the preceding elements are placed outside the domain of the situation that follows.



- (19a) *Jon mo Susan mo Nyuuyooku ni itta*  
 ‘Both John and Susan went to New York.’  
 (John, too, Susan, too, [they] went to New York.)

*Jon > mo < Susan > mo < ∑ / PA*  
 $X = iku > [ni_1]$   
 $[ni_2]; Nyuuyooku$

- (19b) *Jon ga Nyuuyooku ni itta*  
 ‘John went to New York.’

$∑ / PA$   
 $Jon = iku > [ni_1]$   
 $[ni_2]; Nyuuyooku$

- (19c) *Susan mo Nyuuyooku ni itta*  
 ‘Susan went to New York, too.’  
 (Susan, too, [she] went to New York)

*Susan > mo < ∑ / PA*  
 $X = iku > [ni_1]$   
 $[ni_2]; Nyuuyooku$

- (20a) *Biru wa sake mo tabako mo yaranai*  
 ‘Bill neither drinks nor smokes.’  
 (as for Bill, [drinking] sake, too, [smoking] cigarettes, too, [he] does not do)

*Biru > wa < sake > mo < tabako > mo < ∑ / PR*  
 $X = nai > yaru$

- (20b) *Biru wa sake wo yaranai*  
 ‘Bill doesn’t drink.’  
 (as for Bill, [he] does not drink sake)

*Biru > wa < ∑ / PR*  
 $X = nai > [yaru_1]$   
 $[yaru_2]; sake$

- (20c) *Biru wa tabako mo yaranai*  
 ‘Bill doesn’t smoke either.’  
 As for Bill, [smoking] cigarettes, too, [he] does not do)

$$\text{Biru} > \text{wa} < \text{tabako} > \text{mo} < \sum / \text{PR}$$

$$\text{X} = \text{nai} > \text{yaru}$$

- (21a) *Samu kara mo Jiru kara mo tegami wo moratta*  
 ‘I received letters from both Sam and Jill.’  
 (from Sam, too, from Jill, too, [I] received letters)

$$\text{X} > [\text{kara}_1] > \text{mo} < \text{X} > [\text{kara}_1] > \text{mo} < \sum / \text{PA}$$

$$[\text{kara}_2]; \text{Samu} \quad | \quad [\text{kara}_2]; \text{Jiru} \quad | \quad \text{X} = [\text{morau}_1]$$

$$[\text{morau}_2]; \text{tegami}$$

- (21b) *Samu kara tegami wo moratta*  
 ‘I received a letter from Sam.’

$$\sum / \text{PA}$$

$$\text{X} = [\text{morau}_1] \quad > [\text{kara}_1]$$

$$[\text{morau}_2]; \text{tegami} \quad | \quad [\text{kara}_2]; \text{Samu}$$

- (21c) *Jiru kara mo tegami wo moratta*  
 ‘I received a letter from Jill, too.’  
 (from Jill, too, [I] received a letter)

$$\text{X} > [\text{kara}_1] > \text{mo} < \sum / \text{PA}$$

$$[\text{kara}_2]; \text{Jiru} \quad | \quad \text{X} = [\text{morau}_1]$$

$$[\text{morau}_2]; \text{tegami}$$

### 7.2.1.7 ‘even’-like usages of *mo*

Shudo (2002:24) points out that in some sentences, the *mo* construction generates a meaning translatable by English ‘even’. Makino&Tutsui (1995:250) quote the following examples for occurrences of *mo* in the meaning ‘even’, i.e. *mo* as “a marker indicating emphasis”:

- (22) *Guree-san wa konna muzukashii kanji mo yomeru*  
 ‘Mr. Gray can read even difficult *kanji* like this.’  
 (as for Mr. Gray, such difficult *kanji*, too, [he] can read)

$$\text{Guree} \cup \text{san} > \text{wa} < \text{kanji} - \text{muzukashii} - \text{konna} > \text{mo} < \sum / \text{PR}$$

$$\text{X} = \text{eru} > \text{Y}$$

$$\text{yomu}$$

- (23) *watashi wa nani mo tabenakatta*  
 ‘I didn’t eat anything.’  
 (as for me, something, too, [I] didn’t eat)

$watashi > wa < nani > mo < \sum / PA$   
 $X = nai > taberu$

### 7.2.1.8 *mo* follows a numerical quantifier

In the following example sentence from Shudo, the numeral quantifier marked by *mo* directly follows the accusative particle *wo*. Consequently, the phrase is not analyzed as being embedded in the second valence of the predicate; instead *mo* is described as marking the entire preceding part as a topic, which necessitates the insertion of the symbols [X<sub>1</sub>] and [X<sub>2</sub>] to refer to the predicate of the situation that follows.

- (24) *okozukai wo ichiman en mo moratta*  
 ‘[I] received an allowance of as much as 10.000 yen.’  
 ([receiving] an allowance to the extent of even 10.000 yen, [I] received)

$[X_1] > ichiman \cap en > mo < \sum / PA$   
 $[X_2]; okozukai \quad | X = morau$

Makino&Tutsui’s examples (1995:251) for this construction of quantifier + *mo* are:

- (25) *watashi wa kanji wo hassen mo shitte iru*  
 ‘I know as many as eight thousand *kanji*.’  
 (as for me, [knowing] *kanji* to the extent of even 8000, [I] know)

$watashi > wa < [X_1] > has \cap sen > mo < \sum / PR$   
 $[X_2]; kanji \quad | X = iru \supset shiru$

- (26) *watashi wa kanji wo hitotsu mo shiranai*  
 ‘I don’t know even one *kanji*.’  
 (as for me, [knowing] *kanji* to the extent of even one, [I] don’t know)

$watashi > wa < [X_1] > hito \cap tsu > mo < \sum / PR$   
 $[X_2]; kanji \quad | X = nai > shiru$

### 7.2.2 *mo* in a non-topical function

When the noun phrase marked by *mo* is directly followed by the nominative particle *ga*, it is embedded in the first valence of the predicate and the function is non-topical. Martin (2004:55), who remarks that such co-occurrences of *ga* and *mo* are rare, quotes a few constructions where *mo* is directly followed by nominative *ga*, as in the fixed expression *dare mo kare mo ga* ‘anybody and everybody’ and in the following example:

- (27) *nisen-nin mo ga atsumeru*  
 ‘All of 2000 people gather.’

$$\sum / \text{PR}$$

$$nisen \cap nin > mo = atsumeru$$

Furthermore, Martin gives the following example for the construction *dare de mo ga* ‘anybody’ or, with negative predicates, ‘nobody’; in this construction *de* is analyzed as the gerund form of the copula.

- (28) *dare de mo ga keiken suru koto ga dekiru*  
 ‘Anybody can experience it.’  
 (being who [ever] also/even can experience it)

$$\sum / \text{PR}$$

$$koto \downarrow = dekiru$$

$$- \sum / \text{PR}$$

$$\sum / \text{GER} > mo = keiken \cap suru$$

$$X = dare$$

However, when *dare mo* occurs without the particle *ga*, it is not embedded in the first valence of the verb and is analyzed as a topic, e.g.:

- (29) *dare mo sono koto wo shirimasen*  
 ‘Nobody knows about it.’  
 (who [ever] too/even, [he/she] does not know [it])

$$dare > mo < \sum / \text{POL} / \text{NON} / \text{PR}$$

$$X = [shiru_1]$$

$$[shiru_2]; koto - sono$$

### 7.2.3 the co-occurrence of *wa* and *mo*

Shudo (2002:19-20) states that: “It should be noted that the co-occurrence of *wa* and *mo* in a phrase would result in ungrammatical sentences. This prohibition of co-occurrence of *wa* and *mo* strongly suggests that there is some conflict in their meanings.” Martin (2004:53-54), however, although agreeing that *wa* and *mo* are opposites which are expected to be mutually incompatible, does quote examples of such co-occurrences of *mo* and *wa*, dividing them into two subtypes:

- a) when *mo* is part of a generalizing expression built on an indeterminate, e.g.

- (30) *dare ni de mo wa dekimasen*  
 ‘Not just anybody can do it.’  
 (as for whoever it is, too, [he] cannot do [it])

$$\sum / \text{GER} > mo > wa < \sum / \text{POL} / \text{NON} / \text{PR}$$

$$X = [ni_1] \quad | \quad X = \text{dekiru}$$

$$[ni_2]; \text{dare}$$

- (31) *doko ni de mo wa utte imasen*  
 ‘They are not sold just anyplace.’  
 (as for wherever it is, too, [they] don’t sell [it])

$$\sum / \text{GER} > mo > wa < \sum / \text{POL} / \text{NON} / \text{PR}$$

$$X = [ni_1] \quad | \quad X = \text{iru} \supset \text{uru}$$

$$[ni_2]; \text{doko}$$

- b) with generalized number words, e.g.

- (32a) *ikutsu mo nai*  
 ‘We haven’t got many of them.’  
 (many, too, [there] are not)

$$ikutsu > mo < \sum / \text{PR}$$

$$X = \text{nai}$$

- (32b) *ikutsu mo wa nai*  
 ‘We do not have an indefinite number of them (but some).’  
 (as for many, too, [there] are not)

$$ikutsu > mo > wa < \sum / \text{PR}$$

$$X = \text{nai}$$

### 7.3 The particle *sae*

The particle *sae* is similar in meaning and function to the particle *mo*; *sae*, too, is analyzed as having a topical function in the majority of its occurrences and a non-topical function in constructions where it is embedded in the first or second valence of the verb or when *sae* follows a numeral quantifier.

Martin (2004:73-74) classifies three meanings for *sae*: the “basic” meaning ‘additionally’, the “more frequent” meaning ‘even’ and a third meaning ‘(if) just’. Makino&Tutsui (1995:369) list two separate meanings for *sae*: the meaning ‘even’, used in non-conditional clauses, and the meaning ‘only’, which is used in conditional clauses.

In my view, there is only one basic meaning for *sae* and the variations or nuances of this meaning are dependent on the meanings of the other sentence parts, rather than on the meaning of *sae* on its own. For this basic meaning of *sae* the word ‘even’ is used in the English textual descriptions, because this word expresses the idea of ‘too’ as well as placing more stress on it, thus distinguishing it from the particle *mo*.

This section about *sae* is divided into two main parts, namely, for *sae* marking a topic and for *sae* in a non-topical function. In order to quote the example sentences and arguments of Martin and Makino&Tutsui in their right order, a subdivision has been made following the classification of Makino&Tutsui.

#### 7.3.1 *sae* in a topical function

##### 7.3.1.1 *sae* in the meaning ‘even’, ‘additionally’

Martin writes that in this meaning *sae* can be followed by *mo* or be replaced by the more literary synonym *sura*, whereas in the other meaning ‘only’ (see 7.3.1.2.) *sae* can be used but neither *sae mo* nor *sura (mo)* will be accepted. He describes *sae* in the meaning ‘even’ as a stronger equivalent of *mo* and *sae mo* as being used for still heavier emphasis.

Makino&Tutsui inform us that *sura* can replace *sae* except in conditional clauses.

The first two example sentences in this section are quoted from Martin, who attaches the meaning ‘additionally, too’ to these occurrences of *sae*. The third sentence is given by Makino&Tutsui as an example of *sae* in a non-conditional sentence, with the meaning ‘even’. However, sentence (2) from Martin and example (3) from Makino&Tutsui are very similar in structure, in both cases *sae* directly follows another case particle; and since the form is the same, it is difficult to attach different meanings to these occurrences of *sae*. In my view, sentence (3) could also be translated as ‘‘Researchers from America, **too**, visit this lab’’; or equally possible, Martin’s example could be interpreted as having the meaning ‘As for Japanese, **even** here it is taught’. Only by interpretation or contextual (prior) knowledge could it be established which of the two meanings is intended by the speaker or writer, factors which are not taken into consideration in the semiotactic analyses proposed here. Therefore, as the mathematical descriptions show, these two occurrences of *sae* are analyzed in the same way.

- (1) *michi ga kurai ue ni ame sae furidashita*  
 ‘The road was dark and on top of that it started to rain, too.’  
 (besides the road was dark, even rain, [it] began to fall)

$$\begin{aligned}
 X > [ni_1] > ame > sae < \sum / PA \\
 [ni_2]; ue \downarrow \quad | X = furi \cap dasu \\
 - \sum / PR \\
 michi = kurai
 \end{aligned}$$

- (2) *nihongo wa koko de sae oshiete imasu*  
 ‘Japanese is taught here too’  
 (as for Japanese, even here, [it] is being taught)

$$\begin{aligned}
 nihon \cap go > wa < X > [de_1] > sae < \sum / POL / PR \\
 [de_2]; koko \quad | X = iru \supset oshieru
 \end{aligned}$$

- (3) *kono kenkyuujo ni wa Amerika kara sae kenkyuusha ga kuru*  
 ‘Researchers even from America visit this lab.’  
 (as for in this lab, even from America, researchers come)

$$\begin{aligned}
 X > [ni_1] > wa < X > [kara_1] > sae < \sum / PR \\
 [ni_2]; kenkyuu \cap jo - kono \quad | \quad [kara_2]; Amerika \quad | \quad kenkyuu \cap sha = kuru
 \end{aligned}$$

Whereas in sentence (2) here above *de* has been analyzed as a particle denoting a location, in the next example from Makino&Tutsui, *de* is analyzed as the gerund form of the copula *desu* ‘to be’.

- (4) *sono uta wa kodomo de sae shitte iru*  
 ‘Even children know that song.’  
 (as for that song, even being children, [one] knows [it])

$$\begin{aligned}
 uta - sono > wa < \sum / GER > sae < \sum / PR \\
 X = kodomo \quad | X = iru \supset shiru
 \end{aligned}$$

- (5) *kanojo wa gendai nihongo wa mochiron koten sae yomeru*  
 ‘She can read even classical Japanese, not to mention modern Japanese.’  
 (as for her, as for modern Japanese, of course, even classical Japanese, [she] can read)

$$\begin{aligned}
 kanojo > wa < gendai \cap nihon \cap go > wa < mochiron > koten > sae < \sum / PR \\
 X = eru > Y \\
 yomu
 \end{aligned}$$

When *sae* and *mo* co-occur, both *sae* and *mo* are analyzed as topical particles; *sae*, directly following the noun phrase, marks this NP as a topic, while *mo* marks the preceding phrase ‘NP *sae*’ as a topic.

Kaiser et al. (2001:437) write that in both positive and negative sentences, ‘NP *sae mo*’ is often used after other noun phrases marked by *mo* and that in such cases the emphasis is on the noun phrase to which *sae mo* is attached. e.g.:

- (6) *sono ie ni wa mado-garasu mo doa mo yuka sae mo garandoo da*  
 ‘The house is completely bare, with no window-panes, no doors, and not even any floor.’  
 (as for in that house, window-panes too, doors too, even a floor, too, [it] is empty [of])

$X > [ni_1] > wa < mado \cap garasu > mo < doa > mo < yuka > sae > mo < \sum / PR$   
 $[ni_2]; ie - sono$  |  $X = garandoo$

### 7.3.1.2 *sae* in the meaning ‘(if) just’, ‘(if) only’, ‘as long as’

According to Martin (2004:73-4), the particle *sae* in this meaning is used to narrow the focus on the adjunct – or on the nucleus itself – in anticipation of the provisionalization of the nucleus, as in:

- (7) *kare no ie he sae ikeba wakaru deshoo*  
 ‘If we just go to his house we can find out.’  
 (even to his house, provided that [we] go [there], [we] will understand)

$X > [he_1] > sae < \sum / OPT < \sum / POL / SUB$   
 $[he_2]; ie \downarrow$  |  $X = iku$  |  $X = wakaru$   
 – *kare*

Makino&Tutsui write that the use of *sae* in the meaning ‘only’ occurs in conditional clauses, for which they give examples with the verb forms *-tara* and *-eba*. Although in conditional and provisional constructions *sae* is commonly translated as ‘if only, if just, as long as’, the question arises whether this meaning is expressed by *sae* itself or by these verb forms that it is combined with. I maintain that the latter is the case, that there is only one basic meaning for *sae* and the extra nuance of meaning is added by other parts of the sentence.

- (8) *te wo age sae sureba keikan ga tonde kuru*  
 ‘If you just raise your hand, a policeman will rush to you.’  
 (even raise your hand, provided that [you] do [it], a policeman will come running)

$\sum / INF > sae < \sum / OPT < \sum / PR$   
 $X = [ageru_1]$  |  $X = suru$  |  $keikan = kuru \supset tobu$   
 $[ageru_2]; te$



- (9) *sono shigoto sae katazuitara ato wa raku na n desu*  
 ‘If we (can) only finish this work, the rest will be easy.’  
 (even this work, as for after if [you] finish, [it] will be the situation that it is easy)

$$\begin{array}{c}
 \textit{shigoto} - \textit{sono} > \textit{sae} < \sum / \textit{COND} > \textit{ato} > \textit{wa} < \sum / \textit{POL} / \textit{PR} \\
 \text{X} = \textit{katazuku} \qquad \qquad \qquad | \text{X} = \text{Y} \\
 \qquad \qquad \qquad \qquad \qquad \qquad \qquad \qquad \qquad \textit{raku}
 \end{array}$$

### 7.3.2 *sae* in a non-topical function

Makino&Tutsui (1995:366) inform us that the particles *ga* and *wo* do not co-occur with *sae*, that the directional particles *he* and *ni* optionally precede *sae* and that other case particles must precede *sae*. Martin (2002:73) however, although admitting that typically *ga* will drop when *sae* is added, has found a few occurrences of ‘NP *sae ga*’, as in example sentence (10). Martin also points out that *sae mo ga* and *sae wo* may rarely occur, but the combinations *ga sae* and *wo sae* apparently are not used.

- (10) *Tanaka-san sae ga soo iu n desu kara*  
 ‘Well since even Mr. Tanaka says so...’  
 (because it is the situation that even Mr. Tanaka says so)

$$\begin{array}{c}
 \sum / \textit{POL} / \textit{PR} > \textit{kara} \\
 \text{X} = \sum / \textit{PR} \\
 \textit{Tanaka} \cup \textit{san} > \textit{sae} = \textit{iu} > \textit{soo}
 \end{array}$$

#### 7.4 The particle *made* marking a topic

According to Martin (2004:72), a place word followed by *made* seems to have at least two interpretations: one is a simple equivalent to the allative *he* or *ni* and the other is a focus particle, meaning ‘all the way to’ or ‘even to’. The examples quoted in this section are presented by Martin as examples for the use of *made* as a particle of focus, which he translates as ‘even’. In this work most of these occurrences of *made* are classified as having a non-topical function; the only occurrences of *made* that are analyzed as topic-markers are when it refers to first or second valence of the predicate, as in the examples (3) and (4a) here below.

Martin quotes example (1) and states that *made* in this sentence may be analyzed as an allative particle, as in (1a) or as a particle of focus, as in (1b), and that the latter might be regarded as an optional reduction of *he made* in (2). Since the difference between (1a) and (1b) cannot be recognized by the one form, but could only be determined by interpretation or contextual knowledge, in this study the description (a) for non-topical *made* is preferred, for example (1) as well as for example (2).

- (1) *asoko made iku*  
 (a) ‘I will go over there.’

$$\begin{array}{l} \sum / \text{PR} \\ X = iku > [made_1] \\ \quad [made_2]; asoko \end{array}$$

- (b) ‘I will go even (or all the way) over there.’

$$\begin{array}{l} asoko > made < \sum / \text{PR} \\ \quad X = iku \end{array}$$

- (2) *asoko he made iku*

a)

$$\begin{array}{l} \sum / \text{PR} \\ X = iku > [made_1] \\ \quad [made_2]; [he_1] \\ \quad \quad [he_2]; asoko \end{array}$$

b)

$$\begin{array}{l} X > [he_1] > made < \sum / \text{PR} \\ \quad [he_2]; asoko \quad | \quad X = iku \end{array}$$

In the next sentence, due to the absence of the subject marker *ga*, *made* is analyzed as having a topical function when the meaning expressed by the English translation is intended; the analysis of *made* as non-topical allative particle would result in the meaning ‘go up to the point where the children are’.

- (3) *Akachan made ikimashita*  
 ‘We all went, including the children.’  
 (up to the children, [we] went)

$$akachan > made < \sum / POL / PA$$

$$X = iku$$

In the following examples from Martin (2004:213), *made* follows the particle *wo* in (4a) and therefore it is analyzed as being topical; in (4b) *Hanoi made* is followed by *wo* and is analyzed as second valence of the predicate.

- (4a) *Hanoi wo made bakugeki shita*  
 ‘(They) bombed even Hanoi’  
 ([bombing] up to Hanoi, [they] bombed)

$$[X_1] > made < \sum / PA$$

$$[X_2]; Hanoi \mid X = bakugeki \cap suru$$

- (4b) *Hanoi made wo bakugeki shita*  
 ‘(They) bombed every place including Hanoi’  
 ([they] bombed up to Hanoi)

$$\sum / PA$$

$$X = [bakugeki \cap suru_1]$$

$$[bakugeki \cap suru_2]; [made_1]$$

$$[made_2]; Hanoi$$

According to Martin (2004:71), *made* can occur before or after case particles other than *ga* or *wo*, such as in combinations with the particle *ni*. He writes that in the following sentences *made ni* in (5a) means “much the same thing” as *ni made* in (5b). However, for the examples (6), Martin maintains that a time word + *made ni* often means ‘by (the time)’ and a time word + *ni made* means ‘even at (the time)’; the translations given by Martin for these sentences seem to imply that the occurrences of *made* in (5a) and (5b) should be analyzed as being topical, whereas for examples (6) only (6b) is considered to be topical while (6a) is non-topical. However, I could find no criteria to determine such a difference in function for the same form; therefore in all these cases *made* is analyzed as being non-topical here.

- (5a) *kodomo made ni kureta*  
 ‘You gave some to even the child.’  
 ([you] gave [something] to - up to the child)

$$\sum / \text{PA}$$

$$X = \textit{kureru} > [ni_1]$$

$$[ni_2]; [made_1]$$

$$[made_2]; \textit{kodomo}$$

- (5b) *kodomo ni made kureta*  
 ‘You gave some even to the child.’  
 ([you] gave [something] up to - to the child)

$$\sum / \text{PA}$$

$$X = \textit{kureru} > [made_1]$$

$$[made_2]; [ni_1]$$

$$[ni_2]; \textit{kodomo}$$

- (6a) *yoji made ni dekiru*  
 ‘It will be done by four o’clock.’  
 ([one] can do [it] at [a time] - up to four o’clock)

$$\sum / \text{PR}$$

$$X = \textit{dekiru} > [ni_1]$$

$$[ni_2]; [made_1]$$

$$[made_2]; \textit{yoji}$$

- (6b) *asa yoji ni made kane ga naru*  
 ‘The bell rings even at four in the morning.’  
 (the bell rings up to - at four in the morning)

$$\sum / \text{PR}$$

$$\textit{kane} = \textit{naru} > [made_1]$$

$$[made_2]; [ni_1]$$

$$[ni_2]; \textit{asa} \cap \textit{yoji}$$

The particle *made* following the particle *kara* in the next example from Martin gets the same description as *ni made*:

- (7) *Toohoku ya Kansai kara made fan ga oshi-kakete kita kaijoo*  
 ‘the auditorium to which fans had come crowding in all the way from the Northeast  
 and Kansai even’  
 (the auditorium [to which] fans had come crowding up to - from Toohoku and  
 Kansai)

*kaijoo* ↓

– ∑ / PA

*fan = kuru* ⊃ *oshi* ∩ *kakeru* > [*made*<sub>1</sub>]

[*made*<sub>2</sub>]; [*kara*<sub>1</sub>]

[*kara*<sub>2</sub>]; *Toohoku* > *ya* < *Kansai*

## 8 The restrictive particles

The particles that are analyzed in this chapter are *shika*, *dake*, *bakari*, *hodo*, *kurai* (*gurai*) and *yoru*. The similarity in function and meaning between these six particles lies in the fact that, like the topical particles *mo* and *sae*, they can be used in a topical or in a non-topical function and they all, in one way or the other, indicate that the statement about something is restricted to something else.

Bloch (1970:53-54) includes all these particles except *kurai*, in a larger category of ‘referent particles’ and attaches the following meanings to them: *shika* ‘only, nothing but’, *dake* ‘only’, *bakari* ‘just, nothing but’, *hodo* ‘to the extent of, as much as’, and *yoru* ‘more than’. Martin (2004:90-101) writes that restrictive and quasi-restrictive particles will attach to a noun to form a single phonological phrase, yet permit the noun to be modified by an adnominalized sentence or to be conjoined with another noun.

In this section the restrictive particles are divided into two categories, viz. marking a topic and having a non-topical function.

### 8.1 The particle *shika*

The particle *shika* marks the topic of the sentence in the majority of its occurrences, a number of which will be analyzed in section 8.1.1 here below. When the noun phrase marked by *shika* is embedded inside a sentence part, it is analyzed as being non-topical; such occurrences, however, are rare, as will be explained in section 8.1.2. For the textual descriptions for all occurrences of *shika* the English phrase ‘being excluded’ has been chosen to refer to what is considered to be the basic meaning of *shika*.

#### 8.1.1 *shika* marking a topic

Makino&Tutsui (1995:398-401) define *shika* as a particle which marks an element X when nothing but X makes the expressed proposition true, adding that *shika* always occurs with negative predicates. In the following sentences quoted from Makino&Tutsui, ‘NP *shika*’ is analyzed as a topic and placed outside the frame of the situation in the mathematical descriptions. Due to the negation of the predicate this was found to be the only option, because placing the noun phrase marked by *shika* in the position of the first valence of the predicate would render the meaning that this noun phrase does not perform the act stipulated by the verb, whereas, on the contrary, s/he is the only one who does.

- (1) *Toda-san shika tabako wo suwanai*  
‘No one but Mr. Toda smokes.’  
(Mr. Toda being excluded, [people] do not smoke)

$$\begin{aligned} \textit{Toda} \cup \textit{san} > \textit{shika} < \sum / \textit{PR} \\ X = \textit{nai} > [\textit{suu}_1] \\ [\textit{suu}_2]; \textit{tabako} \end{aligned}$$

- (2) *watashi wa nihongo shika shiranai*  
 ‘I know nothing but Japanese.’  
 (as for me, Japanese being excluded, [I] do not know)

$$\text{watashi} > \text{wa} < \text{nihon} \cap \text{go} > \text{shika} < \sum / \text{PR}$$

$$X = \text{nai} > \text{shiru}$$

- (3) *sore wa Eguchi-san ni shika hanashite inai*  
 ‘I haven’t told it to anybody but Mr. Eguchi.’  
 (as for that, to Mr. Eguchi being excluded, [I] have not been telling [it])

$$\text{sore} > \text{wa} < X > [\text{ni}_1] > \text{shika} < \sum / \text{PR}$$

$$[\text{ni}_2]; \text{Eguchi} \cup \text{san} \mid X = \text{nai} > \text{iru} \supset \text{hanasu}$$

- (4) *soko wa kuruma de shika ikenai*  
 ‘You can go there only by car.’  
 (as for there, by car being excluded, [you] cannot go)

$$\text{soko} > \text{wa} < X > [\text{de}_1] > \text{shika} < \sum / \text{PR}$$

$$[\text{de}_2]; \text{kuruma} \mid X = \text{nai} > \text{eru} > Y$$

$$\text{iku}$$

- (5) *Tamura-san wa sarada shika tabenakatta*  
 ‘Mr. Tamura ate only salad.’  
 (as for Mr. Tamura, salad being excluded, [he] didn’t eat)

$$\text{Tamura} \cup \text{san} > \text{wa} < \text{sarada} > \text{shika} < \sum / \text{PA}$$

$$X = \text{nai} > \text{taberu}$$

- (6) *watashi wa Yamada-san to shika hanashi wo shinai*  
 ‘I talk only with Mr. Yamada.’  
 (as for me, with Mr. Yamada being excluded, [I] do not have a conversation)

$$\text{watashi} > \text{wa} < \text{Yamada} \cup \text{san} > \text{to} > \text{shika} < \sum / \text{PR}$$

$$X = \text{nai} > [\text{suru}_1]$$

$$[\text{suru}_2]; \text{hanashi}$$

Martin (2004:76-81) also points out that the particle *shika* is peculiar in that it is always followed later in the sentence by a negativization of the nucleus of the adjunct to which it is attached. For this purpose ‘negative’ includes rhetorical questions and the expression *dame da* ‘is unsatisfactory, ‘is no good’, as in the following example:

- (7) *kono hon shika dame da*  
 ‘Only this book will do.’  
 (this book being excluded, [it] is no good)

$$\begin{aligned} hon - kono > shika < \sum / PR \\ X = dame \end{aligned}$$

Furthermore, Martin remarks that \*NP *shika da* is ungrammatical even when it is embedded in a negative (e.g. \*NP *shika da to wa iwanai*) and that under certain circumstances the negative can be delayed and put on a predicate later than the one to which the *shika*-marked adjunct is attached, e.g.:

- (8) *watashi shika kuru tsumori wa arimasen*  
 ‘Only I am intending to come.’  
 (I being excluded, as for the intention to come, [there] is not)

$$\begin{aligned} watashi > shika < tsumori \downarrow > wa < \sum / POL / PR \\ - \sum / PR \mid X = aru \\ X = kuru \end{aligned}$$

- (9) *namae shika kaku hitsuyoo wa nai*  
 ‘It is only necessary to write one’s name.’  
 (the name being excluded, as for the need to write, [it] is not)

$$\begin{aligned} namae > shika < hitsuyoo \downarrow > wa < \sum / PR \\ - \sum / PR \mid X = nai \\ X = kaku \end{aligned}$$

In the following example sentences from Martin and Makino&Tutsui, *shika* directly follows the accusative particle *wo*; as a result *shika* is not analyzed as being embedded in the second valence of the verb, as would have been the case for the (non-occurring) phrase \*‘NP *shika wo*’. Therefore, the construction ‘NP *wo shika*’ is analyzed as a topic, and as a result the second valence of the predicate is placed outside the time frame of the situation, as the mathematical descriptions for these sentences show.

- (10) *heitai wo shika oshieta koto wa nai*  
 ‘I have taught none but soldiers.’  
 (as for the fact that, [teaching] soldiers being excluded, [I] taught, [there] is not)

$$\begin{aligned} [X_1] > shika < koto \downarrow > wa < \sum / PR \\ [X_2]; heitai \mid - \sum / PA \mid X = nai \\ X = oshieru \end{aligned}$$



- (11) *koohii wo shika nomanakatta kara*  
 ‘I only had coffee.’  
 ([drinking] coffee being excluded, [I] did not drink, so...)

$$[X_1] > shika < \sum / PA > kara$$

$$[X_2]; koohii \mid X = nai > nomu$$

In Makino&Tutsui’s next example (1995:399) *shika* is directly preceded by a numeral qualifier, which follows the noun phrase marked by accusative *wo*. Again, *shika* is not embedded in the second valence and is topical in function. It is not a situation where the ‘eating’ is limited to rice, but the ‘eating of rice’ is limited to ‘one bowl’.

- (12) *watashi wa gohan wo ippai shika tabenakatta*  
 ‘I had only one bowl of rice.’  
 (as for me, [eating] rice, one bowl being excluded, [I] did not eat)

$$watashi > wa < [X_1] > ip \cap pai > shika < \sum / PR$$

$$[X_2]; gohan \mid X = nai > taberu$$

Martin (2004:82) writes that the word *shika* also occurs as “a postadnominal, roughly the equivalent to *hoka* [*wa*] ‘other than’; it is always followed by a negative, typically *nai* or *shikata ga nai*”, e.g.:

- (13) *tabenakereba shinde shimau shika nai*  
 ‘Unless you eat you’re bound to die.’  
 (provided [you] don’t eat, [you] end up dying being excluded, [there] is not)

$$\sum / OPT < \sum / PR > shika < \sum / PR$$

$$X = nai > taberu \mid X = shimau \supset shinu \mid X = nai$$

- (14) *kangaeru wakamono wo ooen suru shika nai*  
 ‘One cannot help but support the young person who is using his head.’  
 (supporting young people who think being excluded, [there] is not)

$$\sum / PR > shika < \sum / PR$$

$$X = [ooen \cap suru_1] \mid X = nai$$

$$[ooen \cap suru_2]; waka \cap mono \downarrow$$

$$- \sum / PR$$

$$X = kangaeru$$

- (15) *soo suru shika shikata ga nai*  
 ‘That’s all you can do.’  
 (doing thus being excluded, a way to [things] does not exist)

$$\sum / \text{PR} > shika < \sum / \text{PR}$$

$$X = suru > soo \mid shi \cap kata = nai$$

### 8.1.2 *shika* in a non-topical function

Martin (2004:79) informs us that he could find no examples of *\*shika wo* *\*shika wa* nor of *\*ga shika*, but he found a few rare occurrences of ‘NP *shika ga*’. These are the only cases when *shika* should be analyzed as having a non-topical function because in these occurrences it is embedded in the first valence of the predicate. For such an occurrence of *shika* Martin quotes only one example sentence, which he himself describes as being “apparently acceptable, if a bit strange”:

- (16) [*sakusha no me ni shibararete iru n desu kara*], *sakusha ni mi-yaburarete jinbutsu bakari shika ga dete konai*  
 ‘[Since they are tied to the author’s eyes], there come forth nought but the characters that are seen into by the author.’  
 ([...], being seen by the author characters only being excluded, [they] do not appear)

$$\sum / \text{GER} \quad \subset \quad \sum / \text{PR}$$

$$X = rareru > Y \quad > [ni_1] \quad \mid \quad jinbutsu > bakari > shika = nai > kuru \supset deru$$

$$mi \cap yaburu \mid [ni_2]; sakusha$$

## 8.2 The particle *dake*

For the restrictive particle *dake* (and its literary synonym *nomi*), the same division has been made as for the particle *shika*, i.e. on the one hand *dake* in the function of topic marker and on the other hand the occurrences of *dake* in a non-topical function. Contrary to *shika*, which always refers to a negative predicate, *dake* can be used with affirmative as well as with negative predicates. Furthermore, the occurrences of *dake* in a non-topical function are much more frequent than is the case with *shika*. When *dake* follows other particles it has a topic-marking function, as will be described in section 8.2.1, whereas in the cases where *dake* precedes another particle or when it is embedded in the nominal predicate, the function is non-topical, as in the examples quoted in section 8.2.2. Finally, in section 8.2.3 the difference between constructions with *dake* and with *shika* will be analyzed.

Martin (2004:90-101) gives two meanings for *dake*, namely, the meaning ‘only, just’ when *dake* is used as post adnominal, and the meaning ‘to the amount/extent of, just, exactly, at least’ when it is used as restrictive. As the descriptions of his example sentences in this section will show, each category of meaning of *dake* in Martin’s classification can occur in a topical as well as in a non-topical function. In this work *dake* is analyzed as having these two functions with one basic meaning, for which the English word ‘exclusively’ is used in the textual descriptions.

### 8.2.1 *dake* marking a topic

Kawashima (1999:10-12) writes that *dake* indicates a limit that is imposed upon something, as in:

- (1) *akai ringo dake mittsu kudasai*  
 ‘Please give me three of the red apples only.’  
 (red apples exclusively, [please] give three)

$$\text{ringo} - \text{akai} > \text{dake} < \sum / \text{INF}$$

$$X = \text{kudasaru} > \text{mittsu}$$

- (2) *watashi wa hitori dake tori-nokosareta*  
 ‘I was left alone. (Only I was left.)’  
 (as for me, one person exclusively, [I] was left behind)

$$\text{watashi} > \text{wa} < \text{hito} \cap \text{ri} > \text{dake} < \sum / \text{PA}$$

$$X = \text{rareru} > Y$$

$$\text{tori} \cap \text{nokosu}$$

Makino&Tutsui (1995:93-96) describe *dake* as “a particle which expresses a limit imposed upon something that is growing and expanding. When *dake* modifies a preceding noun, the particle that is used with the noun can be positioned before or after *dake*, except for the particles *ga*, *wo* and *wa*, which can be optionally used after *dake*. The optional positionings of the particles other than *ga*, *wo*, and *wa* create a subtle semantic difference.” They quote the following example with *dake* marking a number-counter:

- (3) *watashi wa Nihon he ichido dake itta*  
 ‘I went to Japan only once.’  
 (as for me, to Japan, once exclusively, [I] went)

$$\begin{array}{l}
 \textit{watashi} > \textit{wa} < X > [\textit{he}_1] > \textit{ichi} \cap \textit{do} > \textit{dake} < \sum / \textit{PA} \\
 [\textit{he}_2]; \textit{Nihon} \quad \quad \quad | \quad X = \textit{iku}
 \end{array}$$

### 8.2.2 *dake* used in a non-topical function

In the following example sentences from Makino&Tutsui, the mathematical descriptions show the difference between the non-topical and topical use of *dake*; the difference in meaning between (4a) and (4b) is that in (4a) there is the situation that only Mr. Smith came, while in (4b) for Mr. Smith only, there is the situation that someone came. In the same way, there is the situation that someone ate only fish in example (5a), whereas in sentence (5b) only as far as fish is concerned, there is the situation that someone was eating:

- (4a) *Sumisu-san dake ga kita*  
 ‘Only Mr. Smith came.’  
 (Mr. Smith exclusively came)

$$\begin{array}{l}
 \sum / \textit{PA} \\
 \textit{Sumisu} \cup \textit{san} > \textit{dake} = \textit{kuru}
 \end{array}$$

- (4b) *Sumisu-san dake kita*  
 ‘Only Mr. Smith came.’  
 (Mr. Smith exclusively, [he] came)

$$\begin{array}{l}
 \textit{Sumisu} \cup \textit{san} > \textit{dake} < \sum / \textit{PA} \\
 X = \textit{kuru}
 \end{array}$$

- (5a) *sakana dake wo tabeta*  
 ‘I ate only fish.’  
 ([I] ate fish exclusively)

$$\begin{array}{l}
 \sum / \textit{PA} \\
 X = [\textit{taberu}_1] \\
 [\textit{taberu}_2]; \textit{sakana} > \textit{dake}
 \end{array}$$

- (5b) *sakana dake tabeta*  
 ‘I ate only fish.’  
 (fish exclusively, [I] ate)

$$\begin{array}{l}
 \textit{sakana} > \textit{dake} < \sum / \textit{PA} \\
 X = \textit{taberu}
 \end{array}$$

In example (6a), there is the situation that someone bought only a small Japanese-English dictionary, whereas in (6b) only for a small Japanese-English dictionary, there is the situation that someone was buying; in (7a) *boku dake* is embedded inside the situation, whereas in (7b) this is not the case.

- (6a) *chiisai waeijiten dake wo kaimashita*  
 ‘I bought only a small Japanese-English dictionary.’  
 ([I] bought a small Japanese-English dictionary exclusively)

$$\sum / \text{POL} / \text{PA}$$

$$X = [kau_1]$$

$$[kau_2]; waei \cap jiten - chiisai > dake$$

- (6b) *chiisai waeijiten dake kaimashita*  
 ‘I bought only a small Japanese-English dictionary.’  
 (a small Japanese-English dictionary exclusively, [I] bought)

$$waei \cap jiten - chiisai > dake < \sum / \text{POL} / \text{PA}$$

$$X = kau$$

- (7a) *boku dake ni hanashite kudasai*  
 ‘Please tell it only to me.’  
 (telling [it] to me exclusively, [please] do [it])

$$\sum / \text{INF}$$

$$X = kudasaru \supset hanasu > [ni_1]$$

$$[ni_2]; boku > dake$$

- (7b) *boku ni dake hanashite kudasai*  
 ‘Please tell it only to me.’  
 (to me exclusively, telling, please do [it])

$$X > [ni_1] > dake < \sum / \text{INF}$$

$$[ni_2]; boku \mid X = kudasaru \supset hanasu$$

The difference between the topical and non-topical function of *dake* can be observed in the descriptions for the following examples from Martin (2004:77): *watashi dake* in (8a) is embedded in the first valence of the verb *yomu* and *hon dake* is embedded in its second valence, whereas in (8b) both noun phrases marked by *dake* are topics.

- (8a) *watashi dake ga hon dake wo yomu*  
 ‘Only I read only the book.  
 (I exclusively read the book exclusively)

$$\sum / \text{PR}$$

$$watashi > dake = [yomu_1]$$

$$[yomu_2]; hon > dake$$

- (8b) *watashi dake hon dake yomu*  
 ‘Only I read only the book.  
 (I exclusively, the book exclusively, [I] read)

$$watashi > dake < hon > dake < \sum / \text{PR}$$

$$X = yomu$$

When a noun phrase marked by *dake* constitutes the nominal predicate, its function is non-topical, as in these example sentences from Makino&Tutsui (1995: 94):

- (9) *Yukiko-san to wa deeto shita dake da*  
 ‘I just dated Yukiko, that’s all.’  
 (as for with Yukiko, [it] is the situation exclusively [that I] dated)

$$X > [to_1] > wa < \sum / \text{PR}$$

$$[to_2]; Yukiko \cup san \mid X = \sum / \text{PA} > dake$$

$$X = deeto \cap suru$$

- (10) *kono ie wa ookii dake da*  
 ‘This house is big, that’s all.’  
 (as for this house, [it] is the situation exclusively that it is big)

$$ie - kono > wa < \sum / \text{PR}$$

$$X = \sum / \text{PR} > dake$$

$$X = ookii$$

- (11) *kono okashi wa iro ga kirei na dake da*  
 ‘This cake has pretty colors, that’s all.’  
 (as for this cake, [it] is the situation that the colors are pretty exclusively)

$$okashi - kono > wa < \sum / \text{PR}$$

$$iro = Y > dake$$

$$kirei$$

The mathematical descriptions for the next examples show that in (12a) *dake* has a topical function, whereas in (12b) with the copula-construction, the situation ‘ someone ate fish’, marked by *dake*, is the nominal predicate.

- (12a) *sakana dake tabeta*  
 ‘I ate only fish.’  
 (fish exclusively, [I] ate)

$$sakana > dake < \sum / PA$$

$$X = taberu$$

- (12b) *sakana wo tabeta dake da*  
 ‘I ate fish, that’s all.’  
 ([it] is the situation exclusively that [I] ate fish)

$$\sum / PR$$

$$X = \sum / PA > dake$$

$$X = [taberu_1]$$

$$[taberu_2]; sakana$$

Makino&Tutsui (1995:97-98) point out that phrases marked by *dake* may be combined with *wa* and *mo* in the construction *dake de (wa) naku ~ (mo)*, which means ‘not only X but also Y’, where X and Y can either be a noun, a verb, or an adjective.

- (13a) *ano hito wa yoku benkyoo-suru dake de naku yoku asobu*  
 ‘He not only studies hard, but also plays a lot.’  
 (as for that man, [it] is not the situation exclusively that [he] studies often, [he] plays often)

$$hito - ano > wa < \sum / INF < \sum / PR$$

$$\sum / PR > dake = nai \quad | \quad X = asobu > yoi$$

$$X = benkyoo \cap suru > yoi$$

- (13b) *ano hito wa yoku benkyoo-suru dake de wa naku yoku asobu*  
 ‘He not only studies hard, but also plays a lot.’  
 (as for that man, as for [it] being the situation exclusively that [he] studies often, [it] is not, [he] plays often)

$$hito - ano > wa < \sum / GER > wa < \sum / INF < \sum / PR$$

$$X = \sum / PR > dake \quad | \quad X = nai \quad | \quad X = asobu > yoi$$

$$X = benkyoo \cap suru > yoi$$

- (14a) *Jon dake de naku Mearii mo kita*  
 ‘Not only John but also Mary came here.’  
 ([it] is not the situation of it being John exclusively, Mary, too, came)

$$\sum / \text{INF} < \text{Mearii} > \text{mo} < \sum / \text{PA}$$

*Jon > dake = nai* | *X = kuru*

- (14b) *Jon dake de wa naku Mearii mo kita*  
 ‘Not only John but also Mary came here.’  
 (as for the situation of it not being John exclusively, Mary, too, came)

$$\sum / \text{GER} > \text{wa} < \sum / \text{INF} < \text{Mearii} > \text{mo} < \sum / \text{PA}$$

*X = Jon > dake* | *X = nai* | *X = kuru*

- (15a) *kono uchi wa kirei na dake de naku totemo yasui desu*  
 ‘This house is not only beautiful but it is also inexpensive.’

$$\text{uchi} - \text{kono} > \text{wa} < \sum / \text{INF} < \sum / \text{POL} / \text{PR}$$

*Y > dake = nai* | *X = yasui > totemo*  
*kirei*

- (15b) *kono uchi wa kirei na dake de wa naku totemo yasui desu*  
 ‘This house is not only beautiful but it is also inexpensive.’

$$\text{uchi} - \text{kono} > \text{wa} < \sum / \text{GER} > \text{wa} < \sum / \text{INF} < \sum / \text{POL} / \text{PR}$$

*X = Y > dake* | *X = nai* | *X = yasui > totemo*  
*kirei*

### 8.2.3 comparing *dake* and *shika*

According to Makino&Tutsui (1995:401), *dake* expresses a similar idea as *shika* but they differ in three ways:

- X shika* emphasizes the negative proposition of ‘NON-X’, while *X dake* merely describes the situation in a neutral fashion
- shika* occurs only with negative predicates; *dake*, however, can occur with affirmative predicates
- the verb *kakaru* ‘it takes (time)’ can be used with *shika*, but not with *dake*

- (16a) *Bobu shika konakatta / \*kita*  
 ‘Nobody but Bob came.’  
 (Bob being excluded, [people] didn’t come)

$$\text{Bobu} > \text{shika} < \sum / \text{PA}$$

*X = nai > kuru*



(16b) \**Bobu shika kita*  
 ‘Everybody but Bob came.’

(16c) *Bobu dake kita*  
 ‘Only Bob came.’  
 (Bob exclusively, [he] came)

$$Bobu > dake < \sum / PA$$

$$X = kuru$$

(16d) *Bobu dake konakatta*  
 ‘Only Bob didn’t come.’  
 (Bob exclusively, [he] didn’t come)

$$Bobu > dake < \sum / PA$$

$$X = nai > kuru$$

(17a) *watashi no ie kara gakkoo made wa kuruma de gofun shika kakaranai*  
 ‘From my house to school it takes only five minutes by car’  
 (as for from my house to the school, by car, five minutes being excluded, [it] does not take)

$$X > [kara_1] \quad < X > [made_1] > wa \quad < X > [de_1] < go \cap fun > shika < \sum / PR$$

$$[kara_2]; ie \downarrow \quad | \quad [made_2]; gakkoo \quad | \quad [de_2]; kuruma \quad | \quad X = nai > kakaru$$

–*watashi*

(17b) \**watashi no ie kara gakkoo made wa kuruma de gofun dake kakaru*  
 ‘From my house to school it takes only five minutes by car’

Martin (2004:77) states that a sentence containing ‘except for’ + negative means the same thing as ‘only’ + affirmative; the latter can be translated in two ways in Japanese, namely, by *dake* + affirmative. and by *shika* + negative. However, there is only one way to translate English ‘only + negative’ in Japanese, and that is with ‘*dake* + a negative’, in this case *shika* cannot be used, e.g.:

(18a) *kore dake motanai*  
 ‘[He] lacks possessing only this.’  
 (this exclusively, [he] does not possess)

$$kore > dake < \sum / PR$$

$$X = nai > motsu$$

(18b) \**kore shika motsu*  
 ‘[He] lacks possessing only this.’

Furthermore, Martin writes that the difference in meaning between the construction ‘*shika* + a negative’, and ‘*dake* with an affirmative’ is often small; for instance, he remarks that example (19a) “virtually means the same thing” as (19b). However, the descriptions for these sentences clearly show the difference.

- (19a) *sensei to shika hanashite wa ikenai*  
 ‘You must not speak with anyone but the teacher.’  
 (as for with the teacher being excluded, speaking, [you] must not do [it])

$$\begin{array}{l} \textit{sensei} > \textit{to} > \textit{shika} < \sum / \text{GER} > \textit{wa} < \sum / \text{PR} \\ \text{X} = \textit{hanasu} \quad | \quad \text{X} = \textit{nai} > \textit{eru} > \text{Y} \\ \textit{iku} \end{array}$$

- (19b) *sensei to dake hanasanakereba ikenai*  
 ‘You must speak only with the teacher.’  
 (with the teacher exclusively, the situation of not speaking [you] must not do [it])

$$\begin{array}{l} \textit{sensei} > \textit{to} > \textit{dake} < \sum / \text{OPT} < \sum / \text{PR} \\ \text{X} = \textit{nai} > \textit{hanasu} \quad | \quad \text{X} = \textit{nai} > \textit{eru} > \text{Y} \\ \textit{iku} \end{array}$$

Martin (2004:79) also maintains that “In the spoken language *dake* and *shika* are to some extent mutually exclusive with the case markers *ga* and *wo*, but you will run across *dake ga* and *dake wo* at least in written Japanese; *dake wa* occurs freely in speech, but \**shika mo/wa* is unacceptable, and I have no examples of *dake mo* (...)” When *dake* occurs together with other case particles (except *ga/wo*), the order seems to be optional, e.g. *dake ni* or *ni dake*, *dake shika* or *shika dake*. Therefore, according to Martin, there are three possible translations in Japanese for the English sentence: ‘A letter comes only from mother’. Although Martin gives one and the same English translation for the following three Japanese sentences, the difference in form indicates that there also is a difference in meaning, which can be observed in the descriptions here below; this difference is that in (20a) both *dake* and *shika* are non-topical and embedded in the phrase marked by *kara*, whereas in (20b) *dake* is non-topical and embedded in the adjunct marked by *kara* and *shika* is topical; in example (20c) both *dake* and *shika* are analyzed as being topical, placing the noun phrase marked by *kara* outside the situation.

- (20a) *haha dake shika kara tegami ga konai*  
 ‘A letter comes only from mother’  
 (a letter does not come from mother exclusively being excluded)

$$\begin{array}{l} \sum / \text{PR} \\ \textit{tegami} = \textit{nai} > \textit{kuru} > [\textit{kara}_1] \\ [\textit{kara}_2]; \textit{haha} > \textit{dake} > \textit{shika} \end{array}$$

- (20b) *haha dake kara shika tegami ga konai*  
 ‘A letter comes only from mother’  
 (from mother exclusively being excluded, a letter does not come)

$$X > [kara_1] > shika < \sum / PR$$

$$[kara_2]; haha > dake \mid tegami = nai > kuru$$

- (20c) *haha kara dake shika tegami ga konai*  
 ‘A letter comes only from mother’  
 (exclusively from mother being excluded, a letter does not come)

$$X > [kara_1] > dake > shika < \sum / PR$$

$$[kara_2]; haha \mid tegami = nai > kuru$$

### 8.3 The particle *bakari*

Like the other restrictives *shika* and *dake*, the particle *bakari* can be used both in a topical and in a non-topical function. However, unlike these particles, *bakari* is used more often in a non-topical function. The two functions of *bakari* will be described in sections 8.3.1 and 8.3.2, and in section 8.3.3 the use of *bakari* will be compared to occurrences of the restrictive particles *dake* and *shika*. In the textual descriptions of the example sentences in this section the English phrase ‘limited to’ has been chosen to render the basic meaning of *bakari* in all its occurrences.

Makino&Tutsui (1995:84-87) define *bakari* as a particle which indicates that something is the only thing or state which exists or is the only action someone will take (takes/is taking/took). Kawashima (1999:5-10) writes that *bakari* indicates a limit, an approximation or a degree of things. Martin (2004:90-103) divides the use of *bakari* into two categories, namely, the occurrences of *bakari* as post adnominal in the meaning ‘exclusively, all the time, only, just’, and the meaning ‘about, approximately’ when *bakari* is used as restrictive. As the descriptions will demonstrate, Martin’s division crosses through the two categories proposed here.

#### 8.3.1 *bakari* marking a topic

In the following examples from Makino&Tutsui and Martin, *bakari* is analyzed as a topic marker; because of the absence of the accusative particle *wo*, the noun phrase marked by *bakari* does not constitute the second valence of the verb.

- (1) *Denisu wa biiru bakari nonde iru*  
‘Dennis is drinking only beer.’  
(as for Dennis, limited to beer, [he] is drinking)

$Denisu > wa < biiru > bakari < \sum / PR$   
 $X = iru \supset nomu$

- (2) *amai mono bakari tabete iru*  
‘They eat nothing but sweets.’  
(limited to sweets, [they] are eating)

$mono - amai > bakari < \sum / PR$   
 $X = iru \supset taberu$

In sentence (3a) from Martin, the second valence of the predicate is the topic because *bakari* follows ‘NP *wo*’, whereas in his example (3b) *bakari* is non-topical because it is followed by *wo*, thus being embedded in the second valence.

- (3a) *ano mondai wo bakari kangaete iru*  
 ‘I’m thinking only of that problem.’  
 ([I] am thinking [of things] limited to that problem)  
 $[X_1] > bakari < \sum / PR$   
 $[X_2]; mondai - ano \mid X = iru \supset kangaeru$
- (3b) *ano mondai bakari wo kangaete iru*  
 ‘I’m thinking only of that problem.’  
 (thinking [of things] limited to that problem, [I] am [doing])
- $$\sum / PR$$
- $$X = iru \supset [kangaeru_1]$$
- $$[kangaeru_2]; mondai - ano > bakari$$

### 8.3.2 *bakari* in a non-topical function

For Martin’s second category of *bakari*, marking a quantity, the following examples are analyzed. In the first sentence *bakari* is non-topical since it is embedded in the second valence of the verb; and in example (5) *bakari* is non-topical because it is embedded in the first valence of the verb.

- (4) *kono jikkiri bakari wo shiraberu*  
 ‘We will investigate about ten kilos of this.’  
 ([we] will investigate [this] limited to these ten kilos)
- $$\sum / PR$$
- $$X = [shiraberu_1]$$
- $$[shiraberu_2]; jik \cap kiro - kono > bakari$$
- (5) *kono hyaku meetoru bakari ga nukatte iru*  
 ‘This stretch of about a hundred meters is muddy.’  
 (this [stretch] limited to a hundred meters is muddy)

$$\sum / PR$$

$$hyaku \cap meetoru - kono > bakari = iru \supset nukaru$$

In the next example sentences quoted from Kawashima (6) and Makino&Tutsui (7), *bakari* marks a quantity of time. As has already been described in section 3.6, adverbs of time are analyzed here as being part of the situation and are placed behind the predicate in the mathematical descriptions. The logical choice seems to be to do the same when such a time adjunct is marked by *bakari*, which would yield the mathematical descriptions (a). However, it could also be argued that the presence of *bakari* places extra stress on the time aspect, and as such *bakari* could be analyzed as having a topical function, as expressed by the descriptions (b). Since the sentences as they are quoted here show no indications of words being stressed or accented, the (a) descriptions are preferred.

- (6) *watashi wa tooka bakari rusu ni shimasu*  
 ‘I will be away for about ten days.’

- a) (as for me, [I] will be away limited to ten days)

$$\begin{aligned} \text{watashi} > \text{wa} < \sum / \text{POL} / \text{PR} \\ \text{X} = \text{suru} > [\text{ni}_1] > \text{tooka} > \text{bakari} \\ [\text{ni}_2]; \text{rusu} \end{aligned}$$

- b) (as for me, limited to ten days, [I] will be away)

$$\begin{aligned} \text{watashi} > \text{wa} < \text{tooka} > \text{bakari} < \sum / \text{POL} / \text{PR} \\ \text{X} = \text{suru} > [\text{ni}_1] \\ [\text{ni}_2]; \text{rusu} \end{aligned}$$

- (7) *watashi wa hitotsuki bakari Pari ni ita*  
 ‘I was in Paris for about a month.’

- a) (as for me, [I] was in Paris limited to a month)

$$\begin{aligned} \text{watashi} > \text{wa} < \sum / \text{PA} \\ \text{X} = \text{iru} > [\text{ni}_1] > \text{hitotsuki} > \text{bakari} \\ [\text{ni}_2]; \text{Pari} \end{aligned}$$

- b) (as for me, limited to a month, [I] was in Paris)

$$\begin{aligned} \text{watashi} > \text{wa} < \text{hito} \cap \text{tsuki} > \text{bakari} < \sum / \text{PR} \\ \text{X} = \text{iru} > [\text{ni}_1] \\ [\text{ni}_2]; \text{Pari} \end{aligned}$$

In Martin’s example sentence (8), we don’t have such a choice between two possibilities, because the time adjunct marked by *bakari* is followed by the topical particle *wa*, as a result, the whole preceding phrase becomes the topic.

- (8) *kono isshuukan bakari kare wa konai*  
 ‘He hasn’t come for this whole week, about.’

$$\begin{aligned} \text{isshuu} \cap \text{kan} - \text{kono} > \text{bakari} < \text{kare} > \text{wa} < \sum / \text{PR} \\ \text{X} = \text{nai} > \text{kuru} \end{aligned}$$

In the following examples sentences from Makino&Tutsui, *bakari* has a non-topical function because it is embedded inside the predicate.

- (9) *dezaato wa taberu bakari ni natte iru*  
 ‘The dessert is ready to eat (Lit. the only thing left to do with the dessert is to eat it).’  
 (as for the dessert, it has become limited to the situation that [one] eats [it])

$$\begin{aligned}
 \text{dezaato} > \text{wa} < \sum / \text{PR} \\
 X = \text{iru} \supset \text{naru} > [ni_1] \\
 [ni_2]; \sum / \text{PR} > \text{bakari} \\
 X = \text{taberu}
 \end{aligned}$$

- (10) *Tomoko wa asonde bakari iru*  
 ‘Tomoko is doing nothing but playing.’  
 (as for Tomoko, [she] is [doing something] limited to playing)

$$\begin{aligned}
 \text{Tomoko} > \text{wa} < \sum / \text{PR} \\
 X = \text{iru} \supset \text{asobu} > \text{bakari}
 \end{aligned}$$

- (11) *watashi wa hirugohan wo tabeta bakari da*  
 ‘I have just eaten my lunch (and haven’t done anything else since then).’  
 (as for me, it is limited to the situation that [I] have eaten lunch)

$$\begin{aligned}
 \text{watashi} > \text{wa} < \sum / \text{PR} \\
 X = \sum / \text{PA} > \text{bakari} \\
 X = [\text{taberu}_1] \\
 [\text{taberu}_2]; \text{hiru} \cap \text{gohan}
 \end{aligned}$$

- (12) *kono resutoran wa yasui bakari da*  
 ‘This restaurant is just cheap (which is the only merit).’  
 (as for this restaurant, it is limited to the situation that it is cheap)

$$\begin{aligned}
 \text{resutoran} - \text{kono} > \text{wa} < \sum / \text{PR} \\
 X = \sum / \text{PR} > \text{bakari} \\
 X = \text{yasui}
 \end{aligned}$$

Kawashima gives the following examples for *bakari* indicating a limit and points out that in these cases something is limited to a particular action, place or thing, as in her examples (13) and (14), or it may indicate a degree of things, as in (15).

- (13) *sono koinu wa itsumo nemutte bakari imasu*  
 ‘That puppy is always just sleeping.’  
 (as for that puppy, whenever, [he] is limited to sleeping)

$$ko \cap inu - sono > wa < itsu > mo < \sum /POL / PR$$

$$X = iru \supset nemuru > bakari$$

- (14) *sono nyuusu wo kiite kare wa tada oro-oro suru bakari deshita*  
 ‘Hearing that news, he could only panic.’  
 (hearing that news, as for him, it was limited to the situation that [he] just panicked)

$$\sum /GER \subset kare > wa < \sum /POL / PA$$

$$X = [kiku_1] \quad | \quad X = \sum /PR > bakari$$

$$[kiku_2]; nyuusu - sono \quad | \quad X = oro \bullet oro \cap suru > tada$$

- (15) *ano densha ni notta bakari ni, jiko ni atta*  
 ‘It was only because I got on that train that I was involved in an accident.’  
 (because it is limited to the situation that [I] got on the train, I was involved in an accident)

$$X > [ni_1] < \sum /PA$$

$$[ni_2]; \sum /PA > bakari \quad | \quad X = au > [ni_1]$$

$$X = noru > [ni_1] \quad | \quad [ni_2]; jiko$$

$$[ni_2]; densha - ano$$

### 8.3.3 comparing *bakari* with *dake* and *shika*

Makino&Tutsui (1995: 402) write that the restrictive particle *bakari* is similar to the particles *dake* and *shika* in that it is also used to mean ‘only’ in some situations. Unlike *X shika* and *X dake*, however, *X bakari* emphasizes the positive proposition of X, often with the implication that someone or something does something to X / with X / ... a lot or more than one expects. Furthermore Makino&Tutsui inform us that *bakari* cannot be used for a single entity, as in example (17), nor with negative predicates, as in (18).

- (16a) *Jimu wa biiru bakari nonda*  
 ‘Jim drank only beer (and a lot).’ (emphasizes: he drank beer)  
 (as for Jim, limited to beer, [he] drank)

$$Jimu > wa < biiru > bakari < \sum /PA$$

$$X = nomu$$



- (16b) *Jimu wa biiru shika nomanakatta*  
 ‘Jim drank nothing but beer.’ (emphasizes: he didn’t drink anything but beer)  
 (as for Jim, beer being excluded, [he] didn’t drink)

$$Jimu > wa < biiru > shika < \sum / PA$$

$$X = nai > nomu$$

- (16c) *Jimu wa biiru dake nonda*  
 ‘Jim drank only beer.’ (neutral statement)  
 (as for Jim, beer exclusively, [he] drank)

$$Jimu > wa < biiru > dake < \sum / PA$$

$$X = nomu$$

- (17a) *onna no ko bakari kita*  
 ‘Only girls came (and it was more than I expected).’  
 (limited to girls, [they] came)

$$ko \downarrow > bakari < \sum / PA$$

$$- onna \quad | \quad X = kuru$$

- (17b) \**Mearii bakari kita*  
 ‘Only Mary came.’

- (18a) *kodomotachi dake konakatta*  
 ‘Only the children didn’t come.’  
 (children exclusively, [they] came)

$$kodomo \cup tachi > dake < \sum / PA$$

$$X = nai > kuru$$

- (18b) \**kodomotachi bakari konakatta*  
 ‘Only the children didn’t come.’

## 8.4 The particle *hodo*

Makino&Tutsui (1995:135-138) define *hodo* as a particle which indicates an extent or a degree to which someone or something does something or is in some state; when *hodo* is preceded by a noun, the predicate must be negative; however, if a sentence or a demonstrative pronoun modifies *hodo*, the predicate of the main clause can either be affirmative or negative. Martin (2004:96-112-113) divides the use of the particle *hodo* into two categories, namely, as restrictive in the meaning ‘about, approximately’ and as post adnominal in the meaning ‘insofar as, (not) as much as’. As already has been explained for the particles *dake* and *bakari*, in the semantic analyses proposed here another division is made, namely, between the occurrences of *hodo* as a topic marker and *hodo* in a non-topical function, i.e. when it is embedded in a part of the sentence.

In the textual descriptions all occurrences of *hodo* will be referred to using the English phrase ‘to the extent of’ as its basic meaning.

### 8.4.1 *hodo* marking a topic

In the following examples from Makino&Tutsui and Martin, *hodo* is analyzed here as a topic marker because it is not followed by another particle nor is it embedded in the predicate.

- (1) *watashi wa Ken hodo tsuyokunai /\*tsuyoi*  
 ‘I’m not as strong as Ken.’  
 (as for me, to the extent of Ken, [I] am not strong)

$$\text{watashi} > \text{wa} < \text{Ken} > \text{hodo} < \sum / \text{PR} \\
 \text{X} = \text{nai} > \text{tsuyoi}$$

- (2) *kono shigoto wa kodomo de mo dekiru hodo yasashii*  
 ‘This job is so easy that even a child can do it.’  
 (as for this job, being a child, too, to the extent that [they] can do [it], [it] is easy)

$$\text{shigoto} - \text{kono} > \text{wa} < \sum / \text{GER} > \text{mo} < \sum / \text{PR} > \text{hodo} < \sum / \text{PR} \\
 \text{X} = \text{kodomo} \quad | \quad \text{X} = \text{dekiru} \quad | \quad \text{X} = \text{yasashii}$$

- (3) *warui yatsu hodo yoku nemuru*  
 ‘The worst rascals sleep the soundest.’  
 (to the extent of bad rascals, [they] sleep well)

$$\text{yatsu} - \text{warui} > \text{hodo} < \sum / \text{PR} \\
 \text{X} = \text{nemuru} > \text{yoi}$$

- (4) *kotoshi wa kyonen hodo atsukunai*  
 ‘This year is not so hot as last year.’  
 (as for this year, to the extent of last year, [it] is not hot)

$$kotoshi > wa < kyonen > hodo < \sum / PR$$

$$X = nai > atsui$$

In example (5) from Makino&Tutsui *hodo* + numeral is preceded by the accusative particle *wo*, which indicates that it is not embedded in the second valence; instead *hodo* refers to the entire preceding sentence part as a topic.

- (5) *biiru wo sanbon hodo nomimashita*  
 ‘I drank three bottles of beer.’

$$[X_1] > sanbon > hodo < \sum / POL / PA$$

$$[X_2]; biiru \quad | \quad X = nomu$$

#### 8.4.2 *hodo* in a non-topical function

In the following example sentences quoted from Martin, *hodo* occurs in a non-topical function. In the first two of these sentences, *hodo* is followed by the nominative particle *ga*, thus being embedded in the first valence of the predicate, and in example (8) *hodo* is embedded in the second valence of the predicate, because it precedes the accusative particle *wo*.

- (6) *kono eiga no naka de wa kono jippun hodo ga omoshiroi*  
 ‘In this film, this stretch of about ten minutes is interesting.’  
 (as for in this film, to the extent of these ten minutes is interesting)

$$X > [de_1] > wa \quad < \quad \sum / PR$$

$$[de_2]; naka \downarrow \quad | \quad jippun - kono > hodo = omoshiroi$$

$$- eiga - kono$$

- (7) *sono sannin hodo ga itsumo itazura wo suru*  
 ‘That group of three or so is always up to some prank.’  
 ([they] to the extent of those three people always do naughty things)

$$\sum / PR$$

$$san \cap nin - sono > hodo = [suru_1] > itsu > mo$$

$$[suru_2]; itazura$$

- (8) *sono jippun hodo wo nozokeba omoshirokunai*  
 ‘Except for that stretch of about ten minutes, it isn’t interesting.’  
 (if [one] leaves out [things] to the extent of those ten minutes, [it] is not interesting)

$$\sum / \text{OPT} < \sum / \text{PR}$$

$X = [\text{nozoku}_1]$  |  $X = \text{nai} > \text{omoshiroi}$   
 $[\text{nozoku}_2]; \text{jip} \cap \text{pun} - \text{sono} > \text{hodo}$

## 8.5 The particle *kurai* (*gurai*)

The particle *kurai* or *gurai* is analyzed in the same way as has been described for the other particles in this chapter, viz. it may occur as topic-marker, which will be described in section 8.5.1, or in a non-topical function, as analyzed in section 8.5.2. In section 8.5.3 the use of *kurai* will be compared with occurrences of the restrictive particles *hodo* and *bakari*.

Makino&Tutsui (1995:212-213) write that *kurai* may be freely replaced by *gurai* without a change in meaning and that it indicates an approximate quantity or extent. Martin (2004:96,111) classifies two meanings for *kurai* (or *gurai*), namely, ‘about, as much, or so’, and ‘to the extent of, at least, as ... as’.

### 8.5.1 *kurai* (*gurai*) marking a topic

Although the particle *kurai* is most often used in a non-topical function, there are occurrences of *kurai* as a topic marker, as in the following examples from Makino&Tutsui and Martin. Since the noun phrases marked by *gurai* are not embedded in any sentence part, they are analyzed as being topical.

- (1) *Yamada-san gurai eigo ga dekireba tanoshii deshoo ne*  
‘It must be fun to be able to speak English as well as Mr. Yamada.’  
(approximately as [well as] Mr. Yamada, if English [speaking] is possible, [it] would be fun, wouldn’t it?)

$$Yamada \cup san > gurai < \sum / OPT < \sum / POL / SUB > ne$$
$$eigo = dekiru \mid X = tanoshii$$

- (2) *sono hito gurai yuumei ni naritai*  
‘I want to become as famous as he [is].’

$$hito - sono > gurai < \sum / PR$$
$$X = tai > naru > [ni_1]$$
$$[ni_2]; yuumei$$

### 8.5.2 *kurai* (*gurai*) in a non-topical function

In the following examples quoted from Makino&Tutsui, *kurai* is analyzed as having a non-topical function. In sentence (3) *kurai* follows a time expression; in examples (4) and (5) the noun phrase marked by *kurai* (*gurai*) constitutes the nominal predicate, as is also the case in the example sentence (7) from Martin. In example (6), *gurai* is part of the subject.

- (3) *Tookyoo kara Sanfuranshisuko made hikooki de kujikan kurai kakaru*  
 ‘It’s about nine hours by plane from Tokyo to San Francisco.’

$\sum$ /PR

X = *kakaru* > *ku*  $\cap$  *jikan* > *kurai* > [*de*<sub>1</sub>] > [*made*<sub>1</sub>] > [*kara*<sub>1</sub>]  
 [*de*<sub>2</sub>]; *hikooki* | [*made*<sub>2</sub>]; *Sanfuranshisuko* | [*kara*<sub>2</sub>]; *Tookyoo*

- (4) *sono kuruma wa ikura gurai deshita ka*  
 ‘About how much was that car?’

*kuruma* – *sono* > *wa* <  $\sum$ /POL/PA > *ka*  
 X = *ikura* > *gurai*

- (5) *hyakugojuuman’en kurai deshita*  
 ‘It was about 1.500.000 yen.’

$\sum$ /POL/PA

X = *hyakugojuuman*  $\cap$  *en* > *kurai*

- (6) *kono ichikiro gurai ga kirei da*  
 ‘This stretch of about one kilometer is pretty.’

$\sum$ /PR

*ichi*  $\cap$  *kiro* – *kono* > *gurai* = *kirei*

- (7) *kare wa kinoo atta Satoo-san gurai no se no takasa desu*  
 ‘He is as tall as Mr. Sato whom I saw yesterday.’

*kare* > *wa* <  $\sum$ /POL/PR

X = *takasa* ↓

– *se* ↓

– *Satoo*  $\cup$  *san* ↓ > *gurai*

–  $\sum$ /PA

X = *au* > *kinoo*

The occurrences of *gurai* in the following examples from Martin, are analyzed as having a non-topical function; the noun phrase followed by *gurai* in sentence (8) is embedded in the first valence of the predicate, and in example (9) the noun phrase marked by *gurai* is non-topical because it is embedded in the adjunct that is marked by the particle *ni*.

- (8) *sono hako gurai no ookisa no ga hoshii*  
 ‘I want one of a size as large as that box.’

$$\begin{array}{l}
 \sum / \text{PR} \\
 X \downarrow \\
 \quad - \text{ookisa} \downarrow \\
 \quad \quad - \text{hako} - \text{sono} > \text{gurai} \\
 = \text{hoshii}
 \end{array}$$

- (9) *sono ookii karendaa gurai no kami ni kaite kudasai*  
 ‘Please write it on paper as big as that large calendar.’

$$\begin{array}{l}
 \sum / \text{INF} \\
 X = \text{kudasaru} \supset \text{kaku} > [ni_1] \\
 \quad \quad \quad [ni_2]; \text{kami} \downarrow \\
 \quad \quad \quad - \text{karendaa} - \text{ookii} - \text{sono} > \text{gurai}
 \end{array}$$

### 8.5.3 comparing *kurai*, *hodo* and *bakari*

According to Makino&Tutsui (1995:137-138), the difference between the quantifiers *hodo*, *bakari* and *kurai* is that *bakari* and *hodo* can be used with an exact number or amount of something, whereas *kurai* cannot, as the following examples show.

- (10a) *sono ringo wo futatsu bakari kudasai*  
 ‘Please give me two of those apples.’  
 (giving apples two only, please give)

$$\begin{array}{l}
 [X_1] > \text{futatsu} > \text{bakari} < \sum / \text{INF} \\
 [X_2]; \text{ringo} - \text{sono} \quad | \quad X = \text{kudasaru}
 \end{array}$$

- (10b) *sono ringo wo futatsu hodo kudasai*  
 (giving apples to the extent of two, please give)

$$\begin{array}{l}
 [X_1] > \text{futatsu} > \text{hodo} < \sum / \text{INF} \\
 [X_2]; \text{ringo} - \text{sono} \quad | \quad X = \text{kudasaru}
 \end{array}$$

- (10c) \**sono ringo wo futatsu kurai kudasai*  
 (giving apples approximately two, please give)

## 8.6. The particle *yor*

The particle *yor* most commonly marks the preceding phrase as a topic, but there are a few occurrences of *yor* in a non-topical function, which will be described in section 8.6.2. For the textual descriptions in this section the English phrase ‘compared to’ has been used as basic meaning for *yor*.

Makino&Tutsui (1995:564-567) define the particle *yor* as a particle which indicates that something or someone is being compared with something or someone. Martin (2004:140-142) writes that in Literary Japanese the ablative ‘from’ is marked by the particle *yor* instead of *kara*, whether the ablative is local, temporal or personal. In both the literary and the spoken language *yor* is used to mark the point of departure for a comparison, in the meaning ‘more/other/rather than’. He also states that *yor* can follow a case marker but never precedes one. This last factor is the main reason that the occurrences of a non-topical use of *yor* are rare.

### 8.6.1 *yor* marking a topic

In the following example sentences quoted from Makino&Tutsui, *yor* is analyzed as a topic-marker, as represented by the mathematical description (a). The other alternative, i.e. to place the phrase marked by *yor* inside the situation, as a particle marking an adjunct, would yield description (b). This last description has been rejected, however, since it would express that there is the situation that ‘Mr. Hayashi can run fast to the extent of compared to me’; whereas, in my view, the intended meaning is that it is (only) compared to me, that there is the situation that ‘Mr. Hayashi can run fast’. By the same argument *yor* is analyzed as topic-marker in example (2), where it is only in comparison with *hiragana*, that there is the situation that *kanji* are difficult.

- (1) *Hayashi-san wa watashi yori hayaku hashireru*  
‘Mr. Hayashi can run faster than I can.’

- a) (as for Mr. Hayashi, compared to me, [he] can run fast)

$$\begin{array}{l} \textit{Hayashi} \cup \textit{san} > \textit{wa} < \textit{watashi} > \textit{yor} < \sum / \textit{PR} \\ \textit{X} = \textit{eru} > \textit{Y} \\ \textit{hashiru} > \textit{hayai} \end{array}$$

- \*b) (as for Mr. Hayashi, [he] can run fast compared to me)

$$\begin{array}{l} \textit{Hayashi} \cup \textit{san} > \textit{wa} < \sum / \textit{PR} \\ \textit{X} = \textit{hashireru} > \textit{hayai} > \textit{yor} < \textit{watashi} \end{array}$$



- (2) *kanji wa hiragana yori muzukashii*  
 ‘*Kanji* is more difficult than *hiragana*.’

- a) (as for *kanji*, compared to *hiragana*, [they] are difficult)

$$kanji > wa < hiragana > yori < \sum / PR$$

$$X = muzukashii$$

- \*b) (as for *kanji*, [they] are difficult compared to *hiragana*)

$$kanji > wa < \sum / PR$$

$$X = muzukashii > yori < hiragana$$

Makino&Tutsui also point out that either a noun phrase or a sentence can precede *yor*i, and that in the latter case the verbs that precede *yor*i are usually non-past tense, as in sentence (3). However, there are a few cases where past tense verbs are used, as in Makino&Tutsui’s example (4). Each of these sentences contains two predicates, which means that there are two situations; these situations are represented by sigma symbols in the mathematical descriptions. The first situation in each sentence is marked by *yor*i as a topic.

- (3) *basu de iku yori shikata ga nai*  
 ‘There is no other way than to go by bus.’  
 (compared to going by bus, a way to do [the going] does not exist)

$$\sum / PR > yori < \sum / PR$$

$$X = iku > [de_1] \quad | \quad shikata = nai$$

$$[de_2]; basu$$

- (4) *sono shiken wa omotta yori yasashikatta*  
 ‘The exam was easier than I thought.’  
 (as for that exam, compared to [what I] thought, [it] was easy)

$$shiken - sono > wa < \sum / PA > yori < \sum / PA$$

$$X = omou \quad | \quad X = yasashii$$

The particle *yor*i may be followed by the topical particles *wa* or *mo*. Makino&Tutsui maintain that in the following sentences (5) and (6) *mo* is optional after *yor*i and “does not change the meaning of the sentence”. However, this last statement is not supported here, because of the fact that when is a choice for the one form over the other, consistent with the rule ‘one form, one meaning’, this difference in form should also be expressed in the semantic descriptions. The descriptions show the difference in meaning and function: in the (a) examples, the particle *yor*i is the topic-marker of the preceding noun phrase, whereas in the (b) sentences *mo* marks the topic, besides adding the meaning ‘too’.

- (5a) *nihongo wa supeingo yori omoshiroi*  
 ‘Japanese is more interesting than Spanish.’  
 (as for Japanese, compared to Spanish, [it] is interesting)

$$\text{nihon} \cap \text{go} > \text{wa} < \text{supein} \cap \text{go} > \text{yori} < \sum / \text{PR}$$

$$X = \text{omoshiroi}$$

- (5b) *nihongo wa supeingo yori mo omoshiroi*  
 (as for Japanese, compared to Spanish, too, [it] is interesting)

$$\text{nihon} \cap \text{go} > \text{wa} < \text{supein} \cap \text{go} > \text{yori} > \text{mo} < \sum / \text{PR}$$

$$X = \text{omoshiroi}$$

- (6a) *watashi wa ryokoo suru yori uchi ni itai desu*  
 ‘I’d rather stay at home than go on a trip.’  
 (as for me, compared to traveling, [I] wish to stay home)

$$\text{watashi} > \text{wa} < \sum / \text{PR} > \text{yori} < \sum / \text{POL} / \text{PR}$$

$$X = \text{ryokoo} \cap \text{suru} \mid X = \text{tai} > \text{iru} > [ni_1]$$

$$[ni_2]; \text{uchi}$$

- (6b) *watashi wa ryokoo suru yori mo uchi ni itai desu*  
 (as for me, compared to traveling, too, [I] wish to stay home)

$$\text{watashi} > \text{wa} < \sum / \text{PR} > \text{yori} > \text{mo} < \sum / \text{POL} / \text{PR}$$

$$X = \text{ryokoo} \cap \text{suru} \mid X = \text{tai} > \text{iru} > [ni_1]$$

$$[ni_2]; \text{uchi}$$

Martin (2004:141) gives the following examples for *yori* following a case marker; since *yori* follows the other particle, it is not embedded in the situation and is analyzed as being topical.

- (7) *anata to yori hoka no hito to ikitai*  
 ‘I’d rather go with someone other than you.’  
 (compared to with you, [I] like to go with another person)

$$\text{anata} > \text{to} > \text{yori} < \sum / \text{PR}$$

$$X = \text{tai} > \text{iku} > \text{to} < \text{hito} \downarrow$$

$$- \text{hoka}$$

- (8) *Kyooto he yori Nara he ikimashoo ka*  
 ‘Shall we go to Nara rather than Kyoto?’  
 (compared to - to Kyoto, shall we rather go to Nara?)

$$\begin{array}{l}
 X > [he_1] > yori < \sum / \text{POL} / \text{SUB} > ka \\
 [he_2]; Kyooto \mid X = iku > [he_1] \\
 [he_2]; Nara
 \end{array}$$

In comparisons the particle *yori* is often combined with the word *hoo* ‘the alternative of’, as in the examples (9) and (10a) from Makino&Tutsui. In the first sentence, the noun phrase marked by *yori* is a topic, whereas in the example (10b) in the next section, *yori* has a non-topical function.

- (9) *Boku wa suteeki yori sakana no hoo ga suki da*  
 ‘I prefer fish to steak.’  
 (as for me, compared to steak, there is the situation that [choosing] fish is likable)

$$\begin{array}{l}
 boku > wa < suteeki > yori < \sum / \text{PR} \\
 hoo \downarrow = suki \\
 - sakana
 \end{array}$$

### 8.6.2 *yori* in a non-topical function

In the next sentence the phrase marked by *yori* is preceded by *hoo ga*; the noun phrase + *yori* is embedded in the situation because it occurs between the subject *kuruma de iku hoo ga* and the predicate *yasui*, therefore *yori* is analyzed as being non-topical.

- (10a) *kuruma de iku hoo ga basu de iku yori yasui*  
 ‘Going by car is cheaper than going by bus.’  
 (there is the situation that the way of the situation of going by car is cheap compared to the situation of going by bus)

$$\begin{array}{l}
 \sum / \text{PR} \\
 hoo \downarrow = yasui > yori < \sum / \text{PR} \\
 - \sum / \text{PR} \mid X = iku > [de_1] \\
 X = iku > [de_1] \mid [de_2]; basu \\
 [de_2]; kuruma
 \end{array}$$

A similar analysis is made when *mo* is added, as in example (10b). In this sentence, too, the entire phrase preceding *yori mo* is embedded between the subject and the predicate, and as a result, it is not a topic.

- (10b) *kuruma de iku hoo ga basu de iku yori mo yasui*  
 ‘Going by car is cheaper than going by bus.’  
 (there is the situation that the way of the situation of going by car is cheap also compared to the situation of going by bus)

$$\begin{array}{l} \sum / \text{PR} \\ hoo \downarrow = yasui > yori > mo < \sum / \text{PR} \\ - \sum / \text{PR} \quad | X = iku > [de_1] \\ X = iku > [de_1] \quad | \quad [de_2]; basu \\ \quad \quad \quad [de_2]; kuruma \end{array}$$

Martin points out that case markers may optionally drop before *yori*, albeit with a slight difference in meaning, and he gives the following examples; he maintains that sentence (11a) becomes ambiguous when the particle *ni* is dropped, as in (11b) since it could be taken as having the meaning ‘I am nicer to others than my brother [is]’. In both sentences the noun phrase marked by *yori* is non-topical because it occurs between the subject *watashi*, marked by the nominative particle *ga*, and the predicate.

- (11a) *watashi ga ani ni yori hito ni shinsetsu da*  
 ‘I am nicer to others than [to] my brother.’

$$\begin{array}{l} \sum / \text{PR} \\ watashi = shinsetsu > [ni_1] > yori > [ni_1] \\ \quad \quad \quad [ni_2]; hito \quad | \quad [ni_2]; ani \end{array}$$

- (11b) *watashi ga ani yori hito ni shinsetsu da*  
 (I am nice to people compared to my brother)

$$\begin{array}{l} \sum / \text{PR} \\ watashi = shinsetsu > [ni_1] \quad > yori < ani \\ \quad \quad \quad [ni_2]; hito \end{array}$$

## 9 Conjunctional particles

In this chapter the clause conjunctions *ga*, *kara*, *made*, *to*, *shi*, *ke(re)do*, *nara* and *nagara* will be discussed. Bloch (1970:46) defines these particles as clause particles with the class meaning: “to relate the clause to the following clause in meaning”. The sentence final particle *ka* can also be used to connect two sentences, which will be described in section 10.1.

The conjunctional particles all share the same function of connecting two coordinate sentences, albeit with differences in meaning; these differences will be explained while analyzing various example sentences in the sections here below. The conjunctional function is noted down in the mathematical descriptions by placing the conjunction between the two situations, connected to the first situation by the relation symbol “>” for gradation, and to the following situation by the reversed gradation symbol “<”:

$$S_1 > \text{conjunctional particle} < S_2$$

### 9.1 The particle *ga*

The main function of the particle *ga*, namely, to mark the first valence of the predicate, has been described in section 4.1. In this function the nominative particle *ga* marks the preceding noun phrase as a subject, without adding a meaning of its own and therefore it is left out of the mathematical descriptions. In the conjunctive function of connecting two sentences, however, *ga* does add an extra meaning of its own, and since this meaning differs from the meanings of other particles with the same function, the conjunctional particle *ga* cannot be left out of the descriptions. The meaning of conjunctive *ga* is most commonly translated in English as ‘but’ or ‘additionally’. In the English descriptions of the example sentences in this section the phrase ‘but additionally’ will be used for the basic meaning of *ga* as a conjunction. The conjunctive particle *ga* makes a sentence unit with the preceding sentence, not with the following sentence; that is why it cannot appear at the beginning of a sentence but may occur in the sentence final position, which will be described in section 9.1.2.

#### 9.1.1 *ga* connecting two sentences

Martin (2004:979-980) writes that the particle *ga* can be added to the imperfect, perfect and tentative of any sentence to impart the meaning ‘but, and (yet)’, showing a weak contrast, as in this example:

- (1) *samui ga gaman shiyoo*  
‘It’s cold but we’ll have to put up with it.’  
([it] is cold but additionally, let’s put up with it)

$$\sum / \text{PR} > ga < \sum / \text{SUB}$$

$X = \textit{samui} \quad | \quad X = \textit{gaman} \cap \textit{suru}$

According to Martin, in addition to the ‘but’ meaning, we also find the meaning ‘and also’, as in sentence (2). However, in my view, these are not two fundamentally different meanings but different translations or interpretations of one basic meaning, since the word ‘but’ also contains the idea of ‘additionally’ and ‘additionally’ may also include a sense of a contrast.



- (6) *boku wa besuto wo tsukushita ga dame datta*  
 ‘I did the best I could, but I failed.’  
 (as for me, [I] did my best but additionally, [it] was no good)

$$\begin{array}{l}
 \text{boku} > \text{wa} < \sum / \text{PA} > \text{ga} < \sum / \text{PA} \\
 \text{X} = [\text{tsukusu}_1] \quad | \quad \text{X} = \text{dame} \\
 [\text{tsukusu}_2]; \text{ besuto}
 \end{array}$$

- (7) *boku wa hitobanjuu kangaeta ga meian wa ukabanakatta*  
 ‘I pondered all night, but couldn’t come up with any great ideas.’  
 (as for me, [I] pondered all night but additionally, as for great ideas, [they] didn’t come up)

$$\begin{array}{l}
 \text{boku} > \text{wa} < \sum / \text{PA} > \text{ga} < \text{meian} > \text{wa} < \sum / \text{PA} \\
 \text{X} = \text{kangaeru} > \text{hitobanjuu} \quad | \quad \text{X} = \text{nai} > \text{ukabu}
 \end{array}$$

### 9.1.2 *ga* at the end of a sentence

Although the particle *ga* may occur at the end of a sentence, it is not analyzed here as a sentence final particle because in these occurrences *ga* basically has the same function and meaning as the conjunctive particle *ga*, the only difference being that the second sentence is absent.

According to Martin (2004:979): “Often sentences are left dangling with *ga*... as a deferential fragment; this is especially common with desideratives, round-about requests, and the like.” He gives the following example, where someone identifies himself on the phone:

- (8) *Tanaka desu ga*  
 ‘This is Tanaka speaking.’  
 ([it] is Tanaka, but additionally...)

$$\begin{array}{l}
 \sum / \text{POL} / \text{PR} > \text{ga} \\
 \text{X} = \text{Tanaka}
 \end{array}$$

Makino&Tutsui (1995:122) write that the  $S_2$  in: ‘ $S_1$  *ga*  $S_2$ ’ is often omitted when it is understandable from the context and/or the situation, or when the speaker doesn’t want to continue for some reason (e.g., the sentence is too direct, impolite, embarrassing, etc.), as in the next examples:

- (9) *daijoobu da to omoimasu ga*  
 ‘I think it’s all right but...’  
 ([I] think [that it] is alright, but additionally ...)

$$\begin{array}{l}
 \sum / \text{POL} / \text{PR} > \text{ga} \\
 \text{X} = \text{omou} > \text{to} < \sum / \text{PR} \\
 \text{X} = \text{daijoobu}
 \end{array}$$

- (10) *Tomu wa yoku benkyoo suru n desu ga*  
 ‘Tom studies hard but...’  
 (as for Tom, [it] is the situation that he studies hard, but additionally ...)

$$\begin{aligned} Tomu > wa < \sum / POL / PR > ga \\ X = \sum / PR \\ X = benkyoo \cap suru > yoi \end{aligned}$$

Kawashima (1999:40-41) remarks that when *ga* is used at the end of a sentence, it serves to soften a request or an opinion, to express uncertainty or puzzlement, or to make the utterance exclamatory or scornful (the latter is used only in men’s language); for such occurrences she quotes the following example sentences:

- (11) *watashi wa kono mama de ii to omou n desu ga*  
 ‘I think it would be fine to leave it the way it is...’  
 (as for me, it is the situation that [I] think [it] being this way is good, but additionally ...)

$$\begin{aligned} watashi > wa < \sum / POL / PR > ga \\ X = \sum / PR \\ X = omou > to < \sum / PR \\ \sum / GER = ii \\ X = mama - kono \end{aligned}$$

- (12) *tashika ni koko ni oite oita n desu ga*  
 ‘I had definitely put it there but...’  
 ([it] is the situation that [I] put [it] leaving [it] here certainly, but additionally ...)

$$\begin{aligned} \sum / POL / PR > ga \\ X = \sum / PA \\ X = oku \supset oku > [ni_1] > [ni_1] \\ [ni_2]; koko \mid [ni_2]; tashika \end{aligned}$$

In the next example, description (a) is used when the phrase is indicated to be a quotation, (e.g. by quotation marks) and (b) when such an indication can’t be determined.

- (13) *kono usotsuki-me ga!*  
 ‘You liar!’

a)

$$Y > ga$$

$$uso \cap tsuki \cup me - kono$$

b)

$$uso \cap tsuki \cup me - kono > ga$$



## 9.2 The particle *kara*

In the function of marking a noun phrase, *kara* is an ablative particle with the meaning ‘from’, indicating a starting point in time or place; this use of *kara* has been analyzed in section 5.4. The particle *kara* marking a sentence is a conjunction connecting two sentences in the same manner as has been described for the conjunctive particle *ga* in the previous section; however, there is a difference in meaning. In most sources a division is made between the occurrences of conjunctive *kara* following the gerund form of a verb or adjective, for which the meaning ‘after’ is usually given, and *kara* following the present or past indicative form with the meaning ‘because’. In this study these translations are not considered to be two separate meanings, but variations of one basic meaning of *kara*, which is translated here as ‘from’. The meaning ‘after’ for *kara* in ‘V-*te* + *kara*’ is the result of the combination with the gerund, which expresses a temporal dimension; in such cases *kara* indicates a starting point in time. Examples for the occurrences of *kara* in the second translation ‘because’, show that essentially *kara* has the same meaning ‘from’, but without the temporal implication of the gerund; instead, the sentence preceding *kara* and the one following it are presented as situations for which *kara* indicates: ‘from the fact that S<sub>1</sub> is true, S<sub>2</sub> is also true’.

### 9.2.1 V-*te* *kara*

Martin (2004:507-508) writes: “The gerund of a verbal sentence can be followed by *kara*; this forms a temporal ablative with the meaning ‘after doing’, ‘after one does/did/will do’ – with tense, mood, and the like determined by the final predicate in the new sentence, which may be verbal, adjectival, or nominal. When that sentence is imperfect, the translation is often ‘has been (doing) since ...’.”

- (1) *Amerika ni kite kara Bosuton ni sunde imasu*  
 ‘I have been living in Boston since coming to America.’  
 (from the time of coming to America, the situation occurs that [I] am living in Boston)

$$\begin{array}{l} \sum / \text{GER} > \textit{kara} < \sum / \text{POL} / \text{PR} \\ X = \textit{kuru} > [ni_1] \quad | \quad X = \textit{iru} \supset \textit{sumu} > [ni_1] \\ [ni_2]; \textit{Amerika} \quad | \quad [ni_2]; \textit{Bosuton} \end{array}$$

Martin also points out that that the expression V-*te* *kara* ‘after doing’ usually implies a logical or temporal sequence and it often has the same subject as the next sentence, although this need not always be the case, e.g.:

- (2) *kare ga itte kara watashi-tachi ga tabeyoo*  
 ‘Let’s eat when he goes.’  
 (from the time of him leaving, the situation occurs that we propose to eat)

$$\begin{array}{l} \sum / \text{GER} > \textit{kara} < \sum / \text{SUB} \\ \textit{kare} = \textit{iku} \quad | \quad \textit{watashi} \cup \textit{tachi} = \textit{taberu} \end{array}$$

Makino&Tutsui (1995:177-180) give the following examples for *kara* in the construction *V-te kara* indicating: after/since a point in time at which something takes place, in the meaning ‘after’, ‘having doing something’, or ‘since’. They argue that: “*Kara* in *V-te kara* can be omitted if the main verb does not indicate a high degree of volitional control on the part of the speaker as in the cases of a strong suggestion, determination or a command” and explain that the difference between *te kara* and *te ø* is that the former focuses more on chronological order and volitional planning than the latter does. That is the reason why the examples (3a, 4a, 5a, and 6a) can also occur without *kara*, i.e. (3b, 4b, 5b, and 6b), whereas example (7a) cannot. In the mathematical descriptions of sentences with a gerund but without *kara*, the relation symbol ‘ $\subset$ ’ is used to link the two sentences, indicating that the connection is temporal, and reversed because the main sentence is not put first in the description.

- (3a) *Yukiko wa bangohan wo tabete kara eiga ni itta*  
 ‘After eating her supper, Yukiko went to a movie.’  
 (as for Yukiko, from the time of having eaten her supper, the situation occurs that [she] went to a movie)

$$\begin{array}{l} \text{Yukiko} > \text{wa} < \sum / \text{GER} > \text{kara} < \sum / \text{PA} \\ \text{X} = [\text{taberu}_1] \quad | \quad \text{X} = \text{iku} > [\text{ni}_1] \\ [\text{taberu}_2]; \text{ban} \cap \text{gohan} \quad | \quad [\text{ni}_2]; \text{eiga} \end{array}$$

- (3b) *Yukiko wa bangohan wo tabete eiga ni itta*  
 (as for Yukiko, having eaten her supper, [she] went to a movie)

$$\begin{array}{l} \text{Yukiko} > \text{wa} < \sum / \text{GER} < \sum / \text{PA} \\ \text{X} = [\text{taberu}_1] \quad | \quad \text{X} = \text{iku} > [\text{ni}_1] \\ [\text{taberu}_2]; \text{ban} \cap \text{gohan} \quad | \quad [\text{ni}_2]; \text{eiga} \end{array}$$

- (4a) *watashi wa tomodachi ni denwa shite kara uchi wo deta*  
 ‘I left home after making a call to my friend.’  
 (as for me, from the time of having made a call to my friend, the situation occurs that [I] left home)

$$\begin{array}{l} \text{watashi} > \text{wa} < \sum / \text{GER} > \text{kara} < \sum / \text{PA} \\ \text{X} = \text{denwa} \cap \text{suru} > [\text{ni}_1] \quad | \quad \text{X} = [\text{deru}_1] \\ [\text{ni}_2]; \text{tomo} \cap \text{dachi} \quad | \quad [\text{deru}_2]; \text{uchi} \end{array}$$

- (4b) *watashi wa tomodachi ni denwa shite uchi wo deta*  
 (as for me, having made a call to my friend, [I] left home.)

$$\begin{array}{l} \text{watashi} > \text{wa} < \sum / \text{GER} < \sum / \text{PA} \\ \text{X} = \text{denwa} \cap \text{suru} > [\text{ni}_1] \quad | \quad \text{X} = [\text{deru}_1] \\ [\text{ni}_2]; \text{tomo} \cup \text{dachi} \quad | \quad [\text{deru}_2]; \text{uchi} \end{array}$$

- (5a) *Joonzu-san wa itsumo shawaa wo abite kara nemasu*  
 ‘Mr. Jones always goes to bed after taking a shower.’  
 (as for Mr. Jones, whenever, from the time of taking a shower, the situation occurs that [he] goes to bed)

$$\begin{array}{l}
 \text{Joonzu} \cup \text{san} > \text{wa} < \text{itsu} > \text{mo} < \sum / \text{GER} > \text{kara} < \sum / \text{POL} / \text{PR} \\
 \text{X} = [\text{abiru}_1] \quad | \quad \text{X} = \text{neru} \\
 [\text{abiru}_2]; \text{shawaa}
 \end{array}$$

- (5b) *Joonzu-san wa itsumo shawaa wo abite nemasu*  
 (as for Mr. Jones, whenever, having taken a shower, [he] goes to bed)

$$\begin{array}{l}
 \text{Joonzu} \cup \text{san} > \text{wa} < \text{itsu} > \text{mo} < \sum / \text{GER} > < \sum / \text{POL} / \text{PR} \\
 \text{X} = [\text{abiru}_1] \quad | \quad \text{X} = \text{neru} \\
 [\text{abiru}_2]; \text{shawaa}
 \end{array}$$

- (6a) *watashitachi ga kono ie wo katte kara moo juunen ni naru*  
 ‘It’s already been ten years since we bought this house.’  
 (from the time of us buying this house, the situation occurs that [it] is already ten years)

$$\begin{array}{l}
 \sum / \text{GER} > \text{kara} < \sum / \text{PR} \\
 \text{watashi} \cup \text{tachi} = [\text{kau}_1] \quad | \quad \text{X} = \text{naru} > [\text{ni}_1] > \text{moo} \\
 [\text{kau}_2]; \text{ie} - \text{kono} \quad | \quad [\text{ni}_2]; \text{juu} \cap \text{nen}
 \end{array}$$

- (6b) *watashitachi ga kono ie wo katte moo juunen ni naru*  
 (us having been buying this house, [it] is already ten years [ago])

$$\begin{array}{l}
 \sum / \text{GER} < \sum / \text{PR} \\
 \text{watashi} \cup \text{tachi} = [\text{kau}_1] \quad | \quad \text{X} = \text{naru} > [\text{ni}_1] > \text{moo} \\
 [\text{kau}_2]; \text{ie} - \text{kono} \quad | \quad [\text{ni}_2]; \text{juu} \cap \text{nen}
 \end{array}$$

In example (7a) *benkyoo* is the first valence of the intransitive verb *owaru* ‘come to an end, be over’, but it cannot be the first valence of the action verb *suru*, because it is inanimate; the subject of *suru* is not mentioned, but it must be someone who is performing the action of playing tennis. Therefore the construction without *kara* cannot be used.

- (7a) *benkyoo ga owatte kara tennis wo shimashoo*  
 ‘Let’s play tennis after we’ve finished studying.’  
 (from the time of the studying being over, the situation occurs that [we] suggest to play tennis)

$$\sum / \text{GER} > \text{kara} < \sum / \text{POL} / \text{SUB}$$

$$\text{benkyoo} = \text{owaru} \quad | \text{X} = [\text{suru}_1]$$

$$[\text{suru}_2]; \text{tenisu}$$

- (7b) \**benkyoo ga owatte tennis wo shimashoo*  
 ‘We’ve finished studying, let’s play tennis’

### 9.2.2 V-indicative + *kara*

Makino&Tutsui define *kara* in this use as: “a subordinate conjunction expressing a reason or cause”. As the descriptions show, in these occurrences *kara* is analyzed as having the same basic meaning ‘from’ as in the first category, but without the temporal dimension because *kara* is not preceded by a gerund.

- (8) *Haruko wa juushichi da kara mada o-sake wo nomenai*  
 ‘Haruko is seventeen, so she can’t drink sake yet.’  
 (as for Haruko, from the situation that [she] is seventeen, the situation occurs that [she] can’t drink sake yet)

$$\text{Haruko} > \text{wa} < \sum / \text{PR} > \text{kara} < \sum / \text{PR}$$

$$\text{X} = \text{juushichi} \quad | \text{X} = \text{nai} > \text{eru} > \text{Y} > \text{mada}$$

$$\text{nomu} ; \text{HON} \cap \text{sake}$$

- (9) *kyoo wa isogashii desu kara ashita kite kudasai*  
 ‘Please come tomorrow because I’m busy today.’  
 As for today, from the situation that [I] am busy, the situation occurs of the request to come tomorrow)

$$\text{kyoo} > \text{wa} < \sum / \text{POL} / \text{PR} > \text{kara} < \sum / \text{INF}$$

$$\text{X} = \text{isogashii} \quad | \text{X} = \text{kudasaru} \supset \text{kuru} > \text{ashita}$$

- (10) *jogingu wo shita kara shawaa wo abita*  
 ‘Because I jogged, I took a shower.’  
 (from the situation that [I] jogged, the situation occurred that [I] took a shower)

$$\sum / \text{PA} > \text{kara} < \sum / \text{PA}$$

$$\text{X} = [\text{suru}_1] \quad | \text{X} = [\text{abiru}_1]$$

$$[\text{suru}_2]; \text{jogingu} \quad | \quad [\text{abiru}_2]; \text{shawaa}$$

Makino&Tutsui also point out that in question-and-answer situations, abbreviated forms are occasionally used:

- (11a) *rainen Nihon he iku kara Nihongo wo benkyoo shite iru*  
 ‘I’m studying Japanese because I’m going to Japan next year.’  
 (from the situation that [I] go to Japan next year, the situation occurs that [I] am studying Japanese)

$$\begin{array}{l} \sum / PR > kara < \sum / PR \\ X = iku > [he_1] > rai \cap nen \mid X = iru \supset [benkyoo \cap suru_1] \\ [he_2]; Nihon \mid [benkyoo \cap suru_2]; Nihon \cap go \end{array}$$

- (11b) *rainen Nihon he ikimasu kara*  
 ‘Because I’m going to Japan next year.’

$$\begin{array}{l} \sum / POL / PR > kara \\ X = iku > [he_1] > rai \cap nen \\ [he_2]; Nihon \end{array}$$

### 9.3 The particle *made*

In the section, the conjunctive particle *made* in its function of connecting two sentences will be discussed. The allative particle *made* marking a noun phrase, expressing a limit in time, space or quantity, with the meaning ‘until’ or ‘up to’, has already been described in section 5.5; the particle *made* in a topical function, with the same meaning, has been analyzed in section 7.4. The particle *made* as a conjunction has the same function as the other conjunctive particles, but with the basic meaning ‘up to’. Although, like *kara*, the particle *made* can occur in combination with a gerund, such occurrences of *V-te made* are far less frequent than those of *V-te kara*; an example of *made* preceded by a gerund will be analyzed in section 9.3.2. In the majority of its occurrences the conjunctive particle *made* is used after a sentence with a predicate in the indicative form, as will be described in section 9.3.1. When ‘S + *made*’ is embedded in a sentence part because it is directly followed by another particle, the function of *made* is not analyzed as conjunctive, as can be observed in the descriptions for the examples in section 9.3.3.

#### 9.3.1 the conjunction *made*, preceded by a predicate in the indicative form

The following examples of conjunctive *made*, with the preceding predicates in the indicative form, are quoted from Martin (2004: 388, 694) and Makino&Tutsui (1995:226-228):

- (1) *kare ga kuru made matte kudasai*  
 ‘Please wait till he comes.’  
 (up to the point that he comes, please wait)

$$\sum / \text{PR} > \textit{made} < \sum / \text{INF}$$

*kare = kuru* | *X = kudasaru*  $\supset$  *matsu*

- (2) *pika-pika hikaru made kutsu wo migaita*  
 ‘I brushed my shoes till they were shiny.’  
 (up to the point that [they] shine, [I] brushed [my] shoes)

$$\sum / \text{PR} > \textit{made} < \sum / \text{PA}$$

*X = hikaru > pika•pika* | *X = [migaku<sub>1</sub>]*  
 [migaku<sub>2</sub>]; *kutsu*

- (3) *watashi ga iku made uchi de matte ite kudasai*  
 ‘Please wait at home until I get there.’  
 (up to the point that [I] get there, please be waiting)

$$\sum / \text{PR} > \textit{made} < \sum / \text{INF}$$

*watashi = iku* | *X = kudasaru*  $\supset$  *iru*  $\supset$  *matsu*  $>$  [*de*<sub>1</sub>]  
 [*de*<sub>2</sub>]; *uchi*

- (4) *hikooki ga deru made robii de tomodachi to hanashite ita*  
 ‘Until the plane left I was talking with my friend in the lobby.’  
 (up to the point that the plane left, [I] was talking with a friend in the lobby)

$$\sum /PR > made < \sum /PA$$

$$hikooki = deru \quad | \quad X = iru \supset hanasu > to < tomo \cap dachi > [de_1]$$

$$[de_2]; robii$$

### 9.3.2 the conjunction *made*, preceded by a gerund

In the same way as it has been argued for *V-te kara* in section 9.2.1, *made* in the construction of a gerund + *made* is analyzed as having the same meaning as in the occurrences of *made* following a verb in the indicative form.

The following sentence is one of the complex sentences with *V-te made* quoted by Martin (2004:505):

- (5) *jibun no seikatsu wo gisei ni shite made mo toshi-totta oya no mendoo wo miru hitsuyoo wa nai*  
 ‘There is no need to take care of your aged parents to the point where you sacrifice your own life.’  
 (up to the time of sacrificing one’s own life, too, as for the necessity to take care of [one’s] aged parents, [there] is not)

$$X > [made_1] > mo \quad < hitsuyoo \downarrow > wa \quad < \sum /PR$$

$$[made_2]; \sum /GER \quad | \quad - \sum /PR \quad | \quad X = nai$$

$$X = [suru_1] \quad > [ni_1] \quad | \quad X = [miru_1]$$

$$[suru_2]; seikatsu \downarrow \quad | \quad [ni_2]; gisei \quad | \quad [miru_2]; mendoo \downarrow$$

$$- jibun \quad \quad \quad - oya - toshitotta$$

### 9.3.3 non-conjunctive *made*

In the following example sentences from Makino&Tutsui (1995:229) and Kawashima (1999:90), the particle *made* does not function as a conjunction, despite the fact that it is preceded by a sentence; because *made* is directly followed by the dative particle *ni*, it is analyzed as being embedded in the clause and functioning as an allative particle marking a point in time. In example (7), however, due to the presence of the topical particle *wa*, the entire preceding phrase is marked as a topic.

- (6) *gakkoo ga hajimaru made ni kono hon wo yonde oite kudasai*  
 ‘Please read this book (in advance) by the time the school starts.’  
 (at [the time] up to the point that the school starts, please read this book (in advance))

$$\begin{array}{l} \sum / \text{INF} \\ X = \text{kudasaru} \supset \text{oku} \supset \text{yomu} ; \text{hon} - \text{kono} > [ni_1] \\ \qquad \qquad \qquad \qquad \qquad \qquad \qquad \qquad [ni_2]; [made_1] \\ \qquad \qquad \qquad \qquad \qquad \qquad \qquad \qquad [made_2]; \sum / \text{PR} \\ \qquad \qquad \qquad \qquad \qquad \qquad \qquad \qquad \text{gakkoo} = \text{hajimaru} \end{array}$$

- (7) *hikooki ga deru made ni wa, mada ichijikan gurai aru*  
 ‘There’s still about an hour before the plane leaves.’  
 (as for at [the time] up to the point that the plane leaves, [there] is still about an hour)

$$\begin{array}{l} X > [ni_1] > \text{wa} \qquad \qquad \qquad < \qquad \qquad \qquad \sum / \text{PR} \\ [ni_2]; [made_1] \qquad \qquad \qquad | \text{ichi} \cap \text{jikan} > \text{gurai} = \text{aru} > \text{mada} \\ [made_2]; \sum / \text{PR} \\ \text{hikooki} = \text{deru} \end{array}$$

In the next example quoted by Kawashima (1999:89) with the combination *made mo*, the particle *made* is preceded by a sentence, yet it is not a conjunction connecting two sentences; due to the fact that ‘S *made*’ is directly followed by the topical particle *mo* the first sentence is the topic of the second sentence.

- (8) *nyuuin shinai made mo, juubun na kyuyoo ga hitsuyoo desu*  
 ‘Even though it is not necessary for (you) to be hospitalized, (you) need plenty of rest.’  
 (up to the point that [you] are not hospitalized, too, plenty of rest is necessary)

$$\begin{array}{l} X > [made_1] > \text{mo} \qquad \qquad \qquad < \qquad \qquad \qquad \sum / \text{POL} / \text{PR} \\ [made_2]; \sum / \text{PR} \qquad \qquad \qquad | \text{kyuyoo} - Y = \text{hitsuyoo} \\ X = \text{nai} > \text{nyuuin} \cap \text{suru} \qquad \qquad \qquad \text{juubun} \end{array}$$



## 9.4 The particle *to*

In this section the conjunctive particle *to* connecting two sentences will be discussed. The particle *to* marking a sentence may also function as a quotative particle, which has already been analyzed in section 6.1.8. The particle *to* marking a noun phrase has also been described in chapter 6. In the conjunctive function *to* connects two sentences with the meaning ‘whenever, when, if’ and the predicate of the first sentence must have the non-past indicative form. For the meaning of the particle *to* in this function generally two translations are used, viz. ‘if’ and ‘when’. In order to distinguish between the use of conjunctive *to* and the conditional and optative constructions *-tara* and *-(r)eba*, which in this work are translated by, respectively, ‘if’ and ‘provided’, for the particle *to* in the construction ‘S<sub>1</sub> *to* S<sub>2</sub>’ the translation ‘when’ will be used in the English descriptions.

Martin (2004:974-975) writes that the particle *to* occurs after the imperfect with the meaning ‘when (ever)’ or ‘if’ and after the verbal imperfect it can also mean ‘as soon as’. He maintains that, “Since there are at least three meanings for *-ru to*, some sentences are ambiguous.” and cites the following example sentence with two different translations:

- (1) *densha ni nori-okureru to basu de ikanakereba naranai*  
 a. ‘If you miss your train you’ll have to take the bus.’  
 b. ‘Whenever you miss the train you have to take the bus.’  
 (when [you] are too late to board the train, provided [that you] do not go by bus, it does not become [possible])

$$\begin{array}{ccc} \sum /PR > to & < \sum /OPT & < \sum /PR \\ X = nori \cap okureru > [ni_1] & | X = nai > iku > [de_1] & | X = nai > naru \\ & [ni_2]; densha | & [de_2]; basu \end{array}$$

A choice between these two translations can only be made by means of interpretation or contextual knowledge, which are considered to lie beyond the scope of the semantic analyses proposed here.

The following example sentences with conjunctive *to* are quoted from Makino&Tutsui (1995:480-483), who define *to* as “a subordinate conjunction which marks a condition that brings about a non-controllable event or state”.

- (2) *sore wa sensei ni kiku to sugu wakatta*  
 ‘I understood it immediately when I asked my teacher.’  
 (as for this, when [I] asked the teacher, [I] immediately understood)

$$\begin{array}{ccc} sore > wa < \sum /PR > to & < \sum /PA \\ X = kiku > [ni_1] & | X = wakaru > sugu \\ & [ni_2]; sensei \end{array}$$

- (3) *taiya wa furui to abunai desu yo*  
 ‘Tires are dangerous if they are old.’  
 (as for tires, when [they] are old, [they] are dangerous, [you know])

$$taiya > wa < \sum / PR > to < \sum / POL / PR > yo$$

$$X = furui \quad | \quad X = abunai$$

- (4) *gakusei da to waribiki ga arimasu*  
 ‘If you are a student, there is a discount.’  
 (when [you] are a student, a discount exists)

$$\sum / PR > to < \sum / POL / PR$$

$$X = gakusei \quad | \quad waribiki = aru$$

- (5) *Nyuuyooku he iku to ii resutoran ga aru*  
 ‘If you go to New York, there are good restaurants.’  
 (when [you] go to New York, good restaurants exist)

$$\sum / PR > to < \sum / PR$$

$$X = iku > [he_1] \quad | \quad restoran - ii = aru$$

$$[he_2]; Nyuuyooku$$

Makino&Tutsui inform us that the sentence following *to* cannot be a command, request, suggestion, invitation or a volitional sentence, and therefore, example (6) is not correct.

- (6) \**shigoto ga hayaku owaru to watashi no uchi ni kite kudasai*  
 ‘If you finish your work early, please come to my place.’

Martin points out that *to* is inappropriate to translate many cases of English ‘when’; for instance, in the next example (7) *to* cannot be used and *toki* ‘time’ is used instead; since *toki* is not a particle but a noun, the first situation is analyzed as a relative clause referring to *toki*.

- (7) ‘When you go to America do you go by ship?’  
*Amerika he iku toki wa fune de ikimasu ka*  
 (as for the time that [you] go to America, do [you] go by ship?)

$$toki \downarrow > wa < \sum / POL / PR > ka$$

$$- \sum / PR \quad | \quad X = iku > [de_1]$$

$$X = iku > [he_1] \quad | \quad [de_2]; fune$$

$$[he_2]; Amerika$$

Kawashima (1999: 208) quotes the following examples for the use of conjunctive *to*, which “placed after a verb, indicates that the action/condition described in the clause preceding it, immediately initiated another action/condition”:

- (8) *sensei ga kyooshitsu ni haitte kuru to seitotachi wa awatete seki ni tsuita*  
 ‘As soon as the teacher entered the classroom, the students took their seats in a hurry.’  
 (when the teacher came entering into the classroom, as for the students, [they] took their seats in a hurry)

$$\begin{array}{l} \sum /PR > to < seito \cup tachi > wa < \sum /GER < \sum /PA \\ sensei = kuru \supset hairu > [ni_1] \quad | X = awateru \quad | X = tsuku > [ni_1] \\ \quad \quad \quad [ni_2]; kyoo \cap shitsu \quad \quad \quad \quad \quad \quad \quad \quad [ni_2]; seki \end{array}$$

For the next sentence, the phrase *mizu wo utta yoo ni* can be analyzed as an adjunct to *shizuka*, as is expressed by description (a), or as an adjunct to the predicate *ni naru*, as in description (b).

- (9) *maku ga agaru to kankyaku wa mizu wo utta yoo ni shizuka ni natta*  
 ‘When the curtain went up, the audience became completely silent.’

- a) (when the curtain went up, the audience became ‘silent in the way of sprinkling water’)

$$\begin{array}{l} \sum /PR > to < kankyaku > wa < \sum /PA \\ maku = agaru \quad \quad \quad | X = naru > [ni_1] \\ \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad [ni_2]; shizuka > [ni_1] \\ \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad [ni_2]; yoo \downarrow \\ \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad - \sum /PA \\ \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad X = [utsu_1] \\ \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad [utsu_2]; mizu \end{array}$$

- b) (when the curtain went up, the audience became silent [and became] in the way of sprinkling water)

$$\begin{array}{l} \sum /PR < to > kankyaku > wa < \sum /PA \\ maku = agaru \quad \quad \quad | X = naru > [ni_1] \quad \quad \quad > [ni_1] \\ \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad [ni_2]; shizuka \quad | [ni_2]; yoo \downarrow \\ \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad - \sum /PA \\ \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad X = [utsu_1] \\ \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad [utsu_2]; mizu \end{array}$$

The following sentence from Kawashima is an example of a construction where the first sentence has a negative predicate and the second predicate is affirmative.

- (10) *kimi ga konai to tsumaranai naa*  
'It'll be boring if you don't come'  
(when you don't come, [it] will be boring)

$$\sum /PR > to < \sum /PR > naa$$

*kimi = nai > kuru | X = tsumaranai*

## 9.5 The conjunction *shi*

Martin (2004:975-977) writes that the particle *shi* can be added to the imperfect (=present), perfect (=past), or tentative (=subjunctive), to mean ‘and (also/moreover)’, and that such a conjunctionalized sentence differs from the gerund in that there is no necessary logical or temporal connection between the two sentences linked with *shi*. Furthermore Martin states that cause or reason may be implied in certain occurrences of the conjunctional particle *shi*. However, since interpretations and implications are not a point of consideration in the semantic analyses in this work, *shi* will be referred to with its basic meaning ‘and’.

Makino&Tutsui (1995:395-397) give the following example sentences for *shi* as a conjunction to indicate: ‘and’ in an emphatic way. For the first two sentences it could also be argued that the emphasis is caused by the repeated use of the particles *mo* or *wa* rather than it being implicated by *shi*.

- (1) *kyoo wa tennis mo shita shi eiga mo mita*  
‘I not only played tennis but also saw a movie today.’  
(as for today, tennis too, [I] did, and, a movie too, [I] saw)

$kyoo > wa < tennis > mo < \sum / PA > shi < eiga > mo < \sum / PA$   
X = *suru* | X = *miru*

- (2) *koko wa natsu wa atsui shi fuyu wa samui*  
‘Here it’s hot in the summer, and what’s more, it’s cold in the winter.’  
(as for here, as for the summers, [they] are hot, and, as for the winters, [they] are cold)

$koko > wa < natsu > wa < \sum / PR > shi < fuyu > wa < \sum / PR$   
X = *atsui* | X = *samui*

- (3) *kono apaato wa kirei da shi yasui*  
‘This apartment is clean, and what’s more, it’s inexpensive.’  
(as for this apartment, [it] is clean, and, [it] is cheap)

$apaato - kono > wa < \sum / PR > shi < \sum / PR$   
X = *kirei* | X = *yasui*

Furthermore, Makino&Tutsui point out that *shi* can be repeated more than once in a clause, as in their example sentence (4), and that when the speaker wishes to be very polite, the clause before *shi* can also be in the formal form if the main clause is in the formal form, as in example (5b).

- (4) *shigoto mo atta shi kekkon mo dekita shi totemo ureshii desu*  
‘Not only did I find a job, but I was also able to get married, so I’m very happy.’  
(work too, [there] was, and a marriage too, [I] could do [it], and, I’m very happy)

$shigoto > mo < \sum / PA > shi < kekkon > mo < \sum / PA > shi < \sum / POL / PR$   
X = *aru* | X = *dekiru* | X = *ureshii > totemo*

- (5a) *kyoo wa tenki mo ii shi doko ka he ikimashoo ka*  
 ‘It’s a nice day, so shall we go out somewhere?’  
 (as for today, the weather too, [it] is nice, and, shall we go out somewhere?)

$$kyoo > wa < tenki > mo < \sum / PR > shi < \sum / POL / SUB > ka$$

$$X = ii \quad | \quad X = iku > [he_1]$$

$$[he_2]; doko > ka$$

- (5b) *kyoo wa tenki mo ii desu shi doko ka he ikimashoo ka*  
 ‘It’s a nice day, so shall we go out somewhere?’  
 (as for today, the weather too, [it] is nice, and, shall we go out somewhere?)

$$kyoo > wa < tenki > mo < \sum / POL / PR > shi < \sum / POL / SUB > ka$$

$$X = ii \quad | \quad X = iku > [he_1]$$

$$[he_2]; doko > ka$$

Martin (2004: 976) writes that there are some cases where the sentence with *shi* implies reason or cause, as in his examples (6) and (7).

- (6) *yuki da shi doyoobi da shi demae wa dekinai to iu*  
 ‘What with the snow and it’s being Saturday (and all), they say they can’t deliver [the food].’  
 ([it] is snow, and [it] is Saturday, and, as for the delivery, [they] say [that they] cannot do [it])

$$\sum / PR > shi < \sum / PR > shi < demae > wa < \sum / PR$$

$$X = yuki \quad | \quad X = doyoobi \quad | \quad X = iu > to < \sum / PR$$

$$X = nai > dekiru$$

- (7) *kyuujitsu da shi tenki da shi Yamada ga kuru*  
 ‘It’s a holiday, the weather’s nice – Yamada will come, I think.’  
 ([it] is a holiday, and, [it] is nice weather, and, Yamada will come)

$$\sum / PR > shi < \sum / PR > shi < \sum / PR$$

$$X = kyuujitsu \quad | \quad X = tenki \quad | \quad Yamada = kuru$$

Kawashima (1999:180-182) classifies three kinds of the occurrences of the particle *shi*, and quotes an example sentence for each of these categories. In these examples, too, it can be remarked that the repeated usage of the particle *wa* may well be the main cause for the implication of emphasis or contrast.

- a) when one cites a list with *shi*, it emphasizes the items listed.

- (8) *shoku wa ushinau shi tsuma to wa wakareru shi kare wa hidoku genki ga nai*  
 ‘He has lost his job, (and) he has split with his wife; he’s very depressed.’  
 (as for a job, [he] lost [it], and, as for from his wife, [he] is separated, and, as for him, [he] is not feeling extremely well)

*shoku > wa < ∑ / PR > shi < tsuma > to > wa < ∑ / PR > shi < kare > wa < ∑ / PR >*  
*X = ushinau | X = wakareru | genki = nai > hidoi*

- b) in a list, *shi* shows that the items or situations listed are the reasons or basis for another action or condition

- (9) *kaze wa tsuyoi shi yuki wa furidashita shi kyoo wa dekakeru no wa yamemashoo yo*  
 ‘It’s very windy, and it’s started to snow, so let’s not go out today.’  
 (as for wind, [it] is strong, and, as for snow, [it] began to fall, and, as for going out, let’s refrain from doing [it])

*kaze > wa < ∑ / PR > shi < yuki > wa < ∑ / PA > shi < kyoo > wa < ∞*  
*X = tsuyoi | X = furi ∩ dasu |*

*∞ X ↓ > wa < ∑ / POL / SUB > yo*  
*– ∑ / PR | X = yameru*  
*X = dekakeru*

- c) *shi* lists two conflicting items or situations

- (10) *atarashii yoofuku wa hoshii shi okane wa nai shi gakusei no futokoro wa sabishii naa*  
 ‘I want some new clothes, but I don’t have money (for them); a student’s budget is pretty sad.’  
 (as for new clothes, [they] are desirable, and, as for money, [there] is not, and, as for a student’s budget, [it] is pretty sad)

*yoofuku – atarashii > wa < ∑ / PR > shi < okane > wa < ∑ / PR > shi < ∞*  
*X = hoshii | X = nai |*

*∞ futokoro ↓ > wa < ∑ / PR > naa*  
*– gakusei | X = sabishii*

## 9.6 The conjunction *ke(re)do*

Martin (2004:977-979) writes that the particle *ke(re)do* can be added to the imperfect, perfect or tentative of any sentence, and is often reinforced with the particle *mo*, as *kedo mo*, *keredo mo*. According to Martin, *ke(re)do(mo)* has two meanings, namely, ‘however, but’ and ‘and also’. He argues that the second meaning is similar to the use of *shi*, but the difference is that joined sentences with *shi* are generally reversible, with little change in flavor, whereas those with *kedo* often imply surprise at the second sentence in view of the first. In the English textual descriptions of this work, the meaning of *keredo* is described in all cases as ‘however’, to distinguish it from conjunctive *ga* ‘but additionally’, and *shi* ‘and’. Like the conjunctive particle *ga*, *keredo* also may occur at the end of a sentence, which will be described in section 9.6.2.

### 9.6.1 *keredo* connecting two sentences

The following sentences are quoted by Martin as examples for *keredo* in the meaning ‘however, but’, as in example (1), and *keredo* in the meaning ‘and also’, as in (2). However, such nuances in meaning seem hard to determine and could also be attributed to the meanings of other sentence parts. For instance, the contrast expressed in (1) as ‘however’ in the translation is also expressed by the contrastive meanings of the two adjectives *chiisai* ‘small’ and *tsuyoi* ‘strong’; and if one considers the two actions *undoo suru* ‘do sports’ and *benkyoo suru* ‘study’ in example (2) as opposites rather than as similar activities, the translation ‘however’ for *kedo* may also be chosen for this sentence.

- (1) *karada ga chiisai kedo chikara wa tsuyoi*  
 ‘He is small in body but mighty in strength.’  
 ([his] body is small, however, as for [his] strength, [it] is powerful)

$$\sum /PR > kedo < chikara > wa < \sum /PR$$

*karada = chiisai* | *X = tsuyoi*

- (2) *undoo mo suru kedo benkyoo mo suru*  
 ‘He engages in sports but/and he also studies.’  
 (sports too, [he] does, however, studying too, [he] does)

$$undoo > mo < \sum /PR > kedo < benkyoo > mo < \sum /PR$$

*X = suru* | *X = suru*

The particle *keredo* is often used in combination with the topical particle *mo*, as in the following sentences given by Makino&Tutsui (1995:187-188), who define *keredomo* as a disjunctive subordinate conjunction that combines two sentences.

- (3) *watashi wa iwanakatta keredomo Tomu wa shitte ita*  
 ‘Although I didn’t tell him, Tom knew (about it).’  
 (as for me, [I] didn’t tell, however, too, as for Tom, [he] knew)

$$watashi > wa < \sum /PA > keredo > mo < Tomu > wa < \sum /PA$$

*X = nai > iu* | *X = iru  $\supset$  shiru*





(8) *moshi moshi, Tanaka to mooshimasu keredo*  
'hello, my name is Tanaka.'

(*Kenkyuusha Shinwaei Daijiten*)

Y ::  $\sum$  /POL / PR > *keredo*  
*moshi•moshi* | X = *moosu* > *to* < Y  
*Tanaka*

## 9.7 The conjunction *nara(ba)*

As the mathematical descriptions for the example sentences analyzed in this section will show, the conjunction *nara(ba)* has the same function as the conjunctive particles that have already been described in the previous sections of this chapter. For the meaning of *nara(ba)* the translation ‘if ... is the case’ has been used in the English textual descriptions.

Martin (2004:554-555) writes: “The shapes of the provisional (*-eba*) and the conditional (*-tara*) forms are confusing, since the colloquial copula borrows the literary hypothetical *naraba* as its provisional, usually shortening it to *nara*.” Furthermore, he points out that the forms of the copula must be carefully distinguished from the homonymous forms of *naru* ‘to become’, namely, *nareba* is the literary and colloquial provisional ‘become’, *naraba* is the literary hypothetical ‘become’, whereas in Modern Japanese, *nara(ba)* is the colloquial provisional ‘be’. According to Martin (2004:983), we might consider ‘sentence + *nara(ba)*’ ‘if (it’s a case of)’ as still another kind of conjunctive particle, but it would be better to treat it as just an optional dropping of *no* in the nominalization, e.g.:

- (1a) *yobu no naraba*  
 ‘If you are calling...’  
 (if the fact of the situation of calling is the case)

$$\begin{aligned} X \downarrow > naraba < \\ - \sum / PR \\ X = yobu \end{aligned}$$

- (1b) *yobu naraba*  
 ‘If you are calling...’  
 (if the situation of calling is the case)

$$\begin{aligned} \sum / PR > naraba < \\ X = yobu \end{aligned}$$

- (1c) *yobu no nara*  
 ‘If you are calling...’  
 (if the fact of the situation of calling is the case)

$$\begin{aligned} X \downarrow > nara < \\ - \sum / PR \\ X = yobu \end{aligned}$$

- (1d) *yobu nara*  
 ‘If you are calling...’  
 (if the situation of calling is the case)

$$\begin{aligned} \sum / PR > nara < \\ X = yobu \end{aligned}$$

Martin writes that the ‘if’ expressed by *nara* differs from other ‘ifs’, from (*r*)*eba* and *tara*, in anticipating a specific instance by a general case, e.g.:

- (2) *mado wo akeru nara kore wo akete kudasai*  
 ‘If you’re going to open a window, open this one.’  
 (if the situation of opening a window is the case, please open this [one])

$$\begin{array}{l} \sum / \text{PR} > nara < \sum / \text{INF} \\ X = [akeru_1] \quad | \quad X = kudasaru \supset akeru ; kore \\ [akeru_2] ; mado \end{array}$$

Makino&Tutsui (1995:281-284) define *nara* as: “a conjunction which indicates that the preceding sentence is the speaker’s supposition about the truth of a present or past fact or the actualization of something in the future”. Furthermore, they explain that in Modern Japanese *nara*, which is the simplified form of *naraba*, the conditional form of the copula *da*, is more frequently used than *naraba*; and since *nara* is a form of the copula, it requires a noun or noun equivalent; therefore when the preceding element is not a noun, it is nominalized by *no*, although in Modern Japanese this *no* is optional. Makino&Tutsui give the following examples for *nara* in the conjunctive function, with the meaning ‘if it is true that’, ‘if it is the case that’, ‘if’, ‘would/could’:

- (3a) *Matsuda ga kuru no nara boku wa ikanai*  
 ‘If it is true that Matsuda will come, I won’t go.’  
 (if the fact of the situation of Matsuda coming is the case, as for me, [I] won’t go)

$$\begin{array}{l} X \downarrow > nara < boku > wa < \sum / \text{PR} \\ - \sum / \text{PR} \quad | \quad X = nai > iku \\ Matsuda = kuru \end{array}$$

- (3b) *Matsuda ga kuru nara boku wa ikanai*  
 ‘If it is true that Matsuda will come, I won’t go.’  
 (if the situation of Matsuda coming is the case, as for me, [I] won’t go)

$$\begin{array}{l} \sum / \text{PR} > nara < boku > wa < \sum / \text{PR} \\ Matsuda = kuru \quad | \quad X = nai > iku \end{array}$$

- (4) *sonna ni takai no nara kaemasen*  
 ‘If it is that expensive, I can’t buy it.’  
 (if the fact of the situation of [it] being that expensive is the case, [I] can’t buy [it])

$$\begin{array}{l} X \downarrow > nara < \sum / \text{POL} / \text{NON} / \text{PR} \\ - \sum / \text{PR} \quad | \quad X = eru > Y \\ X = takai > [ni_1] \quad | \quad kau \\ [ni_2] ; sonna \end{array}$$

In the next example, due to the absence of a verbal predicate with a tense marking, the symbol ‘Y’ is used instead of the ‘Σ’ symbol for the situation.

- (5) *Yamadasan ga suki nara tegami wo kaitara doo desu ka*  
 ‘If you like Mr. Yamada, why don’t you write a letter to him?’  
 (if the situation of [you] liking Mr. Yamada is the case, if [you] write a letter, how would it be?)

$$\begin{array}{ccc}
 Y > nara < \Sigma / \text{COND} & \subset & \Sigma / \text{POL} / \text{PR} > ka \\
 Yamada \cup san = suki & | X = [kaku_1] & | X = doo \\
 & [kaku_2]; tegami &
 \end{array}$$

Makino&Tutsui quote example sentences for the cases of  $S_1$  *nara*  $S_2$  when  $S_2$  does not express a past event or a present habitual event, but expresses a present state, the speaker’s opinion (as in 6a), volition (6b), judgment (6c), command, request or suggestion:

- (6a) *Nyuuyooku he iku nara Rinkan Sentaa ga omoshiroi desu yo*  
 ‘If you go to New York, Lincoln Center is interesting.’  
 (if the situation of [you] going to New York is the case, Lincoln Center is interesting)

$$\begin{array}{ccc}
 \Sigma / \text{PR} > nara & < & \Sigma / \text{POL} / \text{PR} > yo \\
 X = iku > [he_1] & | Rinkansentaa = omoshiroi \\
 [he_2]; Nyuuyooku & &
 \end{array}$$

- (6b) *Nyuuyooku he iku nara Rinkan Sentaa he ikimasu*  
 ‘If I go to New York, I will go to Lincoln Center.’  
 (if the situation of [me] going to New York is the case, [I] will go to Lincoln Center)

$$\begin{array}{ccc}
 \Sigma / \text{PR} > nara & < & \Sigma / \text{POL} / \text{PR} \\
 X = iku > [he_1] & | X = iku > [he_1] \\
 [he_2]; Nyuuyooku & | & [he_2]; Rinkansentaa
 \end{array}$$

- (6c) *teepurekoodaa wo kau nara teepu wo kureru hazu desu*  
 ‘If you buy a tape-recorder, they should give you a tape.’  
 (if the situation of [you] buying a tape-recorder is the case, [they] should give you a tape)

$$\begin{array}{ccc}
 \Sigma / \text{PR} > nara & < & \Sigma / \text{POL} / \text{PR} \\
 X = [kau_1] & | \Sigma / \text{PR} = hazu \\
 [kau_2]; teepurekoodaa & | X = [kureru_1] \\
 & [kureru_2]; teepu
 \end{array}$$

When  $S_2$  in  $S_1$  *nara*  $S_2$  is in the past tense,  $S_1$  must be a past event or state, e.g.:

- (7) *ame ga futta nara shiai wa nakatta hazu desu*  
 ‘If it is true that it rained, there should have been no game.’  
 (if the situation of [it] raining was the case, as for the game, [there] should not have been one)

$$\begin{array}{l} \sum /PA > nara < shiai > wa < \sum /POL / PR \\ ame = furu \quad | \quad \sum /PA = hazu \\ \quad \quad \quad \quad \quad \quad \quad X = nai \end{array}$$

When *nara* is used between two nouns, it means ‘just (a case of)’, as in these examples from Martin (2004:245):

- (8) *tatoeba hana nara hana wo rei ni totte miru to...*  
 ‘If, say, we take just a flower for example...’  
 (for example, if a flower is the case, when [we] try to take a flower for example...)

$$\begin{array}{l} \sum /OPT < hana > nara < \sum /PR > to < \\ X = tatoeru \quad | \quad X = miru \supset [toru_1] \quad > [ni_1] \\ \quad \quad \quad \quad \quad \quad \quad [toru_2]; hana \mid [ni_2]; rei \end{array}$$

- (9) *sore nara sore ni koshita koto wa arimasen*  
 ‘There’s nothing better than that, all right.’  
 (if that is the case, as for something that exceeds that, [there] is not)

$$\begin{array}{l} sore > nara < koto \downarrow > wa \quad < \sum /POL / NON / PR \\ - \sum /PA \quad \quad \quad | \quad X = aru \\ X = kosu > [ni_1] \\ \quad \quad \quad \quad \quad \quad \quad [ni_2]; sore \end{array}$$

## 9.8 The conjunction *nagara*

Martin (2004:412-413) writes that a sentence can be adverbialized by applying the “concurrent-concessive” conversion *nagara*, which is sometimes highlighted with *mo*, to represent the meanings ‘while’ (=concurrent) or ‘although’ (=concessive). He also points out that the meaning is limited to ‘although’ with non-durative verbals, such as *aru* ‘exist’ (stative) or *shinu* ‘die’ (punctual) and with adjectival and nominal sentences; the meaning ‘while’ is usual for durative verbals, but the concessive meaning is also possible. The forms of the concurrent concessive are made by attaching *nagara* to the present indicative of adjectives and to the infinitive of verbs.

For the contextual descriptions in this section *nagara* is translated by ‘while’, and in the mathematical descriptions the function of *nagara* is notated in the same way as has been done for the other conjunctions.

- (1) *chiisai nagara chikara ga aru*  
 ‘He may be small, but he is strong.’  
 (while being small, [he] is strong)

$$\sum /PR > nagara < \sum /PR$$

X = *chiisai* | *chikara* = *aru*

- (2) *hosoi nagara tsuyoi ki da*  
 ‘It is a tree that is strong though slender.’  
 (while being slender, [it] is a strong tree)

$$\sum /PR > nagara < \sum /PR$$

X = *hosoi* | X = *ki - tsuyoi*

- (3) *kami wo tokashi-nagara Tsuneo wa onna no hito no kao wo nusumi-mita*  
 ‘While combing his hair, Tsuneo stole a look at the woman’s face.’  
 (while in the situation of combing [his] hair, as for Tsuneo, [he] stole a look at the woman’s face)

$$\sum /INF > nagara < Tsuneo > wa < \sum /PA$$

X = [*tokasu*<sub>1</sub>] | X = [*nusumi* ∩ *miru*<sub>1</sub>]  
 [*tokasu*<sub>2</sub>]; *kami* | [*nusumi* ∩ *miru*<sub>2</sub>]; *kao* ↓  
 – *hito* ↓  
 – *onna*

Makino&Tutsui (1995:269-270) give the following example sentences for the conjunction *nagara*, indicating that the action expressed by the preceding verb takes place concurrently or simultaneously with the action expressed in the main clause. Although the translations seem to suggest otherwise, like all conjunctions, *nagara* refers to the preceding sentence, and not to the one that follows.





## 10 Sentence final particles

The sentence final particles described in this chapter are *ka*, *ne* (*nee*), *na* (*naa*), *sa*, *yo*, and *zo* (*ze*). There are other particles that can be used in a sentence final position, such as *ga*, *keredo*(*mo*), or *wa*, which have been described in previous chapters, and *ya* which is a question particle in literary language, similar in function and meaning to the particle *ka* in questions.

Martin (2004:914-915) classifies the final particles amongst the larger category of “sentence extensions” and writes that the Japanese speaker has a tendency to attach a final particle to their sentences in order to impart some additional hint of the speaker’s attitude toward what he is saying, such as doubt, conviction, caution, inquiry, confirmation or request for confirmation, recollection, etc.; some of these particles (*sa*, *yo*, *ne*, etc.) are little more than interjections, whereas others (*ka*, *na*, etc.) are like grammatical markers of case, of adverbialization and of conjunctionalization. Martin also points out that the plain present of the copula *da* is most commonly dropped before *ka* and *sa*, whereas before other particles, such as *ne*, *na*, or *yo*, speakers have a choice to do so or not.

Bloch (1970:43-44) calls these final particles ‘sentence particles’, defining their class meaning as “a general modulation or coloring of the class meanings of the sentences to which they are attached”. Furthermore he states that the denotation of a sentence is largely the same with or without a sentence particle; the sentence particle merely adds an indication of the speaker’s attitude or purpose.

Since the sentence final particles are referring to the speaker’s attitude to his own statement, and as such are not a part of the event or fact that s/he is trying to relate, these particles are placed behind the tense markings outside the frame of the situation depicted by the symbol ‘ $\Sigma$ ’ in the mathematical descriptions.

### 10.1 The particle *ka*

The particle *ka*, when preceded by a sentence, is most commonly used as a sentence final particle, indicating that the preceding sentence is a question. The particle *ka* can also occur in a quotational or conjunctional function, which will be analyzed in section 10.1.2, or in the combination *ka doo ka*, as described in section 10.1.3.

#### 10.1.1 *ka* in a sentence final position

Bloch (1970:44) writes that *ka* after an indicative or presumptive (=subjunctive) nucleus marks a question. Some sentences ending with *ka*, such as (1a), have, except for this particle, the form of a statement, as in (1b); whereas other sentences ending with *ka* and containing an interrogative word like *dare* ‘who’, *nani* ‘what’ or *itsu* ‘when’, do not match any corresponding statement without *ka*, as example (2). Therefore, as Bloch writes “Every statement that does not end with a sentence final particle can be turned into a question by adding *ka*; but not every question can be turned into a statement by omitting *ka*.”

- (1a) *otoosan wa moo kaette imasu ka*  
 ‘Has your father returned already?’  
 (as for [your] father, [he] has already returned ?)

$$otoo \cup san > wa < \sum / POL / PR > ka$$

$$X = iru \supset kaeru > moo$$

- (1b) *otoosan wa moo kaette imasu*  
 ‘Your father has already returned.’  
 (as for [your] father, [he] has already returned)

$$otoo \cup san > wa < \sum / POL / PR$$

$$X = iru \supset kaeru > moo$$

- (2) *dare ga to wo tatakimashita ka*  
 ‘Who knocked at the door?’

$$\sum / POL / PA > ka$$

$$dare = [tataku_1]$$

$$[tataku_2]; to$$

Martin (2004:923) remarks that *ka* marks questions which are most often directed toward a listener, although some are self-directed, as his example (4), or rhetorical, as in Kawashima’s example sentence (3), description (a); for the same example description (b) is used when the utterance is a question repeating a word in a statement of someone else; for instance, as a reply to someone saying: *watashi wa mata ikimashita* ‘I went again’.

- (3) *mata ka*  
 ‘Not again?!’  
 (again?)

a)

$$Y > ka$$

$$mata$$

b)

$$mata > ka$$

- (4) *dooshite sonna koto ga shinjirareru daroo ka*  
 ‘How can (I) believe something like that?’

$$\sum / SUB > ka$$

$$X = \sum / PR > dooshite$$

$$koto - sonna = rareru > Y$$

$$shinjiru$$

According to Kawashima, *ka* may also express a rebuttal or objection to a previous sentence, as in:

- (5) *hontoo ni daijoobu deshoo ka*  
 ‘Is it really going to be all right?’

$$\begin{aligned} & \sum / \text{POL} / \text{SUB} > ka \\ X = & \text{daijoobu} > [ni_1] \\ & [ni_2]; \text{hontoo} \end{aligned}$$

Makino&Tutsui (1995:166-168) define *ka* as a sentence-final particle which indicates that the preceding sentence is interrogative, as in example (6); and unless it is very informal, an interrogative sentence is marked by *ka* whether it is a yes-no question, or a WH-question, as in (7).

- (6) *anata wa gakusei desu ka*  
 ‘Are you a student?’  
 (as for you, [you] are a student?)

$$\begin{aligned} \text{anata} > \text{wa} < \sum / \text{POL} / \text{PR} > ka \\ X = & \text{gakusei} \end{aligned}$$

- (7) *kore wa nan desu ka*  
 ‘What is this?’  
 (as for this, [it] is what?)

$$\begin{aligned} \text{kore} > \text{wa} < \sum / \text{POL} / \text{PR} > ka \\ X = & \text{nan} \end{aligned}$$

Martin (2004:923) writes that for nominal sentences, the informal copula *da* usually drops; however, the polite copula *desu* remains, e.g.:

- (8a) *soosu da*  
 ‘It’s sauce.’

$$\begin{aligned} & \sum / \text{PR} \\ X = & \text{soosu} \end{aligned}$$

- (8b) *soosu ka*  
 ‘Is it sauce?’

$$\begin{aligned} Y > & ka \\ & \text{soosu} \end{aligned}$$

- (8c) *soosu desu ka*  
 ‘Is it sauce?’

$$\sum / \text{POL} / \text{PR} > ka$$

X = *soosu*

Makino&Tutsui point to the fact that when the informal forms of a *na*-type adjectives and the copula precede the question marker *ka*, *da* drops. In example (9b) the symbol ‘Y’ is inserted for the entity without the predicate *da*.

- (9a) *kore wa shizuka desu ka*  
 ‘Is this quiet?’  
 (as for this, [it] is quiet?)

$$kore > wa < \sum / \text{POL} / \text{PR} > ka$$

X = *shizuka*

- (9b) *kore wa shizuka (\*da) ka*  
 ‘Is this quiet?’  
 (as for this, quiet?)

$$kore > wa < Y > ka$$

*shizuka*

In indirect questions *ka* remains, as Makino&Tutsui’s next example sentences show:

- (10) *tomodachi wa kanji ga muzukashii ka to kiita*  
 ‘My friend asked if *kanji* is difficult.’

$$tomo \cup dachi > wa < \sum / \text{PA}$$

$$X = kiku > to < \sum / \text{PR} > ka$$

*kanji = muzukashii*

- (11) *watashi wa Jan ni dare ga kita ka to tazuneta*  
 ‘I asked Jan who had come.’  
 (as for me, [I] asked Jan, who had come?)

$$watashi > wa < X > [ni_1] < \sum / \text{PA}$$

$$[ni_2]; Jan \mid X = tazuneru > to < \sum / \text{PA} > ka$$

*dare = kuru*

### 10.1.2 *ka* connecting two sentences

Makino&Tutsui (1995:168) maintain that “The question-marker *ka* is a special use of the *ka* which marks an alternative”, and quote the following example sentences where the second part of (12a) is omitted in the question (12b):

- (12a) *Yoshiko wa daigaku he iku ka soretomo ikimasen ka*  
 ‘Is Yoshiko going to college, or is she not?’  
 (as for Yoshiko, [she] goes to college or is it even so that, [she] does not go?)

$$\begin{array}{ccc}
 \text{Yoshiko} > \text{wa} < \sum / \text{PR} > \text{ka} & & < \text{sore} > \text{to} > \text{mo} < \sum / \text{POL} / \text{NON} / \text{PR} > \text{ka} \\
 \text{X} = \text{iku} > [\text{he}_1] & | & \text{X} = \text{iku} \\
 & & [\text{he}_2]; \text{daigaku}
 \end{array}$$

- (12b) *Yoshiko wa daigaku he iku ka*  
 ‘Is Yoshiko going to college?’  
 (as for Yoshiko, [she] goes to college?)

$$\begin{array}{ccc}
 \text{Yoshiko} > \text{wa} < \sum / \text{PR} > \text{ka} \\
 \text{X} = \text{iku} > [\text{he}_1] \\
 & & [\text{he}_2]; \text{daigaku}
 \end{array}$$

- (13) *Tomu ga iku ka Mearii ga iku ka dochira ka desu*  
 ‘Either Tom will go or Mary will go.’  
 (Tom goes or, Mary goes or, whichever [of these possibilities] will [it] be)

$$\begin{array}{ccc}
 \sum / \text{POL} / \text{PR} \\
 \text{X} = \text{dochira} > \text{ka} < \sum / \text{PR} > \text{ka} < & \sum / \text{PR} > \text{ka} \\
 \text{Tomu} = \text{iku} & | & \text{Mearii} = \text{iku}
 \end{array}$$

- (14) *niku ga takakatta ka Ichiroo ga niku ga kirai datta ka dochira ka da*  
 ‘Either meat was expensive or Ichiro didn’t like meat.’  
 (meat was expensive or, Ichiro didn’t like meat or, whichever [of these possibilities] is [it])

$$\begin{array}{ccc}
 \sum / \text{PR} \\
 \text{X} = \text{dochira} > \text{ka} < \sum / \text{PA} > \text{ka} < & \sum / \text{PA} > \text{ka} \\
 \text{niku} = \text{takai} & | & \text{Ichiroo} = \text{Y} \\
 & & \text{niku} = \text{kirai}
 \end{array}$$

In the examples (15) and (16) here below, the sentence marked by *ka* constitutes the contents of what is expressed by the final predicate and as such *ka* is analyzed as a quotational particle, and gets the same description as the quotational particle *to* in this function:

- (15) *boku wa Yamazaki-sensei ga kinoo nani wo itta ka wasurete shimatta*  
 ‘I’ve forgotten (completely) what Prof. Yamazaki said yesterday.’  
 (as for me, [I] have forgotten (completely) what Prof. Yamazaki said yesterday)

$$\begin{array}{l}
 \text{boku} > \text{wa} < \sum / \text{PA} \\
 \text{X} = \text{shimau} \supset \text{wasureru} > \text{ka} < \sum / \text{PA} \\
 \text{Yamazaki} \cup \text{sensei} = [\text{iu}_1] > \text{kinoo} \\
 [\text{iu}_2]; \text{nani}
 \end{array}$$

Kawashima (1999:46) writes that *ka* may express uncertainty of the topic it marks, as in her example (16), or a conjecture with an implied sense of doubt, as in (17):

- (16) *Nihon ni iku no wa itsu ni naru ka mattaku wakaranai*  
 ‘I have no idea when I’ll be going to Japan’  
 (as for the situation of going to Japan, [I] have no idea when [it] will be)

$$\begin{array}{l}
 \text{X} \downarrow > \text{wa} < \sum / \text{PR} \\
 - \sum / \text{PR} \quad | \quad \text{X} = \text{nai} > \text{wakaru} > \text{mattaku} > \text{ka} < \sum / \text{PR} \\
 \text{X} = \text{iku} > [\text{ni}_1] \quad | \quad \text{X} = \text{naru} > [\text{ni}_1] \\
 [\text{ni}_2]; \text{Nihon} \quad | \quad [\text{ni}_2]; \text{itsu}
 \end{array}$$

- (17) *yuube wa nomisugita no ka kesa wa atama ga itai*  
 ‘Perhaps I had too much to drink last night; this morning I have a headache’  
 (as for last night, whether [it is the fact that] [I] had too much to drink, as for this morning, [I] have a headache)

$$\begin{array}{l}
 \text{yuube} > \text{wa} < \text{X} \downarrow > \text{ka} < \text{kesa} > \text{wa} < \sum / \text{PR} \\
 - \sum / \text{PA} \quad | \quad \text{atama} = \text{itai} \\
 \text{X} = \text{nomi} \cap \text{sugiru}
 \end{array}$$

### 10.1.3 the construction *ka doo ka*

The particle *ka* can occur in the combination *ka doo ka* as a marker for an embedded yes-no question; for this construction Makino&Tutsui (1995:168-169) give the following examples:

- (18) *Suzuki-san ga daigaku ni haitta ka doo ka shiranai*  
 ‘I don’t know whether or not Mr. Suzuki entered college.’  
 ([I] do not know whether or how, did Mr. Suzuki enter college?)

$$\begin{array}{l}
 \sum / \text{PR} \\
 \text{X} = \text{nai} > \text{shiru} > \text{ka} < \text{Y} > \text{ka} < \sum / \text{PA} \\
 \text{doo} \quad | \quad \text{Suzuki} \cup \text{san} = \text{hairu} > [\text{ni}_1] \\
 [\text{ni}_2]; \text{daigaku}
 \end{array}$$

- (19) *Ogawa-san ga kekkon shite iru ka doo ka shitte imasen ka*  
 ‘Do you know if Mr. Ogawa is married or not?’  
 (Mr. Ogawa is married or how, do [you] not know?)

$$\sum / \text{POL} / \text{NON} / \text{PR} > ka$$

$$X = iru \supset shiru > ka < Y > ka < \quad \sum / \text{PR}$$

$$doo \quad | \quad Ogawa \cup san = iru \supset kekkon \cap suru$$

Makino&Tutsui (1995:170) remark that *ka (doo ka)*, when preceded by an infinitive, can be used as a noun phrase that takes particles such as *ga* and *wo*; in such occurrences it is analyzed here as being embedded in the first or second valence of the predicate:

- (20) *shigoto wo yameru ka doo ka ga mondai datta*  
 ‘Whether or not to quit the job was the question.’  
 (quit the job whether or how was the question)

$$\sum / \text{PA}$$

$$\sum / \text{PR} > ka \quad < Y > ka = mondai$$

$$X = [yameru_1] \quad | \quad doo$$

$$[yameru_2]; shigoto$$

- (21) *daigakuin ni iku ka doo ka wo ima kangaete imasu*  
 ‘I’m now thinking about whether or not I will go to graduate school.’  
 ([I] am now thinking to go to graduate school whether or how)

$$\sum / \text{POL} / \text{PR}$$

$$X = iru \supset [kangaeru_1] > ima$$

$$[kangaeru_2]; \sum / \text{PR} > ka \quad < Y > ka$$

$$X = iku > [ni_1] \quad | \quad doo$$

$$[ni_2]; daigaku \cap in$$

## 10.2 The particle *ne* (*nee*)

Martin (2004:916-917) writes that the particle *ne(e)* softens a statement and invites confirmation on the part of the hearer; since it is often used for requests and proposals, it cannot be combined with the plain (= non-polite) imperative.

Bloch (1970:44-45) maintains that *nee* or *ne* in the meaning ‘isn’t it, nicht wahr, n’est-ce pas’ is a particle that has a different syntax from the other sentence final particles, because it is added to the sentence as a whole, not to the last inflected expression. He gives two reasons for this view, one is that *nee* or *ne* occurs after other sentence particles and the other reason is that it occurs at the end of some minor sentences. Bloch also points out that in major sentences *nee* or *ne* occurs after an indicative or presumptive (=subjunctive) final predicate, and after a predicate ending with *ka*. After a predicate that does not include a sentence particle, *nee* or *ne* marks a suggestion, a softened statement, or a rhetorical question, e.g.:

- (1) *kyoo wa atsui nee*  
‘It’s hot today, isn’t it?’

$$kyoo > wa < \sum / PR > nee$$

$$X = atsui$$

- (2) *koko wa kirei na tokoro desu nee*  
‘Isn’t this a nice place?’

$$koko > wa < \sum / POL / PR > nee$$

$$X = tokoro - Y$$

$$kirei$$

According to Bloch, after the sentence particle *ka*, *nee* adds a meaning of deliberation or doubt, e.g.:

- (3a) *doo deshoo ka*  
‘How will it be?’

$$\sum / SUB > ka$$

$$X = doo$$

- (3b) *doo deshoo ka ne*  
‘I wonder how it will be.’

$$\sum / SUB > ka > ne$$

$$X = doo$$

Makino&Tutsui (1995:286-288) classify *ne* as “a sentence-final particle that indicates the speaker’s request for confirmation or agreement from the hearer about some shared knowledge” and cite the following example sentences:



- (4) *Sakamoto-san wa tabako wo suimasen ne*  
 ‘Mr. Sakamoto doesn’t smoke, does he?’  
 (or, when addressing Mr. Sakamoto himself: ‘Mr. Sakamoto, you don’t smoke, do you?’)

$$Sakamoto \cup san > wa < \sum / POL / NON / PR > ne$$

$$X = [suu_1]$$

$$[suu_2]; tabako$$

According to Makino&Tutsui, the *ne* of agreement becomes *nee* if the speaker is excited about the content of his statement, e.g.:

- (5) *omoshiroi eiga deshita nee!*  
 ‘It was such an interesting film, wasn’t it!’

$$\sum / POL / PA > nee$$

$$X = eiga - omoshiroi$$

Furthermore Makino&Tutsui point to the fact that *ne* cannot follow a non-polite imperative, although the polite imperative is possible before *ne*, e.g.:

- (6a) *\*yome ne*  
 ‘Read it, will you?’
- (6b) *yonde kudasai ne*  
 ‘Please read it, will you?’

$$\sum / INF > ne$$

$$X = kudasaru \supset yomu$$

Makino&Tutsui quote the following examples sentences for *ne* following the sentence final particle *yo*, explaining that *yo* is used for assertion and *ne* for confirmation or agreement:

- (7) *eigo ga wakaru yo ne*  
 ‘You understand English, don’t you?’  
 (Lit. I assert that you understand English but am I right?)

$$\sum / PR > yo > ne$$

$$eigo = wakaru$$

- (8) *ano sensei wa ii sensei desu yo ne*  
 ‘That teacher is a good teacher. Don’t you think so?’  
 (Lit. I assert that that teacher is a good teacher but am I right?)

$$\textit{sensei} - \textit{ano} > \textit{wa} < \sum / \textit{POL} / \textit{PR} > \textit{yo} > \textit{ne}$$

$$X = \textit{sensei} - \textit{ii}$$

In conversations, especially on the telephone, the particle *ne* is sometimes used in a non-final position to draw the hearer’s attention or to get confirmation that the hearer has understood what has been said, as in Makino&Tutsui’s example:

- (9) *moshi moshi, konban ne, Ginza de nonde kara kaeru kara ne, juuichijihan goro ni naru yo*  
 ‘Hello, tonight, ok? I go home after drinking in Ginza, you understand? So I’ll be home around 11:30.’  
 (hello, tonight, yes?, from the time of the situation of drinking in Ginza, from the situation of returning, [I] assert that [I] will return around 11:30)

$$Y \quad \quad \quad \text{:: } \textit{konban} > \textit{ne} \text{:: } \sum / \textit{GER} > \textit{kara} \quad \quad \quad < \sum / \textit{PR} > \textit{kara} > \textit{ne} \text{:: } \infty$$

$$\textit{moshi} \bullet \textit{moshi} \mid \quad \quad \quad X = \textit{nomu} > [de_1] \quad \quad \quad \mid X = \textit{kaeru} \quad \quad \quad \mid$$

$$\quad \quad \quad \quad \quad \quad \quad [de_2]; \textit{Ginza} \mid$$

$$\infty \sum / \textit{PR} > \textit{yo}$$

$$X = \textit{naru} > [ni_1]$$

$$\quad \quad \quad [ni_2]; \textit{juuichi} \cap \textit{jihan} > \textit{goro}$$

### 10.3 The particle *na* (*naa*)

There are two main uses for the particle *na(a)*, namely, as an affirmative exclamatory particle and as a negative command.

According to Martin (2004:916), the particle *na(a)*, like *ne(e)*, softens the statement and invites confirmation on the part of the hearer, the difference between them being that the *na(a)* form is more “rustic and vigorous”, often used among people of the same age or social status, to friends or to inferiors, but usually not to superiors; furthermore, *na* is often used in speaking to oneself, e.g.:

- (1) *zuibun chigau na to omotta ne*  
 ‘It’s quite different. I thought to myself, you see.’

$$\begin{aligned} & \sum /PA > ne \\ X = omou > to < \sum /PR > na \\ & X = chigau > zuibun \end{aligned}$$

Bloch (1970:44) gives examples for *na*, after a non-past indicative verbal nucleus in the plain present, marking a negative command, e.g.:

- (2) *taberu na*  
 ‘Don’t eat it.’

$$\begin{aligned} & \sum /PR > na \\ X = taberu \end{aligned}$$

- (3) *te wo fureru na*  
 ‘Don’t touch it.’

$$\begin{aligned} & \sum /PR > na \\ X = [fureru_1] \\ & [fureru_2]; te \end{aligned}$$

Makino&Tutsui (1995:266-267) define the particle *na* as a negative imperative marker used by a male speaker in very informal speech, as in:

- (4) *tabako wo suu na!*  
 ‘Don’t smoke!’

$$\begin{aligned} & \sum /PR > na \\ X = [suu_1] \\ & [suu_2]; tabako \end{aligned}$$

- (5) *anna otoko to wa kekkon suru na!*  
 ‘Don’t marry that kind of man!’

$$otoko - anna > to > wa < \sum / PR > na$$

$$X = kekkon \cap suru$$

According to Makino&Tutsui, *na* is seldom used like this because it is such a strong negative imperative; however, the addition of *yo* after *na* serves to soften the force of the statement, as in:

- (6) *sake wo amari nomu na yo*  
 ‘Don’t drink too much *sake*, ok?’

$$\sum / PR > na > yo$$

$$X = [nomu_1] > amari$$

$$[nomu_2]; sake$$

Kawashima (1999:105-106) states that, although *na* and *naa* are used in almost the same way, the difference is that *naa* has an even more emotional tone. She describes *na* (*naa*) as a particle expressing various meanings:

- a) exclamatory emotion, in men’s language

- (7) *yasai no nedan ga zuibun agatta na (naa)*  
 ‘How the price of vegetables has increased!’

$$\sum / PA > na$$

$$nedan \downarrow = agaru > zuibun$$

$$- yasai$$

- b) casual emphasis on a decision, suggestion or opinion

- (8) *boku wa sono uwasa wa hontoo da to omou na*  
 ‘I think that the rumor is true.’

$$boku > wa < uwasa - sono > wa < \sum / PR > na$$

$$X = omou > to < \sum / PR$$

$$X = hontoo$$

- c) eliciting a response in agreement from the hearer, usually in men’s language



## 10.4 The particle *sa*

Martin (2004:918) states that the particle *sa* is vigorous and ego-assertive, it is put at the end of a sentence (often containing *mochiron* ‘of course’) to mean ‘indeed’ or ‘believe-you-me’ or ‘let-me-tell-you’. Furthermore, he points out that the particle *sa* is too frank to be used with the polite style. A nominal sentence obligatory drops *da* when adding *sa*, e.g.:

- (1a) *shizuka da*  
‘It’s quiet.’

$$\sum / \text{PR}$$

X = *shizuka*

- (1b) *shizuka (\*da) sa*  
‘It’s quiet!’

Y > *sa*  
*shizuka*

Makino&Tutsui (2000:358-362) describe *sa* as “a sentence-final particle used in highly informal speech by male speakers to express different degrees of assertion ranging from a light touch comment up to opposition or imposition”, and quote the following example sentences:

- (2) *jinsei wa nagai tabi no yoo na mono sa*  
‘Life is something like a long journey.’

*jinsei* > *wa* < Y > *sa*  
mono – Y  
yoo ↓  
– *tabi* – *nagai*

- (3) (*kyoo no Nihongo no tesuto wa muzukashii ka na.*) *iya, muzukashikunai sa*  
(I wonder if today’s Japanese test is difficult.) ‘No, it’s not difficult, I tell you.’

*iya* ::  $\sum / \text{PR} > sa$   
X = *nai* > *muzukashii*

- (4) (*Nyuuyooku no hitori aruki wa abunai daroo.*) *iya, daijoobu sa*  
(Walking alone in New York must be unsafe!) ‘No, it’s safe, you know.’

*iya* :: Y > *sa*  
*daijoobu*



## 10.5 The particle *yo*

Martin (2004:918-919) writes that in standard speech *yo* does not occur except at the end of a sentence; this sentence may be past, present or subjunctive; and the copula *da* is optionally omitted before *yo*. Furthermore, he informs us that the particle *yo* expresses an insistent ‘indeed’, used in asserting a claim, advocating a course of action, or emphasizing a warning.

Bloch (1970:44) describes *yo*, used after an indicative or imperative nucleus, as a sentence particle marking an emphatic statement or command, or a statement that implies a warning or an injunction, e.g.:

- (1) *soo desu yo*  
‘It is so.’

$$\sum / \text{POL} / \text{PR} > yo$$

X = *soo*

- (2) *sore wo tabe yo*  
‘Eat that.’

$$\sum / \text{INF} > yo$$

X = [*taberu*<sub>1</sub>]  
[*taberu*<sub>2</sub>]; *sore*

- (3) *anmari hatarakisugiru to byooki ni narimasu yo*  
‘If you overwork (too much), you’ll get sick.’

$$\sum / \text{PR} > to \qquad < \sum / \text{POL} / \text{PR} > yo$$

X = *hataraki* ∩ *sugiru* > *anmari* | X = *naru* > [*ni*<sub>1</sub>]  
[*ni*<sub>2</sub>]; *byooki*

Kawashima (1999:251-253) cites example sentences for various kinds of occurrences of the sentence final particle *yo*, which she lists as follows:

- a) *yo* transforms the sentence into an exclamation

- (4) *kanojo no hanayome-sugata, hontoo ni kirei datta yo*  
‘She looked really beautiful in her wedding dress!’

$$hanayome \cap sugata \downarrow \qquad \therefore \sum / \text{PA} > yo$$

– *kanojo* | X = *kirei* > [*ni*<sub>1</sub>]  
[*ni*<sub>2</sub>]; *hontoo*

- b) after an interrogative pronoun, *yo* adds a tone of criticism



- (5) *kyuu ni naki-dashitari shite ittai doo shita no yo*  
 ‘(You) suddenly burst into tears, what in the world is the matter?’

$$\begin{array}{l} \sum / \text{ALT} \qquad \qquad \qquad \subset \sum / \text{GER} \subset X \downarrow > yo \\ X = naki \cap dasu > [ni_1] \qquad | \ X = suru \ | \ - \sum / \text{PA} \\ \qquad \qquad \qquad [ni_2]; kyuu \qquad \qquad \qquad | \ \ X = suru > doo > ittai \end{array}$$

- c) *yo* emphasizes a command

- (6) *hayaku tabero yo. (gakkoo ni okureru zo)*  
 ‘Eat quickly already! (You’ll be late for school)’

$$\begin{array}{l} \sum / \text{IMP} > yo \\ X = taberu > hayai \end{array}$$

- d) after a tentative, *yo* emphasizes a suggestion or expresses an emotional state

- (7) *(ii otenki da.) sanpo ni demo ikoo yo*  
 ‘(It’s nice out.) Let’s go take a walk or something.’

$$\begin{array}{l} \sum / \text{SUB} > yo \\ X = iku > [ni_1] > demo \\ \qquad \qquad \qquad [ni_2]; sanpo \end{array}$$

Makino&Tutsui (1995:543-547) define *yo* as “a sentence-final particle that indicates the speaker’s (fairly) strong conviction or assertion about something that is assumed to be known only to him”, e.g.:

- (8) *Sakamoto-san wa tabako wo suimasen yo*  
 ‘Mr. Sakamoto doesn’t smoke, you know.’

$$\begin{array}{l} Sakamoto \cup san > wa < \sum / \text{POL} / \text{NON} / \text{PR} > yo \\ \qquad \qquad \qquad \qquad \qquad \qquad \qquad \qquad \qquad X = [suu_1] \\ \qquad \qquad \qquad \qquad \qquad \qquad \qquad \qquad \qquad [suu_2]; tabako \end{array}$$

They also give examples of requests followed by *yo*, demonstrating that such requests can be formal or informal:

- (9a) *yome yo*  
 ‘Read it.’

$$\begin{array}{l} \sum / \text{IMP} > yo \\ X = yomu \end{array}$$

- (9b) *yominasai yo*  
 ‘Read it.’ (from a superior to his inferior)

$$\sum / \text{INF} > yo$$

$$X = yomi \cap nasaru$$

- (9c) *yonde kudasai yo*  
 ‘Please read it.’

$$\sum / \text{INF} > yo$$

$$X = kudasaru \supset yomu$$

Furthermore, Makino&Tutsui write that the sentence-final particle *ne* may be attached to ‘S + *yo*’, yielding the meaning ‘I assert S and don’t you agree?’, as in:

- (10) *Amerika made juujikan wa kakarimasu yo ne*  
 ‘It takes at least 10 hours to get to America, right?’

$$X > [made_1] > juu \cap jikan > wa < \sum / \text{POL} / \text{PR} > yo > ne$$

$$[made_2]; Amerika \quad | \quad X = kakaru$$

## 10.6 The particle *zo*

Martin (2004:922) writes that the particle *zo* is very forceful and, like *ze*, is almost exclusively used by men. The less commonly used final particle *ze* is similar in function and meaning, although *ze* apparently is friendlier than *zo*. According to Bloch (1970:44), the sentence particle *zo*, after an indicative nucleus, marks an emphatic statement and the connotation of warning that is sometimes present in *yo* is absent with *zo*.

Makino&Tutsui (2000:609-612) define *zo* as “a sentence-final particle that emphasizes a male speaker’s emotion about something in his monologue or his strong desire to draw someone else’s attention”, adding that it is only used in informal speech.

- (1) *kyoo no Nihongo no shiken wa umaku itta zo*  
 ‘Thank God, today’s Japanese exam went well!’

$$\begin{array}{l} \text{shiken} \downarrow > \text{wa} < \sum / \text{PA} > \text{zo} \\ - \text{Nihon} \cap \text{go} \downarrow \quad | \text{X} = \text{iku} > \text{umai} \\ - \text{kyoo} \end{array}$$

- (2) *onaji machigai wo moo ichido shitara yurusanai zo*  
 ‘If you make the same mistake again, I’m not going to forgive you.’

$$\begin{array}{l} \sum / \text{COND} \quad \subset \quad \sum / \text{PR} > \text{zo} \\ \text{X} = [\text{suru}_1] > \text{ichi} \cap \text{do} > \text{moo} \quad | \text{X} = \text{nai} > \text{yurusu} \\ [\text{suru}_2]; \text{machigai} - \text{onaji} \end{array}$$

In comparing the particles *zo* and *yo*, Makino&Tutsui cite four differences:

- a) *yo* cannot be used in a monologue, but *zo* can; in other words, *yo* is always other-directed, while *zo* can be used either self-directed or other-directed; therefore, in example (3) *yo* cannot be used, whereas examples (4a) with *zo* and (4b) with *yo* are both acceptable.

- (3) *hen da zo* (\**yo*). (*Nyooboo no kao ga neko no kao ni mieru*)  
 ‘Strange indeed! (My wife’s face looks like a cat’s face.)’

$$\begin{array}{l} \sum / \text{PR} > \text{zo} \\ \text{X} = \text{hen} \end{array}$$

- (4a) *isoganai to basu ni nori-okureru zo*  
 ‘If you don’t hurry, you’ll be late for the bus, you know.’

$$\begin{array}{l} \sum / \text{PR} > \text{to} < \sum / \text{PR} > \text{zo} \\ \text{X} = \text{nai} > \text{isogu} \quad | \quad \text{X} = \text{nori} \cap \text{okureru} > [\text{ni}_1] \\ [\text{ni}_2]; \text{basu} \end{array}$$

- (4b) *isoganai to basu ni nori-okureru yo*  
 ‘If you don’t hurry, you’ll be late for the bus, you know.’

$$\sum /PR > to < \sum /PR > yo$$

$$X = nai > isogu \mid X = nori \cap okureru > [ni_1]$$

$$[ni_2]; basu$$

- b) *yo* can be used by both male and female speakers, but *zo* is used only by male speakers
- c) in the sentence-final combination of *yo ne* (assertion + confirmation) *yo* cannot be replaced by *zo*

- (5) *saikin Nihon no seiji wa zuibun kawatta yo ne (\*zo ne)*  
 ‘(Lately) Japanese politics has undergone tremendous change, hasn’t it?’

$$saikin < seiji \downarrow > wa < \sum /PA > yo > ne$$

$$- Nihon \mid X = kawaru > zuibun$$

- d) *zo* can be used only with informal forms, whereas *yo* can be used either with informal or formal forms

- (6) *kono hon wa omoshiroi desu yo (\*zo)*  
 ‘This book is interesting, you know.’

$$hon - kono > wa < \sum /POL /PR > yo$$

$$X = omoshiroi$$

## 11 Derived verb constructions

In this chapter the passive, potential and causative constructions will be analyzed. First, in section 11.1, the passive will be analyzed; the potential will also be described in this section, because it is classified as a subcategory of the passive form *rareru*, even though there is a shortened form *eru*, which is used only in the potential function. The causative construction will be discussed in section 11.2 and the causative-passive, a combination of the causative and the passive forms, will be analyzed in section 11.3.

Bloch (1970:6) writes: “Several categories often included in the inflectional system are more conveniently regarded as derivative formations. These are the causative, the passive, the potential, the negative, and the desiderative.” Bloch (1970:101-103) gives the following description of the characteristics of the first three of these constructions. “With a few exceptions, all Japanese verbs – whether transitive or intransitive, and regardless of the inflectional or derivational class to which they belong –underlie three genera of secondary post-extended verbs: causative, passive, and potential. The lexical meanings of these formations are those of the underlying verbs, modified by the class meanings of the three genera.”

Martin (2004:287) gives the following classification for these verb constructions: “Verbal sentences can be converted into causatives, into passives, and into passivized causatives (a passive built on a causative). These categories are formally marked by attaching suffixes (or bound auxiliaries) to the base – originally to the base + the subjunctive ending *-a*, now to be considered part of the voice suffix itself (...). We treat the resulting sentences as conversions because of shifts in the marking of adjuncts: the agent of the underlying active sentence is marked as if the indirect object (by *ni*) when we introduce a new subject – the instigator (causer) of the action or the victim (the passive subject) – who may or may not be the underlying direct object.” It is clear that, according to Martin, the potential constructions do not form a separate group, instead he classifies them in the category of the passive conversions.

Kortlandt (1989:9) writes that the passive suffix *rare* adds a valence ‘affected’ to the verb in the same way as the causative suffix *sase* adds a valence ‘causing’ and the potential suffix *e* adds a valence ‘enabled’. These supplementary valences can be linked to other elements of the sentence in a variety of ways, yielding a number of different syntactic interpretations.

In some sources, the passive, potential and causative conversions are classified as suffixes, where in others they are termed to be “bound auxiliaries” (Martin) or “auxiliary verbs” (Makino&Tutsui). Since the inflections for tense, aspect, mood and negation are attached to the passive, potential and causative forms, it has been decided to present these forms as auxiliary verbs in the semantic analyses of this work. The ‘extra valence’ as proposed by Kortlandt is presented by the symbol ‘Y’ representing the situation of the ‘affecting/caused/potential event’; this event is linked to the passive, potential, or causative auxiliary by the relation symbol for gradation ‘>’. The symbol ‘Σ’ is not used for this situation because the stem of the base verb that is attached to these auxiliaries does not inflect.

## 11.1 The passive construction

According to Bloch (1970:102-103), the class meaning of the passive is: ‘is affected by someone else’s action’, including the meanings ‘is acted upon’ (in the sense of the Latin or English passive) and ‘is adversely affected by someone else’s action’; The passive of a transitive verb may have either of these subsidiary meanings, whereas the passive of an intransitive verb has only the second meaning. Moreover, there is a third meaning, namely, when the passive is used in the honorific style; in this case it replaces the underlying verb without change in meaning, referring deferentially to the action of someone toward whom the speaker wishes to show respect. Bloch argues that it would be semantically more plausible to regard this latter meaning as a use of the potential not of the passive, although in this use the shortened suffix *e* does not occur.

Makino&Tutsui (1995:364-369) make a distinction between two kinds of *rareru*, viz. an auxiliary indicating a state or action that cannot be controlled by someone or something, and an auxiliary indicating a potential. In his first category both the direct (or pure) passive and the indirect (or adversative) passive are included.

Martin (2004:287) classifies four separate conversions for the passive, i.e. the ‘pure’ passive, the ‘adversative’ passive, the passive form used in place of a subject-exalting verb, and the ‘potential’ passive. This classification is followed here, too.

### 11.1.1 the pure passive

Martin (2004:295-298) writes that in the pure (or ‘translational’ or ‘normal’) passive the underlying direct object becomes the surface subject; this passive construction is similar to the passive in European languages, and the agent need not be expressed, as the example (2) shows.

- (1a) A *ga* B *wo yobu*  
‘A calls B.’

$$\sum / \text{PR}$$
$$A = [yobu_1]$$
$$[yobu_2]; B$$

- (1b) B *ga* A *ni yobareru*  
‘B gets called by A.’  
(B is affected by A to the extent of the situation of ‘calling’)

$$\sum / \text{PR}$$
$$B = \textit{rareru} > Y > [ni_1]$$
$$yobu \mid [ni_2]; A$$

- (2) *bira ga makareru*  
 ‘Leaflets are distributed.’  
 (the leaflets are affected to the extent of the situation of ‘distributing’)

$$\sum / \text{PR}$$

$$bira = rareru > Y$$

$$maku$$

Sometimes the agent is optionally marked by *kara* instead of *ni*, as in the following examples from Martin:

- (3) *gakusetsu ga gakkai kara mushi sareta*  
 ‘The theory was ignored by the scholarly world.’  
 (the theory is affected from the scholarly world to the extent of the situation of ‘ignoring’)

$$\sum / \text{PA}$$

$$gakusetsu = rareru > Y > [kara_1]$$

$$mushi \cap suru \mid [kara_2]; gakkai$$

- (4) *minna kara ai-sareta*  
 ‘She was loved by all.’  
 ([she] was affected from all to the extent of the situation of ‘loving’)

$$\sum / \text{PA}$$

$$X = rareru > Y > [kara_1]$$

$$ai \cap suru \mid [kara_2]; minna$$

As Martin points out, the particle *de* may be also used instead of *ni* to mark the source (the underlying agent) when it is inanimate and not self-propelling; however, in such cases the source may also be regarded as causal, or sometimes perhaps instrumental.

- (5) *kaze de taosareru*  
 ‘[It] gets blown down by the wind.’  
 ([it] is affected by the wind to the extent of the situation of ‘blowing’)

$$\sum / \text{PR}$$

$$X = rareru > Y > [de_1]$$

$$taosu \mid [de_2]; kaze$$

- (6) *kaji de yakarete shimau*  
 ‘[It] is burned down in a fire.’  
 ([it] was completely affected by the fire to the extent of the situation of ‘burning’)

$$\sum / \text{PR}$$

$$X = \textit{shimau} \supset \textit{rareru} > Y > [de_1]$$

$$yaku \mid [de_2]; \textit{kaji}$$

Martin also points out that although agents in passive constructions are typically animate and human, there are examples (especially in written Japanese) of inanimates playing the role of the underlying agent, e.g.:

- (7) *watashi wa shibaraku wa akke ni torarete ita*  
 ‘For a while I was seized with amazement.’  
 (as for me, as for a while, [I] was affected by amazement to the extent of the situation of ‘seizing’)

$$\textit{watashi} > \textit{wa} < \textit{shibaraku} > \textit{wa} < \sum / \text{PA}$$

$$X = \textit{iru} \supset \textit{rareru} > Y > [ni_1]$$

$$\textit{toru} \mid [ni_2]; \textit{akke}$$

Jacobsen (1992:37-9) quotes the following example sentences for the pure passive, which he calls the ‘direct passive’:

- (8a) *neko ga nezumi wo kutta*  
 ‘The cat ate the mouse.’

$$\sum / \text{PA}$$

$$\textit{neko} = [kuu_1]$$

$$[kuu_2]; \textit{nezumi}$$

- (8b) *nezumi ga neko ni kuwareta*  
 ‘The mouse was eaten by the cat.’  
 (the mouse was affected by the cat to the extent of the situation of ‘eating’)

$$\sum / \text{PA}$$

$$\textit{nezumi} = \textit{rareru} > Y > [ni_1]$$

$$\textit{kuu} \mid [ni_2]; \textit{neko}$$



- (9) *furui tatemono ga sagyooin ni kowasareta*  
 ‘The old building was broken (torn down) by the workers.’  
 (the old building was affected by the workers to the extent of the situation of ‘breaking’)

$$\sum / \text{PA}$$

$$\text{tatemono} - \text{furui} = \text{rareru} > \text{Y} > [\text{ni}_1]$$

$$\text{kowasu} \mid [\text{ni}_2]; \text{sagyoo} \cap \text{in}$$

- (10) *kono terebi bangumi wa ooku no hito ni mirarete iru*  
 ‘This television program is watched by many people.’  
 (as for this television program, [it] is being affected by many people to the extent of the situation of ‘watching’)

$$\text{terebi} \cap \text{bangumi} - \text{kono} > \text{wa} < \sum / \text{PR}$$

$$\text{X} = \text{iru} \supset \text{rareru} > \text{Y} > [\text{ni}_1]$$

$$\text{miru} \mid [\text{ni}_2]; \text{hito} \downarrow$$

$$- \text{ooku}$$

The following example sentences are quoted by Makino&Tutsui (1995:365) for the direct passive construction:

- (11a) *Jon wa sensei ni shitsumon wo shita*  
 ‘John asked the teacher a question.’

$$\text{Jon} > \text{wa} < \sum / \text{PA}$$

$$\text{X} = [\text{suru}_1] > [\text{ni}_1]$$

$$[\text{suru}_2]; \text{shitsumon} \mid [\text{ni}_2]; \text{sensei}$$

- (11b) *sensei wa Jon ni shitsumon wo sareta*  
 ‘The teacher was asked a question by John.’  
 (as for the teacher, [he] was affected by John to the extent of the situation of ‘asking a question’)

$$\text{sensei} > \text{wa} < \sum / \text{PA}$$

$$\text{X} = \text{rareru} > \text{Y} > [\text{ni}_1]$$

$$\text{suru}; \text{shitsumon} \mid [\text{ni}_2]; \text{Jon}$$

- (12) *kono biru wa ninen mae ni taterareta*  
 ‘This building was built two years ago.’  
 (as for this building, [it] was affected to the extent of the situation of ‘building two years ago’)

$$\begin{aligned}
 & \text{biru} - \text{kono} > \text{wa} < \sum / \text{PA} \\
 & \quad \quad \quad \text{X} = \text{rareru} > \text{Y} \\
 & \quad \quad \quad \text{tateru} > [\text{ni}_1] \\
 & \quad \quad \quad [\text{ni}_2]; \text{ninen} \cap \text{mae}
 \end{aligned}$$

### 11.1.2 the ‘adversative’ passive

After studying the arguments and example sentences of various sources, a number of which are quoted here below, I have come to the conclusion that the term ‘adversative passive’ is somewhat misleading, because basically the passive construction *rareru* expresses only one meaning, i.e. the meaning that someone or something is affected by an event which s/he is undergoing without his/her own free will being involved. Whether or not this state of being ‘affected’ is “adverse” or negative, is not inherent in the passive form itself, but is subject to other factors, such as the lexical meanings of other sentence parts, or interpretation.

According to Martin (2004:287, 295), the adversative passive (also called “victimizing”) is a passive in which a new subject playing the role of the victim is adversely affected by the underlying process. The adversative passives can be made from both transitives and intransitives, including quasi-intransitives that take traversal objects. In the adversative passive, the surface-subject marking is preempted by the victim who suffers from the happening and the underlying agent is marked with *ni*, but any direct object is left marked with *wo*. In example (13b) this direct object is the second valence of the base verb, notated with the symbol ‘;’; the first valence of the verb *yobu* is not filled because the *ga* marked element in this sentence is the subject of *rareru* and not the subject of *yobu*; the agent who does the ‘calling’ is marked by *ni*.

- (13a) *A ga B wo yobu*  
 ‘A calls B.’

$$\begin{aligned}
 & \sum / \text{PR} \\
 & \text{A} = [\text{yobu}_1] \\
 & \quad [\text{yobu}_2]; \text{B}
 \end{aligned}$$

- (13b) *C ga A ni B wo yobareru*  
 ‘C suffers from A calling B.’  
 (C is affected by A to the extent of the situation of ‘calling B’)

$$\begin{aligned}
 & \sum / \text{PR} \\
 & \text{C} = \text{rareru} > \text{Y} \quad > [\text{ni}_1] \\
 & \quad \quad \quad \text{yobu}; \text{B} \mid [\text{ni}_2]; \text{A}
 \end{aligned}$$

Martin also remarks that, since neither host nor guest makes an appearance in the following sentence, it is only from context or outside information that one can decide the proper interpretation for the following sentence:

- (14) *aki wa yoku kekkon-shiki ni yobareru*  
 (a) ‘In autumn one gets invited to a lot of weddings.’ (pure or adversative passive)  
 (b) ‘Esteemed persons invite [guests] to a lot of weddings in autumn.’ (subject-exalting)  
 (as for the autumn, [one] is affected to the extent of the situation of ‘often inviting to weddings’)

$$aki > wa < \sum / PR$$

$$X = rareru > Y$$

$$yobu > [ni_1] > yoi$$

$$[ni_2]; kekkon \cap shiki$$

Kortlandt (1989:10,4) writes: “The characteristic feature of the Japanese passive is the raising rather than lowering of the number of valences, and the affected participant need not be the subject of the sentence.” Furthermore, he points out that: “The meaning ‘negatively affected’ is not part of the meaning of the Japanese passive but results from the combination of two distinct features, which may, by way of convention, be called ‘affected’ and ‘undergoing’.” The negative interpretation arises when a sentence does not contain an element which separates the way of undergoing the action from the way of being affected by it.” Kortlandt quotes the following examples:

- (15) *kinoo wa kaze ni fukareta*  
 ‘Yesterday I was affected by the wind.’  
 (as for yesterday, [I] was affected by the wind to the extent of the situation of ‘blowing’)

$$kinoo > wa < \sum / PA$$

$$X = rareru > Y > [ni_1]$$

$$fuku \mid [ni_2]; kaze$$

- (16) *kinoo ame ni furareta*  
 ‘Yesterday I was affected by the rain.’  
 ([I] was affected by rain to the extent of the situation of ‘falling’ yesterday)

$$\sum / PA$$

$$X = rareru > Y > [ni_1] > kinoo$$

$$furu \mid [ni_2]; ame$$

- (17) *kodomo wa haha ni kata wo dakareta*  
 ‘The mother was holding the child’s shoulders; the child was affected by it.’  
 (as for the child, [it] was affected by the mother to the extent of the situation of ‘holding the shoulders’)

$$\begin{aligned}
 & \textit{kodomo} > \textit{wa} < \sum / \textit{PA} \\
 & \textit{X} = \textit{rareru} > \textit{Y} > [\textit{ni}_1] \\
 & \textit{daku} ; \textit{kata} \mid [\textit{ni}_2] ; \textit{haha}
 \end{aligned}$$

According to Kortlandt, the simultaneous presence of the features ‘affected’ and ‘undergoing’ severely restricts the possibilities of using the passive with an inanimate subject. The only common variant in main verbs is the “passive of local event affecting an object via its parts”, which is similar to the passive of bodily effect, e.g.:

- (18) *kuruma wa ressha ni baa wo hikkakerareta*  
 ‘The train pulled the bumper bar off the car; the car was negatively affected by it.’  
 (as for the train, [it] was affected by the train to the extent of the situation of ‘pulling the bumper off’)

$$\begin{aligned}
 & \textit{kuruma} > \textit{wa} < \sum / \textit{PA} \\
 & \textit{X} = \textit{rareru} > \textit{Y} > [\textit{ni}_1] \\
 & \textit{hikkakeru} ; \textit{baa} \mid [\textit{ni}_2] ; \textit{ressha}
 \end{aligned}$$

Kortlandt explains that the difference between the next two sentences (19a) and (19b) is that in the first sentence John is connected with the piano and in the second sentence with the location of the event:

- (19a) *Jon wa Mearii ni kare no piano wo hikareta*  
 ‘Mary played John’s piano; John was negatively affected by it.’  
 (as for John, [he] was affected by Mary to the extent of the situation of ‘playing his piano’)

$$\begin{aligned}
 & \textit{Jon} > \textit{wa} < \sum / \textit{PA} \\
 & \textit{X} = \textit{rareru} > \textit{Y} > [\textit{ni}_1] \\
 & \textit{hiku} ; \textit{piano} \downarrow \mid [\textit{ni}_2] ; \textit{Mearii} \\
 & \textit{- kare}
 \end{aligned}$$

- (19b) *Jon wa Mearii ni piano wo hikareta*  
 ‘Mary played the piano; John was negatively affected by it.’  
 (as for John, [he] was affected by Mary to the extent of the situation of ‘playing the piano’)

$$\begin{aligned}
 & \textit{Jon} > \textit{wa} < \sum / \textit{PA} \\
 & \textit{X} = \textit{rareru} > \textit{Y} > [\textit{ni}_1] \\
 & \textit{hiku} ; \textit{piano} \mid [\textit{ni}_2] ; \textit{Mearii}
 \end{aligned}$$

For example (20) the semantic analysis indicates no more than that there is a person who is affected by an event, which involves someone or something connected with him/her; according to Kortlandt (1989:2), there may be three different interpretations:

- (20) *Jon wa kodomo ni tabako wo suwareta*  
 ‘John’s child was smoking cigarettes.’  
 ‘A child was smoking John’s cigarettes.’  
 ‘A child was smoking cigarettes near John.’  
 (as for John, [he] was affected by the child to the extent of the situation of ‘smoking cigarettes’)

$$\begin{aligned}
 &Jon > wa < \sum /PA \\
 &X = rareru > Y > [ni_1] \\
 &suu ; tabako \mid [ni_2] ; kodomo
 \end{aligned}$$

This being ‘affected’ need not always be negative, as can be seen in the following examples:

- (21) *Jon wa raifu seebaa ni kodomo wo tasukerareta*  
 ‘John’s child was rescued by a lifeguard; John was positively affected by it.’  
 (as for John, [he] was affected by a lifeguard to the extent of the situation of ‘rescuing his child’)

$$\begin{aligned}
 &Jon > wa < \sum /PA \\
 &X = rareru > Y > [ni_1] \\
 &tasukeru ; kodomo \mid [ni_2] ; raifu \cap seebaa
 \end{aligned}$$

- (22) *Jon wa raifu seebaa ni booto wo tasukerareta.*  
 ‘John’s boat was rescued by a lifeguard; John was positively affected by it.’  
 (as for John, [he] was affected by a lifeguard to the extent of the situation of ‘rescuing his boat’)

$$\begin{aligned}
 &Jon > wa < \sum /PA \\
 &X = rareru > Y > [ni_1] \\
 &tasukeru ; booto \mid [ni_2] ; raifu \cap seebaa
 \end{aligned}$$

As Kortlandt remarks, the negative implication disappears when the affected person’s desire is irrelevant to the situation, as in example (23); furthermore, the main verb specifies the way of being affected and thereby limits the semantic contribution of the subordinate clause to the way of undergoing the action expressed by the passive verb; thus the negative interpretation is lost in the subordinate clauses in (24b) and (25).





- (29) *Tanaka sensei wa asu Tookyoo ni ikareru soo desu*  
 ‘Tanaka-sensei is supposed to go to Tokyo tomorrow.’  
 (as for Prof. Tanaka, [it] seems to be the case that [we] are affected to the extent of the situation of ‘[his] going to Tokyo tomorrow’)

$$\begin{aligned}
 \text{Tanaka} \cup \text{sensei} > \text{wa} < \sum / \text{POL} / \text{PR} \\
 X = \text{soo} \downarrow \\
 - \sum / \text{PR} \\
 X = \text{rareru} > Y \\
 \text{iku} > [ni_1] > \text{asu} \\
 [ni_2]; \text{Tookyoo}
 \end{aligned}$$

- (30) *otoosan ga nakunarareta no wa itsu deshita ka?*  
 ‘When was it that your father passed away?’  
 (as for the fact that [I] was affected to the extent of the situation of ‘your father passing away’, when was [it]?)

$$\begin{aligned}
 X \downarrow > \text{wa} & < \sum / \text{POL} / \text{PA} > \text{ka} \\
 - \sum / \text{PA} & \quad \quad \quad | X = \text{itsu} \\
 X = \text{rareru} > & \quad \quad \quad Y \\
 \text{otoo} \cup \text{san} = \text{nakunaru}
 \end{aligned}$$



### 11.1.4 The potential construction

Although only the potential can occur in the shorter form *eru*, the potential construction is classified here as a subcategory of the passive, because in the majority of its occurrences the potential has the same form and function as the passive *rareru*. The difference in meaning between the passive and the potential is that the passive expresses what the subject is ‘affected’ by, and the potential expresses what is ‘enabled’.

Bloch (1970:102-103) cites the class meaning of the potential as: ‘is able to perform an action’ or ‘an action is possible’, without inherent distinction between the types *someone can do so-and-so* and *so-and-so can be done*.

Martin (2004:297) analyzes the potential construction as a ‘potential passive’, which endows an indirect subject (the “possessor”, marked by *ni/ga*) with the possession of the ability to initiate or carry out the process. Furthermore he writes that with this construction it is optional whether we continue an underlying object as object (marked with *wo*) or change it to direct subject (marked with *ga*), the underlying agent being made the indirect subject (marked with *ni* or *ga*). In the semantic descriptions proposed here, only the noun phrases marked by the nominative particle *ga* are analyzed as subjects.

- (31a) *dare ga nani wo taberu*  
 ‘Who eats what?’

$$\begin{array}{l} \sum / \text{PR} \\ \text{dare} = [\text{taberu}_1] \\ \quad [\text{taberu}_2]; \text{nani} \end{array}$$

- (31b) *dare ga nani ga taberareru*  
 ‘Who can eat what?’  
 (who has the feature of what is enabled to the extent of the situation of ‘eating’?)

$$\begin{array}{l} \sum / \text{PR} \\ \text{dare} = \quad \text{Y} \\ \quad \text{nani} = \text{rareru} > \text{Y} \\ \quad \quad \quad \text{taberu} \end{array}$$

- (31c) *dare ni nani ga taberareru*  
 ‘Who can eat what?’  
 (what is enabled by whom to the extent of the situation of ‘eating’?)

$$\begin{array}{l} \sum / \text{PR} \\ \text{nani} = \text{rareru} > \text{Y} > [\text{ni}_1] \\ \quad \quad \quad \text{taberu} \mid [\text{ni}_2]; \text{dare} \end{array}$$

- (31d) *dare ga nani wo taberareru*  
 ‘Who can eat what?’  
 (who is enabled to the extent of the situation of ‘eating what?’)

$$\sum / \text{PR}$$

$$dare = rareru > Y$$

$$taberu ; nani$$

- (31e) *dare ni nani wo taberareru*  
 ‘Who can eat what?’  
 ([it] is enabled by whom to the extent of the situation of ‘eating what?’)

$$\sum / \text{PR}$$

$$X = rareru > Y > [ni_1]$$

$$taberu ; nani \mid [ni_2] ; dare$$

- (32a) *dare ga doko wo tooru*  
 ‘Who passes where?’

$$\sum / \text{PR}$$

$$dare = [tooru_1]$$

$$[tooru_2] ; doko$$

- (32b) *dare ga doko ga toorareru*  
 ‘Who can pass where?’  
 (who has the feature of where is enabled to the extent of the situation of ‘passing?’)

$$\sum / \text{PR}$$

$$dare = Y$$

$$doko = rareru > Y$$

$$tooru$$

- (32c) *dare ni doko ga toorareru*  
 ‘Who can pass where?’  
 (where is enabled by whom to the extent of the situation of ‘passing?’)

$$\sum / \text{PR}$$

$$doko = rareru > Y > [ni_1]$$

$$tooru \mid [ni_2] ; dare$$

- (32d) *dare ga doko wo toorareru*  
 ‘Who can pass where?’  
 (who is enabled to the extent of the situation of ‘passing where?’)

$$\sum / \text{PR}$$

$$dare = rareru > Y$$

$$tooru ; doko$$

- (32e) *dare ni doko wo toorareru*  
 ‘Who can pass where?’  
 ([it] is enabled by whom to the extent of the situation of ‘passing where?’)

$$\sum / \text{PR}$$

$$X = rareru > Y \quad > [ni_1]$$

$$tooru ; doko \mid [ni_2] ; dare$$

According to Kortlandt (1989:7), the passive verb has potential meaning if the subject is agentive with respect to the action and at the same time negatively affected by the event, as in:

- (33) *inu wa byooki de nani mo taberarenai*  
 ‘The dog is sick and cannot eat anything.’  
 (as for the dog, [it] being sick, whatever, [it] is not enabled to the extent of the situation of ‘eating’)

$$inu > wa < \sum / \text{GER} \subset nani > mo < \sum / \text{PR}$$

$$X = byooki \quad \mid X = nai > rareru > Y$$

$$taberu$$

- (34) *Jon wa paatii ni korarenakatta*  
 ‘John was not able to come to the party.’  
 (as for John, [he] was not enabled to the extent of the situation of ‘coming to the party’)

$$Jon > wa < \sum / \text{PA}$$

$$X = nai > rareru > Y$$

$$kuru > [ni_1]$$

$$[ni_2] ; paatii$$

Makino&Tutsui (1995:370-372) give the following examples for the potential auxiliary *rareru* and its shorter form *eru*, in the meaning ‘be able to do something; can do something; be ~able; ~ can be done’; they also point out that the Japanese verb *suru* ‘do’ is not used in combination with the potential form, for ‘can do’ the verb *dekiru* is used instead, as in (38).

- (35) *Buraun-san wa sashimi ga taberareru*  
 ‘Mr. Brown can eat *sashimi*.’  
 (as for Mr. Brown, *sashimi* is enabled to the extent of the situation of ‘eating’)

$$Buraun \cup san > wa < \sum / PR$$

$$sashimi = rareru > Y$$

$$taberu$$

- (36) *watashi wa nihongo ga yomeru*  
 ‘I can read Japanese.’  
 (as for me, Japanese is enabled to the extent of the situation of ‘reading’)

$$watashi > wa < \sum / PR$$

$$nihongo = eru > Y$$

$$yomu$$

- (37) *kono mizu wa nomenai*  
 ‘This water is not drinkable.’  
 (as for this water, [it] is not enabled to the extent of the situation of ‘drinking [it]’)

$$mizu - kono > wa < \sum / PR$$

$$X = nai > eru > Y$$

$$nomu$$

- (38) *Terada-san wa tenisu ga dekiru*  
 ‘Mr. Terada can play tennis.’  
 (as for Mr. Terada, tennis is possible to do)

$$Terada \cup san > wa < \sum / PR$$

$$tenisu = dekiru$$

## 11.2 The causative construction

The semantic description for the causative is similar to that of the passive and of the potential, the difference in meaning is that the content of ‘Y’ is considered to be the ‘caused event’.

Bloch (1970:102-103) writes that the class meaning of the causative is: ‘causes someone to perform the action’, including the meanings ‘commands or forces someone to perform it’ and ‘allows someone to perform it’.

According to Martin (2004:292-294): “When the causative conversion is applied, a new character is added to the cast, the instigator. The instigator is marked by the subject particle *ga*, and the underlying agent is then marked by *ni* or, under certain conditions, by *wo*. Marking of the agent with *wo* is usual with intransitive verbs, and marking with *ni* is usual for transitive verbs.”

- (1a) A *ga kuru*  
‘A comes.’

$$\sum / \text{PR}$$

A = *kuru*

- (1b) B *ga A wo kosaseru*  
‘B has A come.’  
(B is causing A to the extent of the situation of ‘coming’)

$$\sum / \text{PR}$$

B = [*saseru*<sub>1</sub>] > Y  
[*saseru*<sub>2</sub>]; A | *kuru*

- (2a) A *ga B wo yobu*  
‘A calls B.’

$$\sum / \text{PR}$$

A = [*yobu*<sub>1</sub>]  
[*yobu*<sub>2</sub>]; B

- (2b) C *ga A ni B wo yobaseru*  
‘C has A call B.’  
(C is causing to A to the extent of the situation of ‘calling B’)

$$\sum / \text{PR}$$

C = *saseru* > Y > [*ni*<sub>1</sub>]  
*yobu*; B | [*ni*<sub>2</sub>]; A

For the following example Makino&Tutsui (1995:390) explain that, “If the main verb is a transitive verb, the causee can be marked only by *ni*, because *wo* cannot appear more than once in a clause and, in this case, there is already a direct object marked by *wo* in the clause.”

- (3) *Ichiroo wa Yukiko ni / \*wo biiru wo nomaseta*  
 ‘Ichiro made (or let) Yukiko drink beer.’

*Ichiroo* > *wa* <  $\Sigma$  / PA

X = *saseru* > Y > [*ni*<sub>1</sub>]

*nomu* ; *biiru* | [*ni*<sub>2</sub>]; *Yukiko*

Martin, on the other hand, informs us that some speakers will occasionally permit marking the agent with *wo* even if the verb already has an object marked by *wo*, in particular when the object is a traversal object. In the following examples from Martin (2004:256) with two accusative particles, the first particle *wo* marks the second valence of *saseru* and the other *wo* refers to the second valence of the base verb *wataru*. Example (6) contains even three noun phrases marked by the particle *wo*; however, Martin admits that many speakers will reject this sentence. The presence of a third particle *wo* can be explained by the fact that there are three verbs in this construction, i.e. *katsugu*, *hakobu* and *saseru*.

- (4) *uma wo kawa wo wataraseru*  
 ‘He lets/makes the horse go across the river.’  
 ([he] is causing the horse to the extent of the situation of ‘crossing the river’)

$\Sigma$  / PR

X = [*saseru*<sub>1</sub>] > Y

[*saseru*<sub>2</sub>]; *uma* | *wataru* ; *kawa*

- (5) *uma wo gakkoo no mae wo tooraseru*  
 ‘He lets the horse pass in front of the school.’  
 ([he] is causing the horse to the extent of the situation of ‘passing the front of the school’)

$\Sigma$  / PR

X = [*saseru*<sub>1</sub>] > Y

[*saseru*<sub>2</sub>]; *uma* | *tooru* ; *mae* ↓

– *gakkoo*

- (6) *musuko wo sono nimotsu wo roji wo katsuide hakobaseta*  
 ‘I had my son shoulder the luggage down the lane.’  
 ([I] was causing my son to the extent of the situation of ‘shouldering the luggage, carrying it over the lane’)

$\Sigma$  / PA

X = [*saseru*<sub>1</sub>] > Y

[*saseru*<sub>2</sub>]; *musuko* | *hakobu* ; *roji* ⊃ *katsugu* ; *nimotsu* – *sono*

Makino&Tutsui (1995:387-392) quote the following examples for *saseru*, which they define as an auxiliary verb with the meaning ‘to cause something or someone to do something, or cause something to change its state’. Furthermore, they inform us that when the main verb is an intransitive verb, the causee is marked by either *wo* or *ni*; in such cases *wo* can always be used, but *ni* can only be used if the causee has taken the action intentionally. For instance, in example (9), the adverb *muriyari* ‘forcibly’ is an indication that the causee went to the party involuntarily, and in (10) the causee is inanimate and cannot take a volitional action.

- (7a) *Suzuki-san wa musume wo daigaku he ikaseta*  
 ‘Mr. Suzuki made (or let) his daughter go to college.’  
 (as for Mr. Suzuki, [he] was causing his daughter to the extent of the situation of ‘going to college’)

$$\begin{aligned}
 & Suzuki \cup san > wa < \sum / PA \\
 & X = [saseru_1] > Y \\
 & [saseru_2]; musume \mid iku > [he_1] \\
 & [he_2]; daigaku
 \end{aligned}$$

- (7b) *Suzuki-san wa musume ni daigaku he ikaseta*  
 ‘Mr. Suzuki made (or let) his daughter go to college.’  
 (as for Mr. Suzuki, [he] was causing to his daughter to the extent of the situation of ‘going to college’)

$$\begin{aligned}
 & Suzuki \cup san > wa < \sum / PA \\
 & X = saseru > Y > [ni_1] \\
 & iku > [he_1] \mid [ni_2]; musume \\
 & [he_2]; daigaku
 \end{aligned}$$

- (8) *chichi wa imooto ni piano wo narawaseta*  
 ‘My father made (or let) my younger sister learn to play the piano.’  
 (as for my father, [he] was causing to my younger sister to the extent of the situation of ‘playing the piano’)

$$\begin{aligned}
 & chichi > wa < \sum / PA \\
 & X = saseru > Y > [ni_1] \\
 & narau ; piano \mid [ni_2]; imooto
 \end{aligned}$$

- (9) *chichi wa watashi wo /\*ni muriyari paatii he ikaseta*  
 ‘My father forcefully made me go to the party.’  
 (as for my father, [he] was forcefully causing me to the extent of the situation of ‘going to the party’)

$$\begin{aligned}
 &chichi > wa < \sum /PA \\
 &X = [saseru_1] > Y > muriyari \\
 &[saseru_2]; watashi \mid iku > [he_1] \\
 &[he_2]; paatii
 \end{aligned}$$

- (10) *watashi wa hankachi wo /\*ni shimeraseta*  
 ‘I dampened my handkerchief.’  
 (as for me, [I] was causing my handkerchief to the extent of the situation of ‘becoming damp’)

$$\begin{aligned}
 &watashi > wa < \sum /PA \\
 &X = [saseru_1] > Y \\
 &[saseru_2]; hankachi \mid shimeru
 \end{aligned}$$

Makino&Tutsui give another constraint for the use of the causative construction, namely, the rule that the causer must be equal to or higher than the causee in terms of status, which is why example (11) is acceptable and sentence (12) is not:

- (11) *Hisako wa watashi wo komaraseta*  
 ‘Hisako caused me trouble.’  
 (as for Hikako, [she] was causing me to the extent of the situation of ‘being embarrassed’)

$$\begin{aligned}
 &Hisako > wa < \sum /PA \\
 &X = [saseru_1] > Y \\
 &[saseru_2]; watashi \mid komaru
 \end{aligned}$$

- (12) *\*watashi wa sensei ni/ wo paatii ni kosaseru tsumori da*  
 ‘I’m going to let (or make) my teacher come to the party.’



### 11.3 The causative-passive construction

The causative *saseru* can be combined with the passive *rareru* into a causative-passive construction *saserareru*, which may be contracted to *sasareru*. This construction is called the passivized causative by Martin (2004:299-300), who writes that each kind of passive can be built on a causative, though the action sometimes gets a bit difficult to follow, and he gives the following examples:

- (1a) A ga B wo yobu  
'A calls B.'

$$\sum / \text{PR}$$

$$A = [\text{yobu}_1]$$

$$[\text{yobu}_2]; B$$

- (1b) C ga A ni B wo yobaseru (causative)  
'C gets A to call B.'  
(C is causing to A to the extent of the situation of 'calling B')

$$\sum / \text{PR}$$

$$C = \text{saseru} > Y > [\text{ni}_1]$$

$$\text{yobu}; B \mid [\text{ni}_2]; A$$

- (1c) A ga C ni B wo yobas(er)areru (pure passivized causative)  
'A is made to call B by C.'  
(A is affected to the extent of the situation of 'causing' by C to the extent of the situation of 'calling B')

$$\sum / \text{PR}$$

$$A = \text{rareru} > Y$$

$$\text{saseru} > Y > [\text{ni}_1]$$

$$\text{yobu}; B \mid [\text{ni}_2]; C$$

- (1d) D ga C ni A ni B wo yobas(er)areru (adversatively passivized causative)  
'D suffers from A's being made to call B by C.'  
(D is affected by C to the extent of the situation of 'causing' to A to the extent of the situation of 'calling B')

$$\sum / \text{PR}$$

$$D = \text{rareru} > Y > [\text{ni}_1]$$

$$\text{saseru} > Y > [\text{ni}_1] \mid [\text{ni}_2]; C$$

$$\text{yobu}; B \mid [\text{ni}_2]; A$$

- (2) *watashi wa piano wo kodomo ni hikas(er)areru* (passive-potentialized causative)  
 ‘I can have the child play the piano.’  
 (as for me, [I] am enabled to the extent of the situation of ‘causing’  
 to the child to the extent of the situation of ‘playing the piano’)

$$\begin{aligned}
 & \text{watashi} > \text{wa} < \sum / \text{PR} \\
 & \text{X} = \text{rareru} > \text{Y} \\
 & \text{saseru} > \text{Y} > [\text{ni}_1] \\
 & \text{hiku} ; \text{piano} \mid [\text{ni}_2] ; \text{kodomo}
 \end{aligned}$$

- (3) *sensei ga gakusei ni kodomo wo yobas(er)areta* (honorific passive-causative)  
 ‘The teacher made the student call the child.’  
 ([I] was affected to the extent of the situation of ‘the teacher  
 causing’ to the student to the extent of the situation of ‘calling the child’)

$$\begin{aligned}
 & \sum / \text{PA} \\
 & \text{X} = \text{rareru} > \text{Y} \\
 & \text{sensei} = \text{saseru} > \text{Y} > [\text{ni}_1] \\
 & \text{yobu} ; \text{kodomo} \mid [\text{ni}_2] ; \text{gakusei}
 \end{aligned}$$

Makino&Tutsui (1995:392) give the following examples for causative-passive sentences:

- (4a) *chichi wa watashi wo aruite kaerasete*  
 ‘My father had me walk home.’ (causative)  
 (as for my father, [he] was causing me to the extent of the situation  
 of ‘returning [while] walking’)

$$\begin{aligned}
 & \text{chichi} > \text{wa} < \sum / \text{PA} \\
 & \text{X} = [\text{saseru}_1] > \text{Y} \\
 & [\text{saseru}_2] ; \text{watashi} \mid \text{kaeru} \supset \text{aruku}
 \end{aligned}$$

- (4b) *watashi wa chichi ni aruite kaerarereta*  
 ‘I was made to walk home by my father.’ (causative-passive)  
 (as for me, [I] was affected to the extent of the situation  
 of ‘causing’ by my father to the extent of the situation of ‘returning [while] walking’)

$$\begin{aligned}
 & \text{watashi} > \text{wa} < \sum / \text{PA} \\
 & \text{X} = \text{rareru} > \text{Y} \\
 & \text{saseru} > \text{Y} > [\text{ni}_1] \\
 & \text{kaeru} \supset \text{aruku} \mid [\text{ni}_2] ; \text{chichi}
 \end{aligned}$$

- (5a) *Kazuo wa Natsuko ni sake wo nomaseta* (causative)  
 ‘Kazuo made/let Natsuko drink *sake*.’  
 (as for Kazuo, [he] was causing to Natsuko to the extent of the situation of ‘drinking *sake*’)

*Kazuo* > *wa* <  $\sum$  / PA  
 X = *saseru* > Y > [*ni*<sub>1</sub>]  
*nomu* ; *sake* | [*ni*<sub>2</sub>]; *Natsuko*

- (5b) *Natsuko wa Kazuo ni sake wo nomaserareta* (causative-passive)  
 ‘Natsuko was made to drink *sake* by Kazuo.’  
 (as for Natsuko, [she] was affected to the extent of the situation of ‘causing’ by Kazuo to the extent of the situation of ‘drinking *sake*’)

*Natsuko* > *wa* <  $\sum$  / PA  
 X = *rareru* > Y  
*saseru* > Y > [*ni*<sub>1</sub>]  
*nomu* ; *sake* | [*ni*<sub>2</sub>]; *Kazuo*

## 12 Complex verb constructions

In this chapter a number of verb constructions consisting of the gerund form of a verb followed by another verb will be analyzed. In the first section the constructions *V-te iru*, *V-te aru* and *de aru* will be described, followed by the combinations of a gerund with verbs for giving and receiving. In section 12.3 the construction of *te*-forms combined with *kuru* and *iku* will be analyzed, and finally in section 12.4 constructions of the gerund with the verbs *miru*, *oku* and *shimau* will be discussed.

### 12.1 Constructions with *-te iru*, *-te aru* and *de aru*

As an independent verb the verb *iru* means ‘to be’, ‘to stay’, or ‘to exist (for animates only)’ (not to be confused with the verb *iru* ‘to need’, which has a different stem and is written with a different *kanji*); and the independent verb *aru* has the meaning ‘to be’, ‘to exist (for inanimate things)’. Both verbs are used in the function of auxiliaries in combinations with other verbs in the gerund form. For the verb *iru* in these constructions the meaning ‘to be’ is assumed, and for *aru* the meaning ‘to exist’. In the mathematical descriptions proposed here for the combination *V-te iru* and *V-te aru*, the verbs *iru* and *aru* are put first in the mathematical descriptions, followed by the base verb of the gerund form; because of the temporal meaning of the gerund, these two verbs are connected by the relation symbol ‘ $\supset$ ’ for temporal gradation.

The constructions *V-te iru* and *V-te aru* will be analyzed in the first two sections, followed by the constructions *de (wa) aru / de (wa) nai*, combinations of the gerund of the copula *da/desu* with *aru*, in section 12.1.3; in section 12.1.4 the differences in meaning between *V-te iru* and *V-te aru* will be explained while comparing a number of example sentences.

#### 12.1.1 *V-te iru*

The meaning for ‘*X ga V-te iru*’ is described here as ‘*X* is in state of *V*-ing’.

Martin (2004:217-220, 517) defines three meanings for *V-te iru*, as quoted here below. However, the difference between the second and third category in his classification can often only be determined by contextual knowledge or interpretation, as example (7) demonstrates, or is expressed by other sentence parts, such as *mainichi* in example (5); therefore sentence (2a) in the second category can also be taken as an example for the third category. The first category in the following classification is different from the other two categories in that in these constructions inanimates can refer to the verb *iru* and only intransitive verbs are used.

- a) the stative resultative, which expresses a resultant state; e.g. *tatte iru* ‘is upright’, *suwatte iru* ‘is seated’, *natte iru* ‘is become’, and *shinde iru* ‘is dead’.

- (1) *hana ga saite iru*  
‘The flowers are in bloom (=have blossomed)  
(the flowers are in the state of blossoming)

$$\sum / \text{PR}$$

*hana = iru  $\supset$  saku*

b) the repetitive, which expresses regular activity; e.g. *mise ni utte iru* ‘they sell it at/to the shop’, *hataraitte iru* ‘they work’, *aruite iru* ‘they walk regularly’

(2a) *toshokan de hon wo yonde ita*  
 ‘I regularly read books at the library.’  
 ([I] was in the state of reading books at the library)

$$\sum / \text{PA}$$

$$X = iru \supset [yomu_1] > [de_1]$$

$$[yomu_2]; hon \mid [de_2]; toshokan$$

c) the continuative, which expresses stretched-out action; e.g. *aruite iru* ‘they are walking’, *hataraitte iru* ‘they are working’, *utte iru* ‘they are selling’.

(2b) *toshokan de hon wo yonde ita*  
 ‘I was reading the book at the library.’  
 ([I] was in the state of reading books at the library)

$$\sum / \text{PA}$$

$$X = iru \supset [yomu_1] > [de_1]$$

$$[yomu_2]; hon \mid [de_2]; toshokan$$

Makino&Tutsui (1995:155-7) quote the following example sentences for *-te iru* expressing: ‘a present state’ (stative resultative) in examples (3) and (4), a ‘habitual action’ (repetitive) in (5) and ‘the continuation of an action’ in sentence (6).

(3) *watashi wa Tookyoo ni sunde iru*  
 ‘I live in Tokyo.’  
 ([I] am in the state of living in Tokyo)

$$watashi > wa < \sum / \text{PR}$$

$$X = iru \supset sumu > [ni_1]$$

$$[ni_2]; Tookyoo$$

(4) *kono ringo wa kusatte iru*  
 ‘This apple is rotten.’  
 (this apple is in the state of being rotten)

$$ringo - kono > wa < \sum / \text{PR}$$

$$X = iru \supset kusaru$$

- (5) *watashi wa mainichi yonmairu hashitte iru*  
 I run four miles everyday.'  
 (as for me, [I] am in the state of running four miles everyday)

$$\begin{aligned}
 \textit{watashi} > \textit{wa} < \sum / \textit{PR} \\
 \textit{X} = \textit{iru} \supset \textit{hashiru} > \textit{yon} \cap \textit{mairu} > \textit{mai} \cap \textit{nichu}
 \end{aligned}$$

- (6) *Sasaki-san wa sake wo nonde iru*  
 'Mr. Sasaki is drinking sake.'  
 (Mr. Sasaki is in the state of drinking sake)

$$\begin{aligned}
 \textit{Sasaki} \cup \textit{san} > \textit{wa} < \sum / \textit{PR} \\
 \textit{X} = \textit{iru} \supset [\textit{nomu}_1] \\
 [\textit{nomu}_2]; \textit{sake}
 \end{aligned}$$

Hasegawa (1996:103) points out that the construction *V-te iru*, as *katte iru* in (7a), frequently implicates a resultative state as the outcome of the event referred to by the *te*-predicate, but that such a resultative reading is only an implicature, which can be cancelled without yielding a contradiction, as in (7b).

- (7a) *Tanaka wa ninen mae ni sono uchi wo katte iru*  
 'Tanaka bought that house two years ago (and this fact is relevant).'  
 (as for Tanake, [he] is in the state of buying that house two years ago)

$$\begin{aligned}
 \textit{Tanaka} > \textit{wa} < \sum / \textit{PR} \\
 \textit{X} = \textit{iru} \supset [\textit{kau}_1] > [\textit{ni}_1] \\
 [\textit{kau}_2]; \textit{uchi} - \textit{sono} \mid [\textit{ni}_2]; \textit{ni} \cap \textit{nen} \cap \textit{mae}
 \end{aligned}$$

- (7b) *shikashi kare wa saikin kyuu ni Yamada ni uri-haratta*  
 'However, recently he suddenly sold (it) to Yamada.'

$$\begin{aligned}
 \textit{shikashi} < \textit{kare} > \textit{wa} < \sum / \textit{PA} \\
 \textit{X} = \textit{uri} \cap \textit{harau} > [\textit{ni}_1] > [\textit{ni}_1] > \textit{saikin} \\
 [\textit{ni}_2]; \textit{Yamada} \mid [\textit{ni}_2]; \textit{kyuu}
 \end{aligned}$$

### 2.1.2 V-te aru

For the combination *V-te aru* a different analysis has been made; whereas the construction *V-te iru* has been analyzed as belonging to one situation, the construction *V-te aru* is analyzed as consisting of two situations: the main situation with the verb *aru* as predicate in the meaning 'to exist', and the subordinate situation with the gerund verb as predicate. The temporal dimension of the gerund is expressed by the symbol '⊃' in the mathematical descriptions. Since the tense of the gerund is already expressed by this relation symbol, the symbol 'Y' is used for the situation instead of 'Σ'. The meaning of 'X ga V-te aru' is assumed to be 'X exists while in the situation of 'having [been] V-ed'.

Makino&Tutsui (1995:76-78) give the following example sentences for the construction *V-te aru*, which are defined as ‘something has been done to something, and the resultant state of that action remains’:

- (8) *sore wa moo Jon ni hanashite aru*  
 ‘It’s been told to John already.’  
 (as for this, [it] exists while in the situation of having been told to John already)

$$\begin{aligned} & \textit{sore} > \textit{wa} < \sum / \textit{PR} \\ & \textit{X} = \textit{aru} \supset \textit{Y} \\ & \textit{X} = \textit{hanasu} > [\textit{ni}_1] > \textit{moo} \\ & \quad \quad \quad [\textit{ni}_2]; \textit{Jon} \end{aligned}$$

- (9) *nomimono wa moo katte arimasu*  
 ‘Drinks have already been bought.’  
 (as for drinks, [they] exist while in the situation of having been bought already)

$$\begin{aligned} & \textit{nomi} \cap \textit{mono} > \textit{wa} < \sum / \textit{POL} / \textit{PR} \\ & \textit{X} = \textit{aru} \supset \textit{Y} \\ & \textit{X} = \textit{kau} > \textit{moo} \end{aligned}$$

Hasegawa (1996:86) makes a distinction between two types of *V-te aru* constructions:

- a) the Valence-Maintaining *te aru* construction, e.g.:

- (10a) *Joon ga soto ni kuruma wo tomete aru*  
 ‘Joan has parked the car outside.’  
 (Joan exists while in the situation of having parked the car outside)

$$\begin{aligned} & \sum / \textit{PR} \\ & \textit{Joon} = \textit{aru} \supset \textit{Y} \\ & \textit{X} = [\textit{tomeru}_1] > [\textit{ni}_1] \\ & \quad \quad \quad [\textit{tomeru}_2]; \textit{kuruma} \mid [\textit{ni}_2]; \textit{soto} \end{aligned}$$

- b) the Valence-Changing *te aru* construction, e.g.:

- (10b) *(\*Joon ga) soto ni kuruma ga tomete aru*  
 ‘There is a car parked outside.’  
 (the car exists while in the situation of having been parked outside)

$$\begin{aligned} & \sum / \textit{PR} \\ & \textit{kuruma} = \textit{aru} \supset \textit{Y} \\ & \textit{X} = \textit{tomeru} > [\textit{ni}_1] \\ & \quad \quad \quad [\textit{ni}_2]; \textit{soto} \end{aligned}$$

### 12.1.3 the constructions *de (wa) aru* and *de (wa) nai*

Since the gerund form *de* in the construction *de aru* is the form of the copula *da/desu*, a different analysis was made for this construction in comparison to *V-te aru*; whereas in the use *V-te aru* there are two verbs referring to one subject, in the case of *de aru* there is a noun phrase that is the subject of the copula, but not the subject of *aru*. The entire situation of ‘someone/something being something’ is analyzed as the subject of *aru* ‘to exist’.

Martin (2004:238-239) informs us that the copula in formal style is generally treated as *de aru* with no contraction, and *aru* is given its usual conjugation, so that the polite form, corresponding to the more colloquial *desu* is *de arimasu*. In colloquial usage when nuclear focus is applied, the copula *da* reverts to its immediately underlying components and yields *de wa/mo aru*. He also points out that in ordinary speech you find that *ja* commonly substitutes for *de (wa)* in negative expressions so that you hear ‘N *ja nai*’ (or ‘N *jaa nai*’) instead of ‘N *de wa nai*’. Thus, *kore ja nai* may be considered to be the equivalent of sentence (11d):

- (11a) *kore de aru*  
 ‘It is this.’  
 (the situation of [it] being this exists)

$$\begin{array}{l} \sum / \text{PR} \\ \sum / \text{GER} = \textit{aru} \\ X = \textit{kore} \end{array}$$

- (11b) *kore de wa aru*  
 ‘It is this.’  
 (as for the situation of [it] being this, [it] exists)

$$\begin{array}{l} \sum / \text{GER} > \textit{wa} < \sum / \text{PR} \\ X = \textit{kore} \quad | \quad X = \textit{aru} \end{array}$$

- (11c) *kore de nai*  
 ‘It isn’t this.’  
 (the situation of [it] being this does not exist)

$$\begin{array}{l} \sum / \text{PR} \\ \sum / \text{GER} = \textit{nai} \\ X = \textit{kore} \end{array}$$

- (11d) *kore de wa nai*  
 ‘It isn’t this.’  
 (as for the situation of [it] being this, [it] does not exist)

$$\begin{array}{l} \sum / \text{GER} > \textit{wa} < \sum / \text{PR} \\ X = \textit{kore} \quad | \quad X = \textit{nai} \end{array}$$



Makino&Tutsui (2000:31) write that *de aru* is used as a copula in formal writing and formal speech, and quote the following example sentences:

- (12) *Botchan wa Sooseki no shoki no daihyoosaku de aru*  
 ‘*Botchan* is representative of Soseki’s early work.’  
 (as for *Botchan*, the situation of [it] being representative of the early work of Soseki exists)

$$\begin{array}{l}
 \text{Botchan} > \text{wa} < \sum / \text{PR} \\
 \sum / \text{GER} = \text{aru} \\
 \text{X} = \text{daihyoo} \cap \text{saku} \downarrow \\
 \quad \quad \quad \quad \quad \downarrow - \text{shoki} \\
 \quad \quad \quad \quad \quad \quad \quad \downarrow - \text{Sooseki}
 \end{array}$$

- (13) *kotoshi no mizubusoku wa kiwamete de aru*  
 ‘The water shortage this year is extremely serious.’  
 (as for the water shortage of this year, the situation of [it] being extremely serious exists)

$$\begin{array}{l}
 \text{mizu} \cap \text{busoku} \downarrow > \text{wa} < \sum / \text{PR} \\
 \quad \quad \quad \quad \quad \downarrow - \text{kotoshi} \mid \sum / \text{GER} = \text{aru} \\
 \quad \quad \quad \quad \quad \quad \quad \text{X} = \text{kiwamete}
 \end{array}$$

The next sentence in this section is quoted from Kaiser et al. (2001:282):

- (14) *shisutemu no minaoshi wa hitsuyoo da ga koto wa soo kantan de wa nai*  
 ‘A reconsideration of the system is needed, but things aren’t that simple.’  
 (as for a reconsideration of the system, [it] is necessary but, as for things, as for the situation of [it] being so simple, [it] does not exist)

$$\begin{array}{l}
 \text{mi} \cap \text{naoshi} \downarrow > \text{wa} < \sum / \text{PR} > \text{ga} < \text{koto} > \text{wa} < \sum / \text{GER} > \text{wa} < \sum / \text{PR} \\
 \quad \quad \quad \quad \quad \downarrow - \text{shisutemu} \mid \text{X} = \text{hitsuyoo} \quad \quad \quad \quad \quad \mid \text{X} = \text{kantan} > \text{soo} \mid \text{X} = \text{nai}
 \end{array}$$

#### 12.1.4 comparing V-te iru and V-te aru

Makino&Tutsui (1995:77-78), when comparing the following two examples, explain that as a result of the use of V-te aru two points are indicated, namely, someone did something to X (that’s why V-te is usually a transitive verb) and X is still in that state; in example (15a), the verb *akeru* ‘to open’ is transitive and the window is still open. In (15b) the use of the intransitive verb *aku* ‘to open’ + *iru* simply means that the window is open and does not imply that someone opened it.

- (15a) *mado ga akete aru*  
 ‘The window has been opened (is open).’  
 (the window exists while in the situation of having been opened)

$$\sum / \text{PR}$$

$$mado = aru \supset Y$$

$$X = akeru$$

- (15b) *mado ga aite iru*  
 ‘The window is open.’  
 (the window is in the state of having opened)

$$\sum / \text{PR}$$

$$mado = iru \supset aku$$

Martin (2004:524) states that the conversion of *V-te aru* is best known as a kind of roundabout passive that permits one to take the object of a transitive verb and turn it into a subject, as in the following examples with the transitive verb *shimeru* and the intransitive verb *shimaru*.

- (16a) *mado wo shimeru*  
 ‘(Someone) closes the window.’

$$\sum / \text{PR}$$

$$X = [shimeru_1]$$

$$[shimeru_2]; mado$$

This example is converted into the next sentence where the agent is implied but not mentioned,

- (16b) *mado ga shimete aru* (intransitivizing resultative)  
 ‘The window is closed.’  
 (the window exists while in the situation of having been closed)

$$\sum / \text{PR}$$

$$mado = aru \supset Y$$

$$X = shimeru$$

This latter sentence differs in meaning from (16c), which implies that there is no agent,

- (16c) *mado ga shimatte iru* (stative resultative)  
'The window is shut.'  
(the window is in the state of having closed)

$$\sum / \text{PR}$$

*mado = iru \supset shimaru*

which is the resultative of:

- (16d) *mado ga shimaru*  
'The window shuts.'

$$\sum / \text{PR}$$

*mado = shimaru*

## 12.2 Constructions with verbs of giving and receiving

Martin (2004:352-354) writes that the group of verbs for ‘giving’ are divided into two groups, namely the set *yaru/ageru* with the meaning ‘give to the out-group’ and the set *kureru/kudasaru*, which carry the meaning ‘give to the in-group’. The in-group includes ‘me’ and the speaker’s own family members, friends, colleagues, etc.; the out-group consists of people outside the family, circle of friends, company, etc., of the speaker. The verb set *yaru/ageru* is appropriate whenever it is ‘I give you or him’, and the set *kureru/kudasaru* is appropriate whenever ‘you give me’. For other situations, such as ‘you give him’, ‘he gives you’, and ‘he gives him’, the choice of the verb depends on whether ‘he’ is thought to be closer to ‘me’ or to ‘you’. In unspecified situations *yaru/ageru* will be used for ‘you will give him’ and for ‘he will give him’, whereas *kureru/kudasaru* will be used for ‘he will give you’. From this follows that the verbs most commonly used for ‘giving’ are *yaru/ageru*. Within this set, the difference between *yaru* and *ageru* is one of level of politeness and hierarchy within the group; the first is used for people considered to be lower in status or age than oneself, while the second is used for those of higher rank. The same distinction applies for the difference between *kureru* and *kudasaru*. For the verbs of ‘receiving’ there is only one set of verbs, i.e. *morau/itadaku*, which is used for the in-group as well as the out-group, and the difference between the two verbs within this set is the same distinction for rank as has been explained here above for the set *yaru/ageru* and *kureru/kudasaru*.

The characteristics of verbs of giving and receiving, as described here above, also apply when these verbs are used in ‘favor conversions’, i.e. combining the gerund form of a verb with a verb of giving or with a verb of receiving.

The difference between the construction of a gerund with a verb of giving and that of a gerund with a verb of receiving lies in the fact that in the first construction the person who ‘gives’ is the same person as the one who performs the action expressed by the gerund verb, whereas in the construction of a gerund with a verb of receiving, the person who ‘receives’ is not the agent of the action expressed by the gerund. In the mathematical descriptions this difference is expressed as follows: for the constructions V-*te* + a verb of giving, the latter verb is put first, since that is the verb that inflects, followed by the base verb of the gerund form, with the temporal gradation symbol ‘ $\supset$ ’ in between; the two verbs are analyzed as belonging to the same situation and are placed on the same line. For the verbs of receiving, however, a different description is made, because the situation expressed by the verb in the gerund form is represented by the symbol ‘Y’, and connected to the verb of receiving by the relation symbol ‘ $\supset$ ’.

Martin (2004:597-601) explains that for expressing the giving or receiving a favor, one uses the verbal gerund V-*te* or its negative form V-(*a*)*nai de* followed by a verb of giving or a verb of receiving and he remarks that the marking of adjuncts of the ‘favor given’ are the same as when a gift is given, e.g.:

- (1a) A *ga* B *ni* X *wo ageru*  
 ‘A gives X to B.’

$$\sum / \text{PR}$$

$$A = [ageru_1] \quad \supset \quad [ni_1]$$

$$[ageru_2]; X \mid [ni_2]; B$$

- (1b) *A ga B ni X wo shite ageru*  
 ‘A does X for B.’  
 (A gives doing X to B)

$$\sum / \text{PR}$$

$$A = \text{ageru} \supset [suru_1] > [ni_1]$$

$$[suru_2]; X \mid [ni_2]; B$$

However, as Martin points out, there is a difference, namely, when you receive things, the preference is to mark the source with *kara* (though *ni* is sometimes used), whereas when you receive favors, the preference is to mark the source with *ni* (though occasionally *kara* may be used), e.g.:

- (2a) *B ga A [ni/] kara X wo morau*  
 ‘B gets X from A.’

$$\sum / \text{PR}$$

$$B = [morau_1] > [kara_1]$$

$$[morau_2]; X \mid [kara_2]; A$$

- (2b) *B ga A ni [/kara] X wo shite morau*  
 ‘B gets A to do X.’  
 (B receives the situation of ‘doing X’ from A)

$$\sum / \text{PR}$$

$$B = \text{morau} \supset Y > [ni_1]$$

$$\text{suru}; X \mid [ni_2]; A$$

Such constructions with a ‘favor given or received’ may enter into further conversions, such as the negative, the desiderative, and adverbializations of either the gerund or the verb of giving/receiving, e.g. *shite kureru* may appear in the negative form *shite kurenai* ‘not do it for me’, or *shinaide kureru* ‘as a favor to me stop doing it’, or *shinaide kurenai* ‘not do me the favor of not doing it’.

According to Martin (2004:191-192), among the verbs that enjoy a dative valence are those that involve the giving of objects or favors (*yaru/ageru, kureru/kudasaru*) and the transmittal of objects or messages (a.o. *okuru* ‘send’, *kasu* ‘lend’, *dasu* ‘pay’, *miseru* ‘show’, *oshieru* ‘instruct’). When a favor conversion (*V-te yaru*, etc. ‘does it for someone’; and *-te morau* ‘has it done for one’) is applied to a verb that has a characteristic dative valence, two beneficiaries may appear, since the favor conversion carries one such valence itself. In these cases the dative that refers to the favor normally precedes that which is called for by the underlying predicate, which usually keeps its grammatically tied elements close to it, e.g.:

- (3) *mekura ni tomodachi ni tegami wo kaite ageru*  
 ‘[He] writes a letter for a blind man to his friend.’  
 ([he] gives ‘writing a letter to a friend’ to a blind man)

$$\sum / \text{PR}$$

$$X = \text{ageru} \supset [kaku_1] > [ni_1] > [ni_1]$$

$$[kaku_2]; \text{tegami} \mid [ni_2]; \text{tomo} \cup \text{dachi} \mid [ni_2]; \text{mekura}$$

Martin quotes the next example sentence (4) to demonstrate that if there is only one dative expressed, the grammar is ambiguous, and he states that the latter would be the interpretation to be assumed in the absence of contrary clues from the situation or the context.

- (4) *tomodachi ni tegami wo kaite ageru*
- a) ‘[He] writes a letter for a friend’ (as a favor for the friend)  
 ([he] gives ‘writing a letter’ to a friend)
- b) ‘[He] writes a letter to a friend.’ (as a favor for someone who is not mentioned)  
 ([he] gives ‘writing a letter to a friend’)

$$\sum / \text{PR}$$

$$X = \text{ageru} \supset [kaku_1] > [ni_1]$$

$$[kaku_2]; \text{tegami} \mid [ni_2]; \text{tomo} \cup \text{dachi}$$

Martin (2004:598) also informs us that, as with other gerund-auxiliary conversions, the giving and receiving of favors is theoretically recursive: you can favor your friend by doing something for his brother, and the friend can receive the benefit of your favoring his brother, e.g.:

- (5) *ueki-ya ni ocha wo nomasete yatte moraitai*  
 ‘I want to have you kindly let them serve the gardener tea.’  
 ([I] want to the extent of receiving the situation of ‘giving causing to the extent of the situation of drinking tea to the gardener’)

$$\sum / \text{PR}$$

$$X = \text{tai} > \text{morau} \supset Y$$

$$\text{yaru} \supset \text{saseru} > Y > [ni_1]$$

$$\text{nomu}; \text{ocha} \mid [ni_2]; \text{ueki} \cap \text{ya}$$

In the following examples from Martin (2004:637) various combinations of giving and receiving favors are present:

- (6a) *tomodachi ga haha ni kodomo wo yonde ageta*  
 ‘The friend called the child for the mother.’  
 (the friend gave ‘calling the child’ to the mother)

$$\sum / \text{PA}$$

$$\text{tomo} \cup \text{dachi} = \text{ageru} \supset [\text{yobu}_1] \quad > [\text{ni}_1]$$

$$[\text{yobu}_2]; \text{kodomo} \mid [\text{ni}_2]; \text{haha}$$

- (6b) *haha ga tomodachi ni kodomo wo yonde moratta*  
 ‘The mother had the child called by the friend.’  
 (the mother received the situation of ‘calling the child’ from the friend)

$$\sum / \text{PA}$$

$$\text{haha} = \text{morau} \supset \text{Y} \quad > [\text{ni}_1]$$

$$\text{yobu}; \text{kodomo} \mid [\text{ni}_2]; \text{tomo} \cup \text{dachi}$$

- (6c) *chichi ga tomodachi ni haha ni kodomo wo yonde agete moratta*  
 ‘The father had the friend call the child for the mother.’  
 (the father received the situation of ‘giving calling the child to the mother’ from a friend)

$$\sum / \text{PA}$$

$$\text{chichi} = \text{morau} \supset \text{Y} \quad > [\text{ni}_1]$$

$$\text{ageru} \supset [\text{yobu}_1] \quad > [\text{ni}_1] \quad \mid [\text{ni}_2]; \text{tomo} \cup \text{dachi}$$

$$[\text{yobu}_2]; \text{kodomo} \mid [\text{ni}_2]; \text{haha}$$

Makino&Tutsui (1995:63-67) give the following examples for favor conversions:

- (7) *watashi wa Nobuo-san ni nekutai wo katte ageta*  
 ‘I bought a tie for Nobuo.’  
 (as for me, [I] gave ‘buying a tie’ to Nobuo)

$$\text{watashi} > \text{wa} < \sum / \text{PA}$$

$$\text{X} = \text{ageru} \supset [\text{kau}_1] \quad > [\text{ni}_1]$$

$$[\text{kau}_2]; \text{nekutai} \mid [\text{ni}_2]; \text{Nobuo} \cup \text{san}$$

- (8) *Tanaka-san wa Sumisu-san ni hon wo kashite ageta*  
 ‘Mr. Tanaka lent a book to Mr. Smith.’  
 (as for Mr. Tanaka, [he] gave ‘lending a book’ to Mr. Smith)

$$\text{Tanaka} \cup \text{san} > \text{wa} < \sum / \text{PA}$$

$$\text{X} = \text{ageru} \supset [\text{kasu}_1] \quad > [\text{ni}_1]$$

$$[\text{kasu}_2]; \text{hon} \mid [\text{ni}_2]; \text{Sumisu} \cup \text{san}$$

In the next two example sentences from Makino&Tutsui, *kureru* is used because the first person (in 9) or a person close to the speaker (in 10) is the recipient:

- (9) *Hanako wa watashi ni nihongo wo oshiete kureta*  
 ‘Hanako taught me Japanese.’  
 (as for Hanako, [she] gave ‘teaching Japanese’ to me)

$$\begin{aligned} \text{Hanako} > \text{wa} < \sum / \text{PA} \\ \text{X} = \text{kureru} \supset [\text{oshieru}_1] &> [\text{ni}_1] \\ &[\text{oshieru}_2]; \text{nihongo} \mid [\text{ni}_2]; \text{watashi} \end{aligned}$$

- (10) *Mearii wa watashi no musume ni pen wo katte kureta*  
 ‘Mary bought a pen for my daughter.’  
 (as for Mary, [she] gave ‘buying a pen’ to my daughter)

$$\begin{aligned} \text{Mearii} > \text{wa} < \sum / \text{PA} \\ \text{X} = \text{kureru} \supset [\text{kau}_1] &> [\text{ni}_1] \\ &[\text{kau}_2]; \text{pen} \mid [\text{ni}_2]; \text{musume} \downarrow \\ &\quad \quad \quad - \text{watashi} \end{aligned}$$

Makino&Tutsui (1995:67) also point out that, when the benefactor of the action is in a higher position than the recipient, or he is of equal status and his relationship to the recipient is very close, *youtu* is used, e.g.:

- (11) *watashi wa imooto ni rekoodo wo katte yatta*  
 ‘I bought my little sister a record.’  
 (as for me, [I] gave ‘buying a record’ to my little sister)

$$\begin{aligned} \text{watashi} > \text{wa} < \sum / \text{PA} \\ \text{X} = \text{youtu} \supset [\text{kau}_1] &> [\text{ni}_1] \\ &[\text{kau}_2]; \text{rekoodo} \mid [\text{ni}_2]; \text{imooto} \end{aligned}$$

- (12) *Jun wa neko ni sakana wo yaite yatta*  
 ‘Jun roasted fish for the cat.’  
 (as for Jun, [he] gave ‘roasting fish’ to the cat)

$$\begin{aligned} \text{Jun} > \text{wa} < \sum / \text{PA} \\ \text{X} = \text{youtu} \supset [\text{yaku}_1] &> [\text{ni}_1] \\ &[\text{yaku}_2]; \text{sakana} \mid [\text{ni}_2]; \text{neko} \end{aligned}$$



The last example sentence of this section is from Jacobsen (1992:140):

- (13) *tomodachi ni kuukoo made okutte moratta*  
 'I was given a ride to the airport by my friend.'  
 ([I] received the situation of 'being driven to the airport' from a friend)

$$\sum /PA$$

$$X = morau \supset Y \quad > [ni_1]$$

$$okuru > [made_1] \quad | [ni_2]; tomo \cup dachi$$

$$[made_2]; kuukoo$$

### 12.3 Constructions with verbs of coming and going

These constructions are similar to the constructions of donatory verbs, as described in the previous section, in that they consist of a verb preceded by a gerund. However, there is a significant difference between the two constructions, namely (contrary to the favor conversions), in the combinations of a gerund with a verb expressing movement, the subject of the two verbs is always the same, s/he is doing the two actions at the same time. Therefore, in these cases, there is only one situation and the two verbs are placed on the same line in the mathematical description, connected by the symbol ‘ $\supset$ ’ for temporal gradation.

Martin (2004:536-539) writes that the notion of movement in Japanese is represented by the verbs *iku* ‘go [there]’ and *kuru* ‘come [here]’. These motion verbs can be preceded by verbal gerunds and in this combination *V-te kuru/iku* can have various meanings:

1. the motion verb can be taken as an auxiliary, marking the fact that the action expressed by the gerund is the beginning of a continuing process or occurs gradually.

- (1) *kyuu ni onaka ga itande kita kara isha ni itta*  
 ‘My stomach suddenly started hurting, so I went to the doctor.’  
 (because my stomach suddenly came hurting, [I] went to the doctor)

$$\begin{array}{l} \sum /PA > kara < \sum /PA \\ onaka = kuru \supset itamu > [ni_1] \quad | \quad X = iku > [ni_1] \\ [ni_2]; kyuu \quad | \quad [ni_2]; isha \end{array}$$

According to Martin, sentence (2) could also be expressed by *samuku natte kuru deshoo*, with much the same meaning, but perhaps adding the idea ‘We here in our area will be getting the cold.’

- (2) *kore kara samuku natte iku deshoo*  
 ‘From now on it will get colder (and colder).’  
 (it will be the situation that [it] goes becoming to the extent of the situation of ‘being cold’ from now on)

$$\begin{array}{l} \sum /POL / SUB \\ X = \sum /PR \\ X = iku \supset naru > Y > [kara_1] \\ samui \quad | \quad [kara_2]; kore \end{array}$$

- (3) *mizu ga sunde kuru to soko ga miete kimasu*  
 ‘When the water clears, the bottom becomes visible.’  
 (when the water comes to be clearing, the bottom comes to be enabled to the extent of the situation of ‘seeing [it]’)

$$\begin{array}{l} \sum /PR > to < \sum /POL / PR \\ mizu = kuru \supset sumu \quad | \quad soko = kuru \supset eru > Y \\ miru \end{array}$$

- (4) *kaze wa shidai ni unari wo mashite itta*  
 ‘The wind gradually increased its roar.’  
 (as for the wind, [it] gradually went increasing its roar)

$$kaze > wa < \sum / PA$$

$$X = iku \supset [masu_1] > [ni_1]$$

$$[masu_2]; unari \mid [ni_2]; shidai$$

2. the motion verb can be taken at ‘face value’, i.e. as retaining its own basic meaning  
 a) preceded by the gerund of a verb expressing the manner of movement, e.g.

- (5) *uchi he aruite kuru*  
 ‘[I] come home walking (come on foot)’  
 ([I] come walking)

$$\sum / PR$$

$$X = kuru \supset aruku > [he_1]$$

$$[he_2]; uchi$$

- (6) *eki made kuruma ni notte iku*  
 ‘[He] goes to the station in a car.’  
 ([he] goes to the station riding in a car)

$$\sum / PR$$

$$X = iku \supset noru > [ni_1] > [made_1]$$

$$[ni_2]; kuruma \mid [made_2]; eki$$

- b) the mission of an ‘errand’, in the meaning ‘...and come/go’

Martin explains that any voluntary action can be the mission of what he calls “an errand”, and that errands are reported differently in English and Japanese. An English speaker tends to focus on the direction taken before the action, whereas a Japanese speaker expresses the direction after the action. For instance, in example (7) the Japanese speaker relates the fact that s/he’ll come home after buying the newspaper, whereas the English sentence expresses the fact that one has to go out in order to buy it; likewise, in the Japanese sentence (8), the fact that the laundry was taken away is expressed by *iku*, whereas the English translation only indicates that they came to collect it, not what happened after.

- (7) *shinbun wo katte kuru*  
 ‘I’ll go and buy a newspaper.’ (go and buy and come back)  
 ([I] come buying a newspaper)

$$\sum / \text{PR}$$

$$X = kuru \supset [kau_1]$$

$$[kau_2]; \textit{shinbun}$$

- (8) *sentaku-mono wo totte itta ka*  
 ‘Did they come and get the laundry?’ (came and took and went)  
 (did [they] go taking away the laundry?)

$$\sum / \text{PA} > ka$$

$$X = iku \supset [toru_1]$$

$$[toru_2]; \textit{sentaku} \cap \textit{mono}$$

Kuno (1973:329-330) writes that when action verbs are combined with *kuru* ‘come’ and *iku* ‘go’, the actions are taken to be toward or away from the place of the speaker, e.g.:

- (9) *John ga hon wo katte kita*  
 ‘John bought books and came to the speaker.’  
 (John came buying books)

$$\sum / \text{PA}$$

$$\textit{John} = kuru \supset [kau_1]$$

$$[kau_2]; \textit{hon}$$

- (10) *John ga hon wo katte itta*  
 ‘John bought books (at the speaker’s place) and went away.’  
 (John went buying books)

$$\sum / \text{PA}$$

$$\textit{John} = iku \supset [kau_1]$$

$$[kau_2]; \textit{hon}$$

Makino&Tutsui (1995:222-223) define *kuru* in *V-te kuru* as an auxiliary verb which indicates the beginning of some process or continuation of some action up to a current point of time. In the first case the V is a verb that indicates a process that takes some time to complete, such as *fururu* ‘fall’ in example (11), or *naru* ‘become’ in (12); in the latter case the V is a non-punctual verb, as *yomu* ‘read’ in sentence (13). Makino&Tutsui also point out that sometimes *kuru* is used more as a full verb than as an auxiliary verb, and the meaning of *V-te kuru* is the same as that of *V-te* and *kuru* separately, in such cases *V-te* has the meaning ‘V and’, as in the examples (14), (15), and (16).

- (11) *tenisu wo shite itara kyuu ni ame ga futte kita*  
 ‘Suddenly, while we were playing tennis, it began to rain.’  
 (while we were playing tennis, suddenly rain came falling)

$$\begin{array}{l} \sum / \text{COND} \qquad \qquad \qquad \subset \qquad \sum / \text{PA} \\ X = iru \supset [suru_1] \qquad \qquad \mid ame = kuru \supset furu > [ni_1] \\ \qquad \qquad \qquad [suru_2]; tennis \mid \qquad \qquad \qquad [ni_2]; kyuu \end{array}$$

- (12) *gogo kara atama ga itaku natte kimashita*  
 ‘My head began to ache in the afternoon.’  
 (my head came becoming to the extent of the situation of ‘hurting’ in the afternoon)

$$\begin{array}{l} \sum / \text{POL} / \text{PA} \\ atama = kuru \supset naru > Y > [kara_1] \\ \qquad \qquad \qquad itai \mid [kara_2]; gogo \end{array}$$

- (13) *ima made takusan hon wo yonde kimashita ga kore kara mo yonde iku tsumori desu*  
 ‘Up to now I have read quite a few books and I intend to read from now on, too.’  
 ([I] came reading books up to now but, from now on, too, [it] is the intention to go reading)

$$\begin{array}{l} \sum / \text{POL} / \text{PA} > ga < X \qquad \qquad \qquad > [kara_1] > mo < \sum / \text{POL} / \text{PR} \\ X = kuru \supset [yomu_1] \qquad \qquad \qquad > [made_1] \qquad \qquad \mid [kara_2]; kore \mid X = tsumori \downarrow \\ \qquad \qquad \qquad [yomu_2]; hon - takusan \mid [made_2]; ima \mid \qquad \qquad \qquad - \sum / \text{PR} \\ \qquad \qquad \qquad \qquad \qquad \qquad \qquad \qquad \qquad \qquad \qquad \qquad \qquad \qquad \qquad \qquad \qquad \qquad X = iku \supset yomu \end{array}$$

- (14) *watashi wa kaisha ni basu ni notte kimasu*  
 ‘I come to work by bus.’ (Lit. I ride a bus and come to my company)  
 (as for me, [I] come riding in the bus to the company)

$$\begin{array}{l} watashi > wa < \sum / \text{POL} / \text{PR} \\ X = kuru \supset noru > [ni_1] \qquad \qquad \qquad > [ni_1] \\ \qquad \qquad \qquad \qquad \qquad \qquad \qquad \qquad \qquad \qquad \qquad \qquad \qquad [ni_2]; basu \mid [ni_2]; kaisha \end{array}$$

- (15) *oishii keeki wo katte kimashita*  
 ‘I bought you a delicious cake.’ (Lit. I bought a delicious cake and came here)  
 ([I] came buying delicious cake)

$$\begin{array}{l} \sum / \text{POL} / \text{PA} \\ X = kuru \supset [kau_1] \\ \qquad \qquad \qquad [kau_2]; keeki - oishii \end{array}$$

- (16) *tomodachi wo uchi ni tsurete kita*  
 ‘I brought my friends to my house.’  
 ([I] came bringing friends to the house)

$$\begin{array}{l} \sum / \text{PA} \\ X = kuru \supset [tsureru_1] > [ni_1] \\ [tsureru_2]; tomo \cup dachi \mid [ni_2]; uchi \end{array}$$

Makino&Tutsui (1995:151-152) write that *iku* in *V-te iku* indicates that some action or state keeps changing from the point in time at which the speaker first describes the action, as in the following examples:

- (17) *kore kara wa samuku natte iku yo*  
 ‘It will get colder (and continue to be that way) from now on.’  
 (as for from now on, [it] goes becoming to the extent of the situation of ‘being cold’)

$$\begin{array}{l} X > [kara_1] > wa < \sum / \text{PR} > yo \\ [kara_2]; kore \mid X = iku \supset naru > Y \\ samui \end{array}$$

- (18) *wakaranai koto wo nooto ni kaite itta*  
 ‘I went on taking notes on things I didn’t understand.’  
 ([I] went writing things that I didn’t understand in my notebook)

$$\begin{array}{l} \sum / \text{PA} \\ X = iku \supset [kaku_1] > [ni_1] \\ [kaku_2]; koto \downarrow \mid [ni_2]; nooto \\ - \sum / \text{PR} \\ X = nai > wakaru \end{array}$$

Furthermore, similar to the use of *kuru*, *iku* may have the full verb meaning ‘to go’ when preceded by *V-te*, as in the following examples:

- (19) *mainichi kaisha ni basu ni notte iku*  
 ‘I go to work everyday by bus.’ (Lit. I ride a bus every day and go to my company)  
 (everyday [I] go riding in the bus to the company)

$$\begin{array}{l} \sum / \text{PR} \\ X = iku \supset noru > [ni_1] > [ni_1] > mai \cap nichi \\ [ni_2]; basu \mid [ni_2]; kaisha \end{array}$$

- (20) *ano resutoran de koohii wo nonde ikimashoo*  
 ‘Let’s drink coffee at that restaurant and go.’  
 (let’s go drinking coffee at that restaurant)

$$\sum / \text{POL} / \text{SUB}$$

$$X = \text{iku} \supset [\text{nomu}_1] \quad > [\text{de}_1]$$

$$[\text{nomu}_2]; \text{koohii} \mid [\text{de}_2]; \text{resutoran} - \text{ano}$$

## 12.4 Constructions with *miru*, *oku* and *shimau*

When the verbs *miru*, *oku* and *shimau* are preceded by a gerund, they either function independently with their basic meanings or are used as auxiliaries. When the subject of the last verb is also the subject of the preceding gerund, the constructions *V-te miru/oku/shimau* are analyzed with the same description as the verbs *kuru* and *iku* in the previous section, namely the two verbs are placed on one line with the symbol ‘ $\supset$ ’ connecting them.

### 12.4.1 *V-te miru*

Martin (2004:541) writes that verb *miru* ‘look at’ or ‘see’ can retain its basic meaning when following a gerund, but it may also be taken as an auxiliary in the meaning ‘does it and then takes a look’, ‘does it so as to react’, or ‘does it and finds out’. He gives the following example to demonstrate that *miru* can be interpreted in two ways, either as retaining its basic meaning (a) or taken as an auxiliary (b). Since this difference in meaning is dependent on the lexical features of the words involved, or on contextual knowledge and interpretation, there is only one semantic description proposed here, which covers both possibilities.

- (1) *hon wo totte mimashita*  
 a) ‘I took the book and looked at it.’  
 b) ‘I tried taking the book (to see what the result or effect would be, or to see what it would be like).’  
 ([I] looked taking the book)

$$\sum / \text{POL} / \text{PA}$$

$$X = \text{miru} \supset [\text{toru}_1]$$

$$[\text{toru}_2]; \text{hon}$$

Makino&Tutsui (1995:246-247) define *miru* in the construction *V-te miru* as an auxiliary verb with the meaning ‘make an attempt at doing something to see what it’s like or what will happen’, and give the following examples:

- (2) *watashi wa Nihon no shoosetsu wo yonde miru*  
 ‘I will read Japanese novels (to see what they are like).’  
 (as for me, [I] look reading Japanese novels)

$$\text{watashi} > \text{wa} < \sum / \text{PR}$$

$$X = \text{miru} \supset [\text{yomu}_1]$$

$$[\text{yomu}_2]; \text{shoosetsu} \downarrow$$

$$- \text{Nihon}$$



- (3) *koko no sashimi wa oishii desu yo. tabete mimasu ka*  
 ‘Sashimi here is good. Will you try it?’  
 (as for the *sashimi* of this place, [it] is good. Will [you] look eating?)

$$\begin{aligned} \text{sashimi} \downarrow > \text{wa} < \sum / \text{POL} / \text{PR} > \text{yo} :: \sum / \text{POL} / \text{PR} > \text{ka} \\ - \text{koko} \mid \text{X} = \text{oishii} \qquad \mid \text{X} = \text{miru} \supset \text{taberu} \end{aligned}$$

Both Martin and Makino&Tutsui point to the fact that the meaning of *miru* as an auxiliary, i.e. ‘do it to see what the effect or result will be’ does not cover the meaning ‘try (or attempt) to do it’; this latter meaning can be expressed by using another construction, i.e. *V-(y)oo to suru*. Makino&Tutsui give an example to illustrate the difference in meaning between *V-te miru* and *V-(y)oo to suru* when they are used in the past tense: in sentence (4a) the use of *miru* implies that Mr. Brown did put on Tom’s undershirt, whereas in (4b) the implication is that he tried to put it on, but couldn’t or didn’t actually do it.

- (4a) *Buraun-san wa Tomu no shatsu wo kite mita*  
 ‘Mr. Brown tried Tom’s undershirt on.’  
 (as for Mr. Brown, [he] looked wearing Tom’s shirt)

$$\begin{aligned} \text{Buraun} \cup \text{san} > \text{wa} < \sum / \text{PA} \\ \text{X} = \text{miru} \supset [\text{kiru}_1] \\ [\text{kiru}_2]; \text{shatsu} \downarrow \\ - \text{Tomu} \end{aligned}$$

- (4b) *Buraun-san wa Tomu no shatsu wo kiyoo to shita*  
 ‘Mr. Brown tried to put Tom’s undershirt on.’  
 (as for Mr. Brown, [he] attempted to wear Tom’s shirt)

$$\begin{aligned} \text{Buraun} \cup \text{san} > \text{wa} < \sum / \text{PA} \\ \text{X} = \text{suru} > \text{to} < \sum / \text{SUB} \\ \text{X} = [\text{kiru}_1] \\ [\text{kiru}_2]; \text{shatsu} \downarrow \\ - \text{Tomu} \end{aligned}$$

#### 12.4.2 V-te oku

The construction of a verb in the gerund form combined with the verb *oku* gets the same description as the construction *V-te miru* that has been analyzed in the previous section.

Martin (2004: 529-532) writes that the verb *oku* had the basic meaning ‘to put, place, set aside’, and as an auxiliary it is used to add one of the following meanings to the preceding gerund:

1. ‘do it and put it aside; do it so the result is on hand; get it done’

- (5) *hachiji made ni sono kane wo atsumete oite kudasai*  
 ‘Please have the money collected [and on hand] by eight o’clock.’  
 (please give ‘placing gathering that money by eight o’clock’)

$$\sum / \text{INF}$$

$$X = kudasaru \supset oku \supset [atsumeru_1] > [ni_1]$$

$$[atsumeru_2]; kane - sono \mid [ni_2]; [made_1]$$

$$[made_2]; hachi \cap ji$$

- (6) *teeburu wo yoyaku shite oitara doo deshoo*  
 ‘How about reserving a table?’  
 (if [we] place reserving a table, how would [it] be?)

$$\sum / \text{COND} \quad \subset \quad \sum / \text{SUB}$$

$$X = oku \supset [yoyaku \cap suru_1] \quad \mid \quad X = doo$$

$$[yoyaku \cap suru_2]; teeburu$$

2. ‘do it and leave it that way’; with a negative gerund: ‘leave things as they are without doing it’

- (7) *to wo shimete oite kudasai*  
 ‘Close the door and leave it shut.’  
 (please give ‘placing closing the door’)

$$\sum / \text{INF}$$

$$X = kudasaru \supset oku \supset [shimeru_1]$$

$$[shimeru_2]; to$$

- (8) *hon wo akenaide oki-nasai*  
 ‘Don’t open your books. Leave them closed.’  
 (please give ‘placing not opening the books’)

$$\sum / \text{INF}$$

$$X = oki \cap nasaru > Y$$

$$X = nai > [akeru_1]$$

$$[akeru_2]; hon$$

3. do it and let it go at that (for the time being), do it for now (as a makeshift or temporary arrangement)’

- (9) *koo shite okitai n desu*  
 ‘I want it this way for now.’  
 ([it] is the situation that [I] want to the extent of placing doing [it] this way)

$$\sum / \text{POL} / \text{PR}$$

$$X = \sum / \text{PR}$$

$$X = \text{tai} > \text{oku} \supset \text{suru} > \text{koo}$$

- (10) *awanai de oitara okoru ka na*  
 ‘I wonder if he’ll get angry if I don’t go ahead and see him?’  
 (if [I] place not meeting [him], will [he] be angry?)

$$\sum / \text{COND} \quad \subset \quad \sum / \text{PR} > \text{ka} > \text{na}$$

$$X = \text{oku} \supset Y \quad | \quad X = \text{okoru}$$

$$\text{nai} > \text{au}$$

4. ‘do it in advance (so that it will be ready), do it in preparation or anticipation’

- (11) *kaite oita tegami wo te-watashita*  
 ‘I handed over the letter that I had (earlier) written.’  
 ([I] handed over the letter that [I] placed writing)

$$\sum / \text{PA}$$

$$X = [te \cap \text{watasu}_1]$$

$$[te \cap \text{watasu}_2]; \text{tegami} \downarrow$$

$$- \sum / \text{PA}$$

$$X = \text{oku} \supset \text{kaku}$$

- (12) *kippu wo katte okimashoo ka*  
 ‘Shall I get the tickets now (for later use)?’  
 (shall [I] place buying tickets?)

$$\sum / \text{POL} / \text{SUB} > \text{ka}$$

$$X = \text{oku} \supset [kau_1]$$

$$[kau_2]; \text{kippu}$$

Makino&Tutsui (1995:357-358) give the following examples for the auxiliary *oku* with the meaning ‘do something in advance for future convenience’:

- (13) *ashita paatii wo suru node biiru wo katte oita*  
 ‘Since we are having a party tomorrow, I bought some beer for it.’  
 (since [we] will have a party tomorrow, [I] placed buying beer)

$$\sum / \text{PR} > \text{node} < \sum / \text{PA}$$

$$X = [\text{suru}_1] > \text{ashita} \mid X = \text{oku} \supset [\text{kau}_1]$$

$$[\text{suru}_2]; \text{paatii} \mid [\text{kau}_2]; \text{biiru}$$

- (14) *rainen Nihon he iku kara, sukoshi nihongo wo benkyoo shite okimasu*  
 ‘Since I’m going to Japan next year, I will study a little Japanese ahead of time.’  
 (because [I] go to Japan next year, [I] place studying a little Japanese)

$$\sum / \text{PR} > \text{kara} < \sum / \text{POL} / \text{PR}$$

$$X = \text{iku} > [\text{he}_1] > \text{rainen} \mid X = \text{oku} \supset [\text{benkyoo} \cap \text{suru}_1] > \text{sukoshi}$$

$$[\text{he}_2]; \text{Nihon} \mid [\text{benkyoo} \cap \text{suru}_2]; \text{nihongo}$$

Makino&Tutsui also point out that, when *oku* follows the gerund of a causative verb, it expresses the idea that someone lets someone or something remain in his/its present state. Furthermore, according to Makino&Tutsui, such a causative construction may be ambiguous if the context is not clear, as in example (16).

- (15) *Nobuko wa tsukarete iru kara shibaraku nesasete okoo*  
 ‘Since Nobuko is tired, let’s let her sleep for a while.’  
 (as for Nobuko, because [she] is tired, let [us] place causing to the extent of ‘sleeping for a while’)

$$\text{Nobuko} > \text{wa} < \sum / \text{PR} > \text{kara} < \sum / \text{SUB}$$

$$X = \text{iru} \supset \text{tsukareru} \mid X = \text{oku} \supset \text{saseru} > Y$$

$$\text{neru} > \text{shibaraku}$$

- (16) *watashi wa Bobu ni biiru wo nomasete oita*  
 a) ‘I let (or make) Bob drink beer (for future convenience)  
 b) ‘I let Bob drink beer.’  
 (as for me, [I] placed causing to the extent of the situation of ‘drinking beer’ to Bob)

$$\text{watashi} > \text{wa} < \sum / \text{PA}$$

$$X = \text{oku} \supset \text{saseru} > Y > [\text{ni}_1]$$

$$\text{nomu}; \text{biiru} \mid [\text{ni}_2]; \text{Bobu}$$

### 12.4.3 V-te shimau

Martin (2004:533-534) writes that the verb *shimau* means ‘put (store) away’ or ‘shut up (completely)’ and that it may be used after a gerund either in its basic meaning, as in example (17), or as an auxiliary, as in sentences (18-21). Furthermore Martin points out that V-*te/de shimau* is sometimes contracted to V-*chimau*, V-*jimau*, V-*chau*, or V-*jau*, e.g. *yonde shimatta* = *yonchatta* or *yonjatta*.

- (17) *fuyu-mono wo zenbu aratte shimatta*  
 ‘I washed the winter clothes and put them away.’  
 ([I] finished washing the winter clothes all [of them])

$$\sum / \text{PA}$$

$$X = \textit{shimau} \supset [ \textit{arau}_1 ] > \textit{zenbu}$$

$$[ \textit{arau}_2 ]; \textit{fuyu} \cap \textit{mono}$$

According to Martin, when *shimau* is used as an auxiliary after a gerund, it may have the following meanings:

1. ‘finish doing’ (in this meaning the gerund cannot be stative or punctual)

- (18) *yatto kotowari-joo wo kaite shimatta*  
 ‘Finally I finished writing the refusal.’  
 ([I] finished writing the refusal finally)

$$\sum / \text{PA}$$

$$X = \textit{shimau} \supset [ \textit{kaku}_1 ] > \textit{yatto}$$

$$[ \textit{kaku}_2 ]; \textit{kotowari} \cap \textit{joo}$$

2. ‘do it completely, do all of it, do it all the way through’

- (19) *okane wo otoshite shimatta*  
 ‘I lost all the money.’  
 ([I] finished losing the money)

$$\sum / \text{PA}$$

$$X = \textit{shimau} \supset [ \textit{otosu}_1 ]$$

$$[ \textit{otosu}_2 ]; \textit{okane}$$

- (20) *kono hon wo honto ni yonde shimatta nara sono suji wo setsumei dekiru deshoo*  
 ‘If you have really read this book through you should be able to explain its plot.’  
 (if [you] finished reading this book, [you] should be able to explain its plot)

$$\begin{array}{l} \sum / \text{PA} > nara < \sum / \text{POL} / \text{SUB} \\ X = \text{shimau} \supset [yomu_1] > [ni_1] \quad | \quad X = \sum / \text{PR} \\ [yomu_2]; hon - kono \quad | \quad [ni_2]; honto \quad | \quad X = [setsumei \cap dekiru_1] \\ [setsumei \cap dekiru_2]; suji - sono \end{array}$$

3. ‘end/wind up by doing, get around to doing, do at the end’ (the gerund cannot be stative)

- (21) *tabesugite onaka wo kowashite shimatta*  
 ‘I ended up with a bad stomach from being such a glutton.’  
 (having over-eaten, [I] finished ruining my stomach)

$$\begin{array}{l} \sum / \text{GER} \quad \subset \quad \sum / \text{PA} \\ X = \text{tabi} \cap \text{sugiru} \quad | \quad X = \text{shimau} \supset [kowasu_1] \\ [kowasu_2]; onaka \end{array}$$

Makino&Tutsui (1995:403-405) define *shimau* after a gerund as an auxiliary verb which indicates the completion of an action, and give the following examples:

- (22) *Ikeda-kun wa mikka de sono hon wo yonde shimatta*  
 ‘Mr. Ikeda finished reading the book in three days.’  
 (as for Mr. Ikeda, [he] finished reading that book in three days)

$$\begin{array}{l} \text{Ikeda} \cup \text{san} > wa < \sum / \text{PA} \\ X = \text{shimau} \supset [yomu_1] > [de_1] \\ [yomu_2]; hon - sono \quad | \quad [de_2]; mik \cap ka \end{array}$$

- (23) *moo shukudai wo shite shimaimashita ka*  
 ‘Have you done your homework yet?’  
 ([you] finished doing [your] homework already?)

$$\begin{array}{l} \sum / \text{POL} / \text{PA} > ka \\ X = \text{shimau} \supset [suru_1] > moo \\ [suru_2]; shukudai \end{array}$$

- (24) *Maiku wa sukkari nihongo wo wasurete shimatta*  
 ‘Mike has completely forgotten Japanese.’  
 (as for Mike, [he] finished forgetting Japanese completely)

$$\begin{aligned}
 \text{Maiku} > \text{wa} < \sum / \text{PA} \\
 \text{X} = \text{shimau} \supset [\text{wasureru}_1] > \text{sukkari} \\
 [\text{wasureru}_2]; \text{nihongo}
 \end{aligned}$$

According to Makino&Tutsui, *V-te shimatta* also expresses the idea that someone did something which he shouldn't have done, or something happened that shouldn't have happened. Thus it often implies the agent's regret about what he has done or the speaker's regret or criticism about someone's action or about something that has happened, e.g.:

- (25) *Jerii wa Pegii no keeki wo tabete shimatta*  
 ‘Jerry (mistakenly) ate Peggy's cake.’  
 (as for Jerry, [he] finished eating Peggy's cake)

$$\begin{aligned}
 \text{Jerii} > \text{wa} < \sum / \text{PA} \\
 \text{X} = \text{shimau} \supset [\text{taberu}_1] \\
 [\text{taberu}_2]; \text{keeki} \downarrow \\
 \text{– Peggy}
 \end{aligned}$$

- (26) *watashi wa chigau basu ni notte shimatta*  
 ‘I got on the wrong bus.’  
 (as for me, [I] finished getting on the wrong bus)

$$\begin{aligned}
 \text{watashi} > \text{wa} < \sum / \text{PA} \\
 \text{X} = \text{shimau} \supset \text{noru} > [\text{ni}_1] \\
 [\text{ni}_2]; \text{basu} \downarrow \\
 \text{– chigau}
 \end{aligned}$$

## 13 Other constructions

In this last chapter various kinds of constructions that are commonly used in Japanese will be analyzed. These are constructions with numerals and counters, the reflexive pronoun *jibun*, *koto* and *no* used as nominalizations, *tokoro*, the expressions *-tai* and *hoshii*, and, finally, the use of *rashii*, *soo da*, *yoo da*, *hazu da* and *tsumori da*.

### 13.1 Numerals and counters

Martin (2004:766-768) writes that in Japanese numbers consist of two parts: a numeral and a counter. As has already been mentioned in chapter 2, there are two underlying systems of numerals, one native Japanese and one borrowed from Chinese. Martin explains that, with a few lexical exceptions, the native system is now used only up to ‘10’; above ‘10’ even those counters which prefer the native numerals must use the Chinese set. Furthermore, Martin (2004:777-778) points out that within a sentence the number can be used as a pure noun, followed by a case marker such as *ga* or *wo* or predicated by some form of the copula. By conversion of the copula to *no*, the number can be adnominalized. When the noun being counted is separately present in the sentence, there are a number of possible structures, as can be observed in the following examples from Martin. The first two examples are the structures most commonly used, the other structures seem to be more theoretical than practical.

In the first example (1a), with the “basic” construction, the genitive particle *no* is used between the counting unit and the object that is being counted; the number is adnominalized to a noun and the entire unit fills the second valence of the predicate. In example (1b) the counting unit follows the particle *wo*, therefore the counting unit is analyzed as an adverbialization, relating to the predicate; the gradation symbol “>” is used in the description instead of the stratification symbol “/” because the predicate *toru* is not the thing being counted. In sentence (1c), with “inverted apposition”, the number precedes the accusative particle *wo*, therefore it is analyzed here as being embedded in the second valence of the predicate; the relation symbol “/” for stratification is used between the thing that is being counted, *irogami*, and the counting unit *nimai*. In (1d) the counting unit is also adverbialized, but since it precedes the main word, this construction, which is called a “preposed adverbialization” by Martin, is analyzed as a topic. In the last example (1e) the same construction is used as in (1a), although inverted; Martin calls this construction “appositional ellipsis” and explains it as a reduction of *irogami no nimai [no irogami] wo totta*; in the constructions with genitive *no* the main word of the two can be established by the word order, because attributive phrases precede the word they refer to.

(1) ‘I took two (or the two) pieces of colored paper.’

(1a) *ni-mai no irogami wo totta*  
([I] took ‘colored paper of the quantity of two sheets’)

$$\begin{array}{l} \sum / \text{PA} \\ X = [ \text{toru}_1 ] \\ \quad [ \text{toru}_2 ]; \text{iro} \cap \text{gami} \downarrow \\ \quad \quad \quad - \text{ni} \cap \text{mai} \end{array}$$



- (1b) *irogami wo ni-mai totta*  
 ([I] took to the extent of the quantity of two sheets ‘colored paper’)

$$\sum / \text{PA}$$

$$X = [toru_1] > ni \cap mai$$

$$[toru_2]; iro \cap gami$$

- (1c) *irogami ni-mai wo totta*  
 ([I] took ‘colored paper in the quantity of two sheets’)

$$\sum / \text{PA}$$

$$X = [toru_1]$$

$$[toru_2]; iro \cap gami / ni \cap mai$$

- (1d) *ni-mai irogami wo totta*  
 (to the extent of a quantity of two sheets, [I] took ‘colored paper’)

$$ni \cap mai < \sum / \text{PA}$$

$$X = [toru_1]$$

$$[toru_2]; iro \cap gami$$

- (1e) *irogami no ni-mai wo totta*  
 ([I] took ‘a quantity of two sheets of the colored paper’)

$$\sum / \text{PA}$$

$$X = [toru_1]$$

$$[toru_2]; ni \cap mai \downarrow$$

$$- iro \cap gami$$

Martin analyzed the examples above still further by adding the adnominal phrase *ano* ‘that’ to the objects that are counted, and while doing so, he discovered that the only difficulty he encountered was in example (2d) with the proposed adverbialization; he argues that, since an adverb cannot be modified by an adnominal phrase, in this case the adnominal phrase has to be moved to the other side.

- (2a) *ano ni-mai no irogami wo totta*  
 ([I] took ‘that colored paper of a quantity of two sheets’)

$$\sum / \text{PA}$$

$$X = [toru_1]$$

$$[toru_2]; iro \cap gami \downarrow - ano$$

$$- ni \cap mai$$

- (2b) *ano irogami wo ni-mai totta*  
 ([I] took to the extent of the quantity of two sheets ‘that colored paper’)

$$\sum / \text{PA}$$

$$X = [toru_1] > ni \cap mai$$

$$[toru_2]; iro \cap gami - ano$$

- (2c) *ano irogami ni-mai wo totta*  
 ([I] took ‘that colored paper in the quantity of two sheets’)

$$\sum / \text{PA}$$

$$X = [toru_1]$$

$$[toru_2]; iro \cap gami - ano / ni \cap mai$$

- (2d) \**ano ni-mai irogami wo totta* → *nimai ano irogami wo totta*  
 (to the extent of a quantity of two sheets, [I] took ‘that colored paper’)

$$ni \cap mai < \sum / \text{PA}$$

$$X = [toru_1]$$

$$[toru_2]; iro \cap gami - ano$$

- (2e) *ano irogami no ni-mai wo totta*  
 ([I] took ‘a quantity of two sheets of that colored paper’)

$$\sum / \text{PA}$$

$$X = [toru_1]$$

$$[toru_2]; ni \cap mai \downarrow$$

$$- iro \cap gami - ano$$

Quantified nouns can be conjoined, linked by the coordinative particle *to*, as in the following examples from Martin (2004:781). In (3a) and (3c) both numbers are analyzed as being embedded in the second valence of the predicate; in (3b), however, the numbers are adverbialized. Since there are two second valences marked by the two particles *wo* and there is only one predicate, the symbols ‘X<sub>1</sub>’ and ‘X<sub>2</sub>’ are inserted in the mathematical description for the two valences of the predicate.

(3) 'I took two pieces of colored paper and one crayon.'

(3a) *nimai no irogami to ippon no iro-enpitsu wo totta*  
 ([I] took 'colored paper of a quantity of two sheets and crayon of a quantity of one piece')

$$\begin{aligned} & \sum / \text{PA} \\ \text{X} &= [\text{toru}_1] \\ & [\text{toru}_2]; \text{iro} \cap \text{gami} \downarrow > \text{to} < \text{iro} \cap \text{enpitsu} \downarrow \\ & \quad \quad \quad - \text{ni} \cap \text{mai} \quad \quad \quad - \text{ip} \cap \text{pon} \end{aligned}$$

(3b) *irogami wo nimai to iro-enpitsu wo ippon totta*  
 ([I] took to the extent of the quantity of two sheets 'colored paper' and to the extent of the quantity of one piece of 'crayon')

$$\begin{aligned} & \sum / \text{PA} \\ \text{X} &= [\text{toru}_1] > \text{ip} \cap \text{pon} > \text{to} < [\text{X}_1] > \text{ni} \cap \text{mai} \\ & [\text{toru}_2]; \text{iro} \cap \text{enpitsu} \quad | \quad [\text{X}_2]; \text{iro} \cap \text{gami} \end{aligned}$$

(3c) *irogami nimai to iro-enpitsu ippon wo totta*  
 ([I] took 'colored paper in a quantity of two sheets and crayon in the quantity of one piece')

$$\begin{aligned} & \sum / \text{PA} \\ \text{X} &= [\text{toru}_1] \\ & [\text{toru}_2]; \text{iro} \cap \text{gami} / \text{ni} \cap \text{mai} > \text{to} < \text{iro} \cap \text{enpitsu} / \text{ip} \cap \text{pon} \end{aligned}$$

In the descriptions for the following examples from Tanimori (1994:269) the counting units are also placed behind the predicate; in example (4) the counting unit follows the nominative particle *ga* and is therefore not embedded in the first valence of the predicate; similarly in (5) the number is not embedded in the second valence of the predicate.

(4) *ie no mae ni kuruma ga nidai tomatte imasu*  
 'Two cars are parked in front of the house.'  
 (cars are parked in the quantity of two vehicles in front of the house)

$$\begin{aligned} & \sum / \text{POL} / \text{PR} \\ \text{kuruma} &= \text{iru} \supset \text{tomaru} > \text{ni} \cap \text{dai} > [\text{ni}_1] \\ & \quad \quad \quad [\text{ni}_2]; \text{mae} \downarrow \\ & \quad \quad \quad - \text{ie} \end{aligned}$$

- (5) *koohii wo nihai nomimashita*  
 ‘I drank two cups of coffee.’

$$\sum / \text{POL} / \text{PR}$$

$$X = [nomu_1] > ni \cap hai$$

$$[nomu_2]; koohii$$

In the next sentence the counting units follow the nominative particle *ga*, therefore they should be analyzed as adjuncts to the predicate. However, in this sentence, due to the fact that there are two subjects marked by the particle *ga* with only one predicate, there are two situations; the predicate of the first situation is represented by the symbol ‘X’.

- (6) *koko ni pen ga nihon to kami ga nimai arimasu*  
 ‘Here are two pens and two sheets of paper.’  
 (pens in the quantity of two pieces and paper in the quantity of two sheets are here)

$$X > [ni_1] \quad < \quad \sum > to \quad < \quad \sum / \text{POL} / \text{PR}$$

$$[ni_2]; koko \mid pen = X > ni \cap hon \mid kami = aru > ni \cap mai$$

### 13.2 The reflexive pronoun *jibun*

In section 2.1 the characteristics of the Japanese reflexive pronoun *jibun* as quoted by Martin and Kuno have been listed. In this section a number of example sentences will be analyzed to demonstrate how the function and meaning of *jibun* are analyzed and described in this work.

The first examples to be analyzed are from Kuno (1973:291-298); he quotes example (2) to demonstrate the difference between the English reflexive that can also be inanimate, and *jibun*, which must be something that is animate and has will power.

- (1) *boku wa jibun wo keibetsu-shite iru*  
 ‘I despise myself.’

$$\begin{aligned}
 & boku > wa < \sum / PR \\
 & X = iru \supset [keibetsu \cap suru_1] \\
 & \qquad \qquad \qquad [keibetsu \cap suru_2]; jibun
 \end{aligned}$$

- (2) ‘History repeats itself.’  
 \**rekishi wa jibun wo kurikaesu*

Kuno also points out that another difference between the English reflexive and *jibun* is that, contrary to Japanese, in English the reflexive need not refer exclusively to the subject of the sentence, but may refer to some other element of the sentence. For instance, in (3) and (4) ‘himself’ may refer to either John or Bill, but *jibun* can only refer to the subject *Jon* in the Japanese sentence.

- (3) ‘John talked to Bill about himself.’  
*Jon ga Biru ni jibun no koto wo hanashita*

$$\begin{aligned}
 & \sum / PA \\
 & Jon = [hanasu_1] > [ni_1] \\
 & \qquad \qquad [hanasu_2]; koto \downarrow \quad | [ni_2]; Biru \\
 & \qquad \qquad \qquad \qquad \qquad \qquad - jibun
 \end{aligned}$$

- (4) ‘John showed Bill a picture of himself.’  
*Jon ga Biru ni jibun no shashin wo miseta*

$$\begin{aligned}
 & \sum / PA \\
 & Jon = [miseru_1] > [ni_1] \\
 & \qquad \qquad [miseru_2]; shashin \downarrow \quad | [ni_2]; Biru \\
 & \qquad \qquad \qquad \qquad \qquad \qquad - jibun
 \end{aligned}$$

Furthermore, Kuno gives an example to illustrate the fact that, in Japanese, reflexive pronouns do not have to be in the same sentence as their antecedents; in sentence (5) the reflexive *jibun* can refer to either the subject of the embedded sentence, *Mearii*, or to the subject of the main predicate, *Jon*.

- (5) *Jon wa Mary ga jibun wo daiji ni suru koto wo kitai-shite iru*  
 ‘John expects that Mary will take good care of herself/himself.’

$$\begin{array}{l}
 \text{Jon} > \text{wa} < \sum / \text{PR} \\
 \text{X} = \text{iru} \supset [\text{kitai} \cap \text{suru}_1] \\
 \quad \quad \quad [\text{kitai} \cap \text{suru}_2]; \text{koto} \downarrow \\
 \quad \quad \quad - \sum / \text{PR} \\
 \text{Mearii} = [\text{suru}_1] > [\text{ni}_1] \\
 \quad \quad \quad [\text{suru}_2]; \text{jibun} \mid [\text{ni}_2]; \text{daiji}
 \end{array}$$

In the same way *jibun* may be ambiguous in sentences with embedded passive or causative constructions, as in the following examples of, respectively, Makino&Tutsui (1995:160) and Kuno (1973:294):

- (6) *Michiko wa Kazuo ni jibun no kuruma de ikareta*  
 ‘Michiko had Kazuo go there in her/his own car.’  
 (as for Michiko, she was affected by Kazuo to the extent of the situation of ‘going by his/her own car’)

$$\begin{array}{l}
 \text{Michiko} > \text{wa} < \sum / \text{PA} \\
 \text{X} = \text{rareru} > \text{Y} > [\text{ni}_1] \\
 \quad \quad \quad \text{iku} > [\text{de}_1] \mid [\text{ni}_2]; \text{Kazuo} \\
 \quad \quad \quad [\text{de}_2]; \text{kuruma} \downarrow \\
 \quad \quad \quad - \text{jibun}
 \end{array}$$

- (7) *John ga Mary ni jibun no uchi de hon wo yomaseta*  
 ‘John made Mary read books in his/her house.’  
 (John is causing to Mary to the extent of the situation of ‘reading books in his/her house’)

$$\begin{array}{l}
 \sum / \text{PA} \\
 \text{Jon} = \text{saseru} > \text{Y} > [\text{ni}_1] \\
 \quad \quad \quad [\text{yomu}_1] > [\text{de}_1] \mid [\text{ni}_2]; \text{Mearii} \\
 \quad \quad \quad [\text{yomu}_2]; \text{hon} \mid [\text{de}_2]; \text{uchi} \downarrow \\
 \quad \quad \quad - \text{jibun}
 \end{array}$$

### 13.3 Nominalizations with *koto* and *no*

The nominalizations that are analyzed in this section are *koto* and *no*; they are used after a statement with a predicate in the present or past indicative form. According to Makino&Tutsui (1995:195) the difference between the nominalizers *koto* and *no* is that *koto* indicates something that the speaker does not feel close to or involved in, he is stating the sentence in general or objective terms, whereas with *no* the speaker indicates something he can directly perceive or empathize with. Martin (2004:841) writes that two common postadnominals are used to nominalize a sentence: *koto* makes a general nominalization that is abstract, habitual, or remote, and *no* makes a specific or definite nominalization that is single, immediate, concrete, or directly perceivable.

#### 13.3.1 nominalizations with *koto*

Martin (2004:841-845) gives a number of examples to demonstrate the difference between the use of *koto* as an “ordinary” noun in the meaning ‘facts (about), matter (regarding)’, as in (1) and (2), and *koto* used in nominalizations, as in example (3). The adnominalized word *koto* is used in a number of expressions, such as *koto ga aru*, *koto ga dekiru*, *koto ni naru* and *koto ni suru*, which will be analyzed in this section, too.

- (1) *sensei no koto desu ga...*  
‘It is (a matter) regarding the teacher...’

$$\sum / \text{POL} / \text{PR} > \text{ga}$$

X = *koto* ↓  
– *sensei*

- (2) *hontoo no koto wo itte kure*  
‘Tell the real story/the truth.’

$$\sum / \text{IMP}$$

X = *kuru* ⊃ [*iu*<sub>1</sub>]  
[*iu*<sub>2</sub>]; *koto* ↓  
– *hontoo*

- (3) *karera no mokuteki wa watashi no kao wo miru koto datta*  
‘Their purpose was to get a look at [my face =] me.’

$$\text{mokuteki} \downarrow > \text{wa} \quad < \sum / \text{PA}$$

– *kare* ∪ *ra* | X = *koto* ↓

$$- \sum / \text{PR}$$

X = [*miru*<sub>1</sub>]  
[*miru*<sub>2</sub>]; *kao* ↓  
– *watashi*

Makino&Tutsui (1995:191-195) write that *koto* may be used as a noun in the meaning of “a thing which is intangible”, or as “a nominalizer used to indicate the speaker’s relative lack of empathy with the content of the sentence he is nominalizing”. For the first use, Makino&Tutsui quote example sentences (4) and (5). Since in sentence (5) *koto* is preceded by a clause with a predicate in the indicative form, it is ambiguous without proper context and may also be taken to mean ‘Do you remember (the fact) that the teacher said (it)?’; sentence (6) and (7) are quoted by Makino&Tutsui as examples for *koto* as a nominalization.

- 4) *Buraun-san wa Nihon no daigaku no koto wo yoku shitte iru*  
 ‘Mr. Brown knows a lot (of things) about Japanese universities.’

$$\begin{array}{l}
 \text{Buraun} \cup \text{san} > \text{wa} < \sum / \text{PR} \\
 \text{X} = \text{iru} \supset [\text{shiru}_1] > \text{yoi} \\
 [\text{shiru}_2]; \text{koto} \downarrow \\
 \text{– daigaku} \downarrow \\
 \text{– Nihon}
 \end{array}$$

- (5) *sensei ga itta koto wo oboete imasu ka*  
 ‘Do you remember what (=the thing which) the teacher said?’

$$\begin{array}{l}
 \sum / \text{POL} / \text{PR} > \text{ka} \\
 \text{X} = \text{iru} \supset [\text{oboeru}_1] \\
 [\text{oboeru}_2]; \text{koto} \downarrow \\
 \text{–} \sum / \text{PA} \\
 \text{sensei} = \text{iu}
 \end{array}$$

- (6) *shoosetsu wo kaku koto wa muzukashii desu*  
 ‘Writing a novel is hard.’

$$\begin{array}{l}
 \text{koto} \downarrow > \text{wa} < \sum / \text{POL} / \text{PR} \\
 \text{–} \sum / \text{PR} \quad | \text{X} = \text{muzukashii} \\
 \text{X} = [\text{kaku}_1] \\
 [\text{kaku}_2]; \text{shoosetsu}
 \end{array}$$



- (7) *wakai toki ni ii tomodachi wo tsukuru koto wa totemo daiji da*  
 ‘It is very important to make good friends when one is young.’  
 (to make good friends when one is young, [it] is very important)

$$\begin{array}{l}
 koto \downarrow > wa & < \sum / PR \\
 - \sum / PR & & | X = daiji > totemo \\
 X = [tsukuru_1] & > [ni_1] \\
 [tsukuru_2]; tomo \cup dachi - ii | [ni_2]; toki \downarrow & & - \sum / PR \\
 & & X = wakai
 \end{array}$$

Martin quotes examples for the use of *koto* as a nominalization expressing an advice, as in example (8), or an indirect command, as in (9).

- (8) *sonna keesu ni aeba o-mawari-san ni tsugeru koto desu*  
 ‘If you meet with such a case, you should tell a policeman.’

$$\begin{array}{l}
 \sum / OPT & < \sum / POL / PR \\
 X = au > [ni_1] & | X = koto \downarrow \\
 [ni_2]; keesu - sonna | & - \sum / PR \\
 & X = tsugeru > [ni_1] \\
 & [ni_2]; HON \cap mawari \cup san
 \end{array}$$

- (9) *tabako wo nomanai koto da*  
 ‘No smoking, please.’

$$\begin{array}{l}
 \sum / PR \\
 X = koto \downarrow \\
 - \sum / PR \\
 X = nai > [nomu_1] \\
 [nomu_2]; tabako
 \end{array}$$

### 13.3.1.1 *koto ga aru, koto ga nai*

Martin (2004:846) writes that an adnominalized sentence + *koto ga aru* means ‘it sometimes happens that S’ or ‘there exists the experience that S’, and that an adnominalized sentence + *koto ga nai* means ‘it never happens that S’ or ‘there lacks the experience that S’, e.g.

- (10a) *yobu koto ga aru*  
 ‘We sometimes [do] call.’

$$\begin{array}{r} \sum / \text{PR} \\ \text{koto} \downarrow \quad = \text{aru} \\ - \sum / \text{PR} \\ \text{X} = \text{yobu} \end{array}$$

- (10b) *yobu koto ga nai*  
 ‘We never [do] call.’

$$\begin{array}{r} \sum / \text{PR} \\ \text{koto} \downarrow \quad = \text{nai} \\ - \sum / \text{PR} \\ \text{X} = \text{yobu} \end{array}$$

- (11a) *yonda koto ga aru*  
 ‘We have (on occasion) called, we called once.’

$$\begin{array}{r} \sum / \text{PR} \\ \text{koto} \downarrow \quad = \text{aru} \\ - \sum / \text{PA} \\ \text{X} = \text{yobu} \end{array}$$

- (11b) *yonda koto ga nai*  
 ‘We have never called.’

$$\begin{array}{r} \sum / \text{PR} \\ \text{koto} \downarrow \quad = \text{nai} \\ - \sum / \text{PA} \\ \text{X} = \text{yobu} \end{array}$$

- (12a) *yobanai koto ga aru*  
 ‘we sometimes don’t call.’

$$\begin{array}{r} \sum / \text{PR} \\ \text{koto} \downarrow \quad = \text{aru} \\ - \sum / \text{PR} \\ \text{X} = \text{nai} > \text{yobu} \end{array}$$

- (12b) *yobanai koto ga nai*  
 ‘It never happens that we don’t call (= we always call).’

$$\begin{array}{l}
 \sum / \text{PR} \\
 \text{koto} \downarrow \quad = \text{nai} \\
 - \sum / \text{PR} \\
 \text{X} = \text{nai} > \text{yobu}
 \end{array}$$

- (13a) *yobanakatta koto ga aru*  
 ‘We have (on occasion, once) failed to call.’

$$\begin{array}{l}
 \sum / \text{PR} \\
 \text{koto} \downarrow \quad = \text{aru} \\
 - \sum / \text{PA} \\
 \text{X} = \text{nai} > \text{yobu}
 \end{array}$$

- (13b) *yobanakatta koto ga nai*  
 ‘We have never failed to call.’

$$\begin{array}{l}
 \sum / \text{PR} \\
 \text{koto} \downarrow \quad = \text{nai} \\
 - \sum / \text{PA} \\
 \text{X} = \text{nai} > \text{yobu}
 \end{array}$$

The following example sentences with the phrase *koto ga aru* ‘there was a time when ~’ are from Makino&Tutsui (1995:196-197), who also point out that S inf. past + *koto ga aru* expresses something that happened in the past, which is often one’s experience.

- (14) *watashi wa Yooroppa he itta koto ga aru*  
 ‘I have been to Europe.’

$$\begin{array}{l}
 \text{watashi} > \text{wa} \qquad \qquad \qquad < \sum / \text{PR} \\
 \text{koto} \downarrow \qquad \qquad \qquad \qquad \qquad \qquad = \text{aru} \\
 - \sum / \text{PA} \\
 \text{X} = \text{iku} > [\text{he}_1] \\
 \qquad \qquad \qquad \qquad \qquad \qquad \qquad \qquad [\text{he}_2]; \text{Yooroppa}
 \end{array}$$

- (15) *retasu ga totemo takakatta koto ga aru*  
 ‘There was a time that lettuce was very expensive.’

$$\begin{array}{l}
 \sum / \text{PR} \\
 \text{koto} \downarrow \\
 = \text{aru} \\
 - \sum / \text{PA} \\
 \text{retasu} = \text{takai} > \text{totemo}
 \end{array}$$

### 13.3.1.2 *koto ga dekiru*

Martin (2004:850) writes that V-*ru koto ga dekiru* is one way to say ‘can (do)’ and if the verbal predicate is *suru* ‘do’ you have the option of dropping *suru koto ga*, e.g. ‘can study’ *benkyoo [suru koto ga] dekiru*.

Makino&Tutsui (1995:201-202) quote the following examples for the phrase *koro ga dekiru* ‘doing something is possible’:

- (16) *Taguchi-san wa chuugokugo wo hanasu koto ga dekiru*  
 ‘For Mr. Taguchi speaking Chinese is possible (=Mr. Taguchi can speak Chinese)’

$$\begin{array}{l}
 \text{Taguchi} \cup \text{san} > \text{wa} \\
 \text{koto} \downarrow \\
 - \sum / \text{PR} \\
 \text{X} = [\text{hanasu}_1] \\
 [\text{hanasu}_2]; \text{chuugoku} \cap \text{go} \\
 < \sum / \text{PR} \\
 = \text{dekiru}
 \end{array}$$

- (17) *shinkansen ni noreba Oosaka made sanjikan de iku koto ga dekiru*  
 ‘If you take the bullet train, you can get to Osaka in three hours.’

$$\begin{array}{l}
 \sum / \text{OPT} \\
 \text{X} = \text{noru} > [\text{ni}_1] \\
 [\text{ni}_2]; \text{shinkansen} \mid \\
 \mid \text{koto} \downarrow \\
 - \sum / \text{PR} \\
 \text{X} = \text{iku} > [\text{de}_1] \\
 [\text{de}_2]; \text{sanji} \cap \text{kan} \mid [\text{made}_2]; \text{Oosaka} \\
 < \sum / \text{PR} \\
 = \text{dekiru}
 \end{array}$$

### 13.3.1.3 *koto ni naru*

According to Martin (2004:849), *V-ru koto ni naru* means ‘will be doing, will have been doing’, e.g.:

- (18) *gogatsu de hantoshi yomu koto ni naru*  
 ‘I will have read it for half a year by May.’

$\sum$ /PR

X = *naru* > [*ni*<sub>1</sub>]

[*ni*<sub>2</sub>]; *koto* ↓

–  $\sum$ /PR

X = *yomu* > *han* ∩ *toshi* > [*de*<sub>1</sub>]

[*de*<sub>2</sub>]; *go* ∩ *gatsu*

Makino&Tutsui (1995:202-203) define the meaning of the phrase *koto ni naru* as follows: “An event takes place as if spontaneously, irrespective of the speaker’s volition” and quote the following examples:

- (19) *watashi wa rainen Oosaka ni tenkin-suru koto ni natta*  
 ‘It has been decided that I will transfer to Osaka next year (=I’m going to be transferred to Osaka next year)’

*watashi* > *wa* <  $\sum$ /PA

X = *naru* > [*ni*<sub>1</sub>]

[*ni*<sub>2</sub>]; *koto* ↓

–  $\sum$ /PR

X = *tenkin* ∩ *suru* > [*ni*<sub>1</sub>] > *rainen*

[*ni*<sub>2</sub>]; *Oosaka*

- (20) *kyoo Yamada-sensei ni au koto ni natte imasu*  
 ‘Today (it’s been arranged that) I’m seeing Prof. Yamada.’

$\sum$ /POL / PR

X = *iru* ∩ *naru* > [*ni*<sub>1</sub>]

[*ni*<sub>2</sub>]; *koto* ↓

–  $\sum$ /PR

X = *au* > [*ni*<sub>1</sub>] > *kyoo*

[*ni*<sub>2</sub>]; *Yamada* ∪ *sensei*



### 13.3.2 nominalizations with *no*

Martin (2004:851) writes that when an imperfect or perfect sentence is adnominalized to the postadnominal *no*, the resulting nominalization can be used in at least three different senses:

1. ‘the act of’ (very similar in meaning to *koto*, but more specific and often implying comparison)
2. ‘the one which’, (somewhat similar to some of the uses of *mono* ‘thing, person, one’, but often implying comparison)
3. ‘the fact that’; ‘a matter of’.

Makino&Tutsui (1995:318-9) define *no* as “a nominalizer which is used when the nominalized sentence expresses a directly perceptible event”, e.g.:

- (1) *nihongo wo oshieru no wa muzukashii*  
 ‘Teaching Japanese is difficult.’

$$\begin{array}{l}
 X \downarrow > wa < \sum / PR \\
 - \sum / PR \quad | \quad X = muzukashii \\
 X = [oshieru_1] \\
 [oshieru_2]; nihon \cap go
 \end{array}$$

- (2) *watashi wa Yukiko-san ga biiru wo nomu no wo mita*  
 ‘I saw Yukiko drinking beer.’

$$\begin{array}{l}
 watashi > wa < \sum / PA \\
 X = [miru_1] \\
 [miru_2]; X \downarrow \\
 - \sum / PR \\
 Yukiko \cup san = [nomu_1] \\
 [nomu_2]; biiru
 \end{array}$$

Furthermore, Makino&Tutsui point out that *no* makes a nominal equivalent from a sentence and that a nominalized sentence can occur in any position where a noun can appear, except in the position of B in ‘A *wa* B *da*’; in that situation, the nominalizer *koto* is used, as in:

- (3a) *komatta no wa kare ga korarenai koto /\*no da*  
 ‘The trouble is that he can’t come.’

$$\begin{array}{l}
 X \downarrow > wa < \sum / PR \\
 - \sum / PA \quad | \quad X = koto \downarrow \\
 X = komaru \quad | \quad - \sum / PR \\
 kare = nai > rareru > Y \\
 kuru
 \end{array}$$

- (3b) *komatta koto wa kare ga korarenai koto /\*no da*  
 ‘The trouble is that he can’t come.’

$$\begin{array}{l}
 koto \downarrow > wa < \sum / PR \\
 - \sum / PA \quad | \quad X = koto \downarrow \\
 X = komaru \quad | \quad - \sum / PR \\
 kare = nai > rareru > Y \\
 kuru
 \end{array}$$

Makino&Tutsui (1995:317) compare the particle *no* (in 4b) and the indefinite pronoun *no* (in 4d and 4f-a) with the nominalizer *no* (in 4f-b) to demonstrate the difference between them:

- (4a) *watashi wa Tomu no pen ga hoshii*  
 ‘I want Tom’s pen.’

$$\begin{array}{l}
 watashi > wa < \sum / PR \\
 pen \downarrow = hoshii \\
 - Tomu
 \end{array}$$

- (4b) *watashi wa Tomu no ga hoshii* (particle *no*, derived from *Tomu no pen*)  
 ‘I want Tom’s pen.’

$$\begin{array}{l}
 watashi > wa < \sum / PR \\
 X \downarrow = hoshii \\
 - Tomu
 \end{array}$$

- (4c) *watashi wa kuroi pen ga hoshii*  
 ‘I want a black one.’

$$\begin{array}{l}
 watashi > wa < \sum / PR \\
 pen - kuroi = hoshii
 \end{array}$$

- (4d) *watashi wa kuroi no ga hoshii* (indef. pronoun *no*, derived from *kuroi pen*)  
 ‘I want a black one.’

$$\begin{array}{l}
 watashi > wa < \sum / PR \\
 X \downarrow = hoshii \\
 - kuroi
 \end{array}$$

- (4e) \* *watashi wa kuroi no pen ga hoshii*  
 ‘I want a black one.’



For *no* in the next sentence (4f) there are two possibilities in function and meaning, only through contextual knowledge or interpretation could be determined which of the two meanings is intended by the speaker.

- (4f) *Takada-san ga tsukatte ita no wo oboete imasu ka*  
 a) ‘Do you remember the one Mr. Takada was using?’ (indef. pronoun)  
 b) ‘Do you remember that Mr. Takada was using something?’ (nominalizer)

$$\begin{aligned} & \sum / \text{POL} / \text{PR} > ka \\ X = iru \supset [oboeru_1] \\ & [oboeru_2]; X \downarrow \\ & \quad \quad \quad - \sum / \text{PA} \\ & Takada \cup san = iru \supset tsukau \end{aligned}$$

### 13.4 Constructions with *tokoro*

Martin (2004:727) writes that *tokoro* means ‘place’ but this meaning is often extended to ‘situation’, ‘stage’, ‘point (in time)’, ‘moment’ or ‘occasion’, and that sometimes the meaning is very close to that of the nominalizers *koto* and *no*.

As the descriptions for the example sentences in this section will show, *tokoro* is analyzed here in the same way as has been explained for *koto* and *no*, namely, the preceding sentence is analyzed as an attributive clause which constitutes the situation marked by *tokoro*; when the *tokoro* is not embedded inside a sentence part, or is sentence-initial, it is placed before the (second) situation, connected by the relation symbol ‘<’ for reversed gradation.

Makino&Tutsui (1995:495-501) explain that besides the meaning ‘place’, *tokoro* can also mean ‘state’ or ‘time’ when it is used with a modifying verb, adjective or noun; *tokoro* may occur by itself or be followed by the copula *da/desu* or by particles as such as *wo*, *ni*, *de*, *he*, and *ga*.

Kawashima (1999:215) quotes the following examples for *tokoro*, which ‘shows that two events occurred successively’.

- (1) *uchi he kaette mita tokoro gookaku-tsuuchi ga todoite ita*  
 ‘When I came home, (I found that) the acceptance letter had been delivered.’

$$\begin{array}{l}
 \text{tokoro} \downarrow \qquad \qquad \qquad < \qquad \qquad \qquad \Sigma / \text{PA} \\
 - \Sigma / \text{PA} \qquad \qquad \qquad | \text{gookaku} \cap \text{tsuuchi} = \text{iru} \supset \text{todoku} \\
 \text{X} = \text{miru} \supset \text{kaeru} > [\text{he}_1] \\
 \qquad \qquad \qquad \qquad \qquad \qquad \qquad \qquad \qquad [\text{he}_2]; \text{uchi}
 \end{array}$$

- (2) *jinji-bu ni kiite mita tokoro buchoo no Rondon tenkin wa hontoo da to wakatta*  
 ‘When I asked the personnel division, I found that it was true that our director would be transferred to London.’

$$\begin{array}{l}
 \text{tokoro} \downarrow < \text{Rondon} \cap \text{tenkin} \downarrow > \text{wa} \qquad < \Sigma / \text{PA} \\
 - \Sigma / \text{PA} \qquad \qquad \qquad | - \text{buchoo} \qquad | \text{X} = \text{wakaru} > \text{to} < \Sigma / \text{PR} \\
 \text{X} = \text{miru} \supset \text{kiku} > [\text{ni}_1] \qquad \qquad \qquad | \qquad \qquad \qquad \qquad \qquad \text{X} = \text{hontoo} \\
 \qquad \qquad \qquad \qquad \qquad \qquad \qquad \qquad \qquad \qquad \qquad \qquad \qquad \qquad \qquad [\text{ni}_2]; \text{jinji} \cap \text{bu}
 \end{array}$$

#### 13.4.1 *tokoro da/desu*

In the construction *tokoro da/desu*, the first situation, i.e. ‘S + *tokoro*’ is the first valence of the copula and is embedded inside the second situation.

Makino&Tutsui give the following examples for *tokoro da/desu* ‘someone/something is in the state where he/it is just about to do something, is doing something, has done something, has been doing something’.

- (1a) *Harue wa bangohan wo taberu tokoro da*  
 ‘Harue is just about to eat her supper.’

$$\begin{aligned}
 & Harue > wa < \sum / PR \\
 & \quad X = tokoro \downarrow \\
 & \quad \quad - \sum / PR \\
 & \quad \quad X = [taberu_1] \\
 & \quad \quad \quad [taberu_2]; ban \cap gohan
 \end{aligned}$$

- (1b) *Harue wa bangohan wo tabete iru tokoro da*  
 ‘Harue is in the midst of eating her supper.’

$$\begin{aligned}
 & Harue > wa < \sum / PR \\
 & \quad X = tokoro \downarrow \\
 & \quad \quad - \sum / PR \\
 & \quad \quad X = iru \supset [taberu_1] \\
 & \quad \quad \quad [taberu_2]; ban \cap gohan
 \end{aligned}$$

- (1c) *Harue wa bangohan wo tabeta tokoro da*  
 ‘Harue has just eaten her supper.’

$$\begin{aligned}
 & Harue > wa < \sum / PR \\
 & \quad X = tokoro \downarrow \\
 & \quad \quad - \sum / PA \\
 & \quad \quad X = [taberu_1] \\
 & \quad \quad \quad [taberu_2]; ban \cap gohan
 \end{aligned}$$

- (1d) *Harue wa bangohan wo tabete ita tokoro da*  
 ‘Harue has been eating her supper.’

$$\begin{aligned}
 & Harue > wa < \sum / PR \\
 & \quad X = tokoro \downarrow \\
 & \quad \quad - \sum / PA \\
 & \quad \quad X = iru \supset [taberu_1] \\
 & \quad \quad \quad [taberu_2]; ban \cap gohan
 \end{aligned}$$

- (2) *boku wa ima dekakeru tokoro desu*  
 ‘I’m just about to go out now.’

$$\begin{array}{l}
 \text{boku} > \text{wa} < \sum / \text{PR} \\
 \text{X} = \text{tokoro} \downarrow \\
 - \sum / \text{PR} \\
 \text{X} = \text{dekakeru} > \text{ima}
 \end{array}$$

Makino&Tutsui also explain that because of the difference between *tokoro*, which expresses a state, and *toki*, indicating a time, in the following example *toki* cannot be used.

- (3a) *boku wa denwa wo kakeru tokoro da*  
 ‘I’m just about to call someone.’ (Lit. I’m in the state where I’m going to place a call)

$$\begin{array}{l}
 \text{boku} > \text{wa} < \sum / \text{PR} \\
 \text{X} = \text{tokoro} \downarrow \\
 - \sum / \text{PR} \\
 \text{X} = [\text{kakeru}_1] \\
 [\text{kakeru}_2]; \text{denwa}
 \end{array}$$

- (3b) \**boku wa denwa wo kakeru toki da*  
 ‘I am when I’m going to place a call.’

#### 13.4.2 *tokoro wo, tokoro ni, tokoro de and tokoro he*

In the following sentences, *tokoro* is followed by the particles *wo*, *ni* and *de*, in the examples from Makino&Tutsui and in the examples (7) and (8) quoted from Kawashima (1999:34) *tokoro* is followed by *he* ‘indicating a situation that exists when an action takes place’.

- (4) *Terii to odotte iru tokoro wo Maasa ni mirarete shimatta*  
 ‘Martha saw me when I was dancing with Terry.’ (Lit. the state in which I was dancing with Terry was seen by Martha)

$$\begin{array}{l}
 \sum / \text{PA} \\
 \text{X} = \text{shimau} \supset \text{rareru} > \text{Y} \\
 \text{miru} ; \text{tokoro} \downarrow \\
 - \sum / \text{PR} \\
 \text{X} = \text{iru} \supset \text{odoru} > \text{to} < \text{Terii}
 \end{array}
 \begin{array}{l}
 > [\text{ni}_1] \\
 | [\text{ni}_2]; \text{Maasa}
 \end{array}$$

- (5) *gohan wo tabe-owatta tokoro ni Mariko ga tazunete kita*  
 ‘Mariko came to see me when I’d just finished my meal.’ (Lit. Mariko came (to see me) at the state in which I had just finished my meal)

$$\begin{aligned} & \sum / \text{PR} \\ \text{Mariko} = \text{kuru} \supset \text{tazuneru} & > [ni_1] \\ & [ni_2]; \text{tokoro} \downarrow \\ & - \sum / \text{PA} \\ \text{X} = [\text{tabe} \cap \text{owaru}_1] \\ & [\text{tabe} \cap \text{owaru}_2]; \text{gohan} \end{aligned}$$

- (6) *sanshoo made yonda tokoro de nete shimatta*  
 ‘I fell asleep when I had read up to the third chapter.’ (Lit. in the state in which I had read it up to the third chapter)

$$\begin{aligned} & \sum / \text{PA} \\ \text{X} = \text{shimau} \supset \text{neru} & > [de_1] \\ & [de_2]; \text{tokoro} \downarrow \\ & - \sum / \text{PA} \\ \text{X} = \text{yomu} & > [\text{made}_1] \\ & [\text{made}_2]; \text{san} \cap \text{shoo} \end{aligned}$$

- (7) *shukudai ga owatta tokoro he tomodachi ga asobi ni kita*  
 ‘I had just finished my homework when my friend came over.’

$$\begin{aligned} & \sum / \text{PA} \\ \text{tomo} \cup \text{dachi} = \text{kuru} & > [ni_1] & > [he_1] \\ & [ni_2]; \sum / \text{INF} \quad | \quad [he_2]; \text{tokoro} \downarrow \\ \text{X} = \text{asobu} \quad | & & - \sum / \text{PA} \\ & & \text{shukudai} = \text{owaru} \end{aligned}$$

- (8) *kasa wo motazu ni dekaketa tokoro he ame ga futte kita*  
 ‘I had just left without bringing an umbrella when it started to rain.’

$$\begin{array}{l}
 \sum / \text{PA} \\
 \text{ame} = \text{kuru} \supset \text{furu} > [\text{he}_1] \\
 \quad \quad \quad [\text{he}_2]; \text{tokoro} \downarrow \\
 \quad \quad \quad - \sum / \text{PA} \\
 \quad \quad \quad \text{X} = \text{dekakeru} > [\text{ni}_1] \\
 \quad \quad \quad \quad \quad \quad [\text{ni}_2]; \sum / \text{INF} / \text{NON} \\
 \quad \quad \quad \quad \quad \quad \text{X} = [\text{motsu}_1] \\
 \quad \quad \quad \quad \quad \quad \quad \quad \quad [\text{motsu}_2]; \text{kasa}
 \end{array}$$

### 13.4.3 *tokoro ga*

Martin (2004:979) maintains that the use of ‘sentence + *ga*’ may be regarded as an abbreviation of an adnominalized sentence + *tokoro ga* ‘whereupon, but’ and that in such structures the predicate of the sentence preceding *tokoro ga* must be in the past tense, e.g.:

- (9) *umaku iku daroo to omotta tokoro ga shippai shita*  
 ‘While I thought it would go well, it failed.’  
 ([I] thought [that it] would go well, however [it] failed)

$$\begin{array}{l}
 \text{tokoro} \downarrow > \text{ga} < \sum / \text{PA} \\
 - \sum / \text{PA} \quad \quad \quad | \text{X} = \text{shippai} \cap \text{suru} \\
 \text{X} = \text{omou} > \text{to} < \sum / \text{SUB} \\
 \quad \quad \quad \text{X} = \sum / \text{PR} \\
 \quad \quad \quad \text{X} = \text{iku} > \text{umai}
 \end{array}$$

- (10) *osoru-osoru sensei ni soodan shite mita tokoro ga sensei wa dai-sansei de atta*  
 ‘I consulted the teacher with some trepidation but he was in complete agreement.’

$$\begin{array}{l}
 \text{tokoro} \downarrow > \text{ga} < \text{sensei} > \text{wa} < \sum / \text{PA} \\
 - \sum / \text{PA} \quad \quad \quad | \sum / \text{GER} = \text{aru} \\
 \text{X} = \text{miru} \supset \text{soodan} \cap \text{suru} > [\text{ni}_1] > \text{osoru} \bullet \text{osoru} | \text{X} = \text{dai} \cap \text{sansei} \\
 \quad \quad \quad \quad \quad \quad \quad \quad \quad [\text{ni}_2]; \text{sensei}
 \end{array}$$

The construction *tokoro ga* is defined by Makino&Tutsui (2000:503) as “a conjunction which is used to present what in fact happened or what is in fact the case when something else was/is expected”, adding that *tokoro ga* always appears in the sentence-initial position, contrary to the conjunctive particle *ga*, which is analyzed as forming one unit with the preceding sentence. However, the example from Martin quoted above shows otherwise, and

the following example sentence which Makino&Tutsui quote with a full stop between the two sentences, corresponding to the description (11a), could also be rephrased without this punctuation mark, as described in (11b).

- (11a) *Amerika de wa nokogiri wa oshite kiru. tokoro ga Nihon de wa hiite kiru*  
 ‘In America you push a saw in order to cut; however, in Japan you pull one to cut.’  
 (as for in America, as for a saw, [one] cuts pushing. However as for in Japan, [one] cuts pulling)

$$\begin{array}{l}
 X > [de_1] > wa < nokogiri > wa < \sum / PR \quad :: tokoro > ga < X > [de_1] > wa < \sum / PR \\
 [de_2]; Amerika \quad | X = kiru \supset osu | \quad [de_2]; Nihon | X = kiru \supset hiku
 \end{array}$$

- (11b) *Amerika de wa nokogiri wa oshite kiru tokoro ga Nihon de wa hiite kiru*  
 ‘In America you push a saw in order to cut; however, in Japan you pull one to cut.’  
 (as for in America, as for a saw, [one] cuts pushing, however as for in Japan, [one] cuts pulling)

$$\begin{array}{l}
 X > [de_1] > wa < nokogiri > wa < tokoro \downarrow > ga < X > [de_1] > wa < \sum / PR \\
 [de_2]; Amerika \quad | \quad - \sum / PR \quad | [de_2]; Nihon | X = kiru \supset hiku \\
 X = kiru \supset osu
 \end{array}$$

According to Kawashima (1999: 216) *tokoro ga* indicates that although the speaker was anticipating one result, which is described in the first clause, the real result was unexpectedly negative, as in:

- (12) *asa otenki datta kara kasa wo motazu ni dekaketa tokoro ga gogo ni natte dosha-buri ni natta*  
 ‘I went out without an umbrella because it was nice out this morning, but in the afternoon, there was a downpour.’

$$\begin{array}{l}
 tokoro \downarrow > ga < \sum / GER \subset \infty \\
 - \sum / PA > kara < \sum / PA \quad | X = naru > [ni_1] \quad | \\
 X = HON \cap tenki > asa | X = dekakeru > [ni_1] \quad | \quad [ni_2]; gogo | \\
 [ni_2]; \sum / INF / NON \\
 X = [motsu_1] \\
 [motsu_2]; kasa
 \end{array}$$

$$\begin{array}{l}
 \infty \sum / PA \\
 X = naru > [ni_1] \\
 [ni_2]; dosha \cap buri
 \end{array}$$

### 13.5 The expressions *rashii*, *soo da*, *yoo da*, *hazu da* and *tsumori da*

By using these expressions the speaker/writer expresses an added meaning to his statement. Martin (2004:733, 988) remarks that the meaning of *yoo da* overlaps with that of the evidential (V-*i soo da*) and that of the semblative *rashii*, and that S *yoo da* is rather general in meaning so that it can be used instead of S *soo da* to report hearsay. He defines the following differences in meaning between these constructions: - *yoo da* expresses “indirect judgment”, - *soo da* “appearance or tendency or imminence”, - *rashii* “presumption or inference”, - *hazu da* expresses “likelihood or expectation”, and by adding - *tsumori da* to a sentence the speaker/writer expresses his personal intention or supposition.

In the analyses proposed here, a distinction is made between the use of these expressions when they are attached to a nominal expression, referring only to the preceding word and forming a combined predicate comparable to, for instance, the *suru*-combinations, and when they follow a predicate referring to the entire preceding sentence part. As the descriptions for the example sentences in the following sections will demonstrate, in the first category there is only one situation, whereas in the second category there are two separate predicates and therefore two situations; in the latter case the first situation is the statement that is made and the second situation expresses the speaker’s viewpoint or feeling towards that statement.

#### 13.5.1 - *rashii*

Martin (2004:987-988) writes that from the semblative *rashii* of nominals you can freely derive “lexical adjectives” with the meaning ‘is suitable to be, is worthy of, is very like’, e.g.:

- (1) *kodomo-rashii*  
‘[He] is child-like’

$$\sum / \text{PR}$$

$$X = \textit{kodomo} \cap \textit{rashii}$$

- (2) *gakusei-rashii taido*  
‘an attitude worthy of (suitable to) a student’

$$\textit{taido} \downarrow$$

$$- \sum / \text{PR}$$

$$X = \textit{gakusei} \cap \textit{rashii}$$

*Rashii* may also follow other sentence parts, such as a verb or adjective in the present or past indicative, with the meaning ‘it seems/is likely that’; in such cases there are two situations as the mathematical description for the following examples show:

- (3) *takai rashii*  
‘It seems that it is expensive.’

$$\sum / \text{PR}$$

$$\sum / \text{PR} = \textit{rashii}$$

$$X = \textit{takai}$$



- (4) *yobu rashii*  
 ‘It seems that he calls (or will call).’

$$\sum / \text{PR}$$

$$\sum / \text{PR} = \text{rashii}$$

$$X = \text{yobu}$$

Martin also points out that when *rashii* follows a nominal sentence, the copula *da* is dropped, as in (5b); in this case *shizuka* is a nominal, therefore, it is described in the same way as the noun + *rashii* combinations in the examples (1) and (2); when the copula is in the past tense it is not dropped and the construction gets another description, as in can be observed in example (5c).

- (5a) *shizuka da*  
 ‘It is quiet.’

$$\sum / \text{PR}$$

$$X = \text{shizuka}$$

- (5b) *shizuka rashii*  
 ‘It seems to be quiet.’  
 ([it] is quiet-like)

$$\sum / \text{PR}$$

$$X = \text{shizuka} \cap \text{rashii}$$

- (5c) *shizuka datta rashii*  
 ‘It seems to have been quiet.’

$$\sum / \text{PR}$$

$$\sum / \text{PA} = \text{rashii}$$

$$X = \text{shizuka}$$

### 13.5.2 - *soo da*

In the same way as has been explained for *rashii*, for the constructions with *soo da* also two different descriptions are made, depending on the nature of the preceding phrase, as the following examples will demonstrate.

Martin (2004: 984, 991-995) makes a distinction between two kinds of uses for *soo da*:

- a) the **evidential** *soo da*, which follows a nominal or a predicate in the infinitive, and has the meaning of ‘seems/looks to be/do’, as in the examples (1-3)

- (1) *yobi-soo da*  
 ‘He seems to be about to call.’  
 ([he] is calling-seeming)

$$\sum / \text{PR}$$

$$X = \text{yobi} \cap \text{soo}$$

- (2) *waru-soo da*  
 ‘It looks bad.’  
 ([it] is bad-seeming)

$$\sum / \text{PR}$$

$$X = \text{waru} \cap \text{soo}$$

- (3) *joobu-soo da*  
 ‘He looks sturdy.’  
 ([he] is sturdy-seeming)

$$\sum / \text{PR}$$

$$X = \text{joobu} \cap \text{soo}$$

- b) *soo da* following a predicate in the present or past indicative, which is used for **hearsay reporting**, with the meaning ‘I hear/ they say that’, as in sentences (4-6).

- (4) *yobu soo da*  
 ‘They say he calls/will call.’

$$\sum / \text{PR}$$

$$\sum / \text{PR} = \text{soo}$$

$$X = \text{yobu}$$

- (5) *ookii soo da*  
 ‘They say it is big.’

$$\sum / \text{PR}$$

$$\sum / \text{PR} = \text{soo}$$

$$X = \text{ookii}$$

- (6) *sensei da soo da*  
 ‘They say it/he is a teacher.’

$$\sum / \text{PR}$$

$$\sum / \text{PR} = \text{soo}$$

$$X = \text{sensei}$$

### 13.5.3 - *yoo da*

Martin (2004:731) states that a sentence with *yoo da* makes an impersonal sentence with the meaning ‘It appears/looks/seems that S’, e.g.:

- (1) *densha ga okureru yoo datta*  
 ‘It appeared that the train would be late.’

$$\begin{array}{l} \sum / \text{PA} \\ \sum / \text{PR} = \text{yoo} \\ \text{densha} = \text{okureru} \end{array}$$

- (2) *mada dare mo konai yoo desu ga...*  
 ‘It appears that no one has come yet, but...’

$$\begin{array}{l} \text{mada} < \text{dare} > \text{mo} < \sum / \text{POL} / \text{PR} > \text{ga} \\ \sum / \text{PR} = \text{yoo} \\ \text{X} = \text{nai} > \text{kuru} \end{array}$$

- (3) *ame ga yanda yoo desu ne*  
 ‘It looks as though the rain has let up.’

$$\begin{array}{l} \sum / \text{POL} / \text{PR} > \text{ne} \\ \sum / \text{PA} = \text{yoo} \\ \text{ame} = \text{yamu} \end{array}$$

### 13.5.4 - *hazu da*

According to Martin (2004:736-738) the expression S *hazu da* is used to convey the meaning ‘(what matches) the general expectation’, ‘what one has every reason to think’, ‘what ought naturally to be true’, ‘what stands to reason’, ‘(what is known to be) likely, the likelihood’, ‘what one would normally assume/presume’, ‘I assume/presume’, ‘I feel sure that’.

- (1) *uchi no Ken-chan wa rainen no sangatsu sotsugyoo suru hazu desu ga*  
 ‘Our son Ken should graduate in March of next year.’

$$\begin{array}{l} \text{Ken} \cup \text{chan} \downarrow > \text{wa} < \sum / \text{POL} / \text{PR} > \text{ga} \\ - \text{uchi} \mid \sum / \text{PR} = \text{hazu} \\ \text{X} = \text{sotsugyoo} \cap \text{suru} > \text{sangatsu} \downarrow \\ - \text{rainen} \end{array}$$

- (2) *sore de wa kare ga okoru hazu da*  
 ‘No wonder he got mad.’

$$\begin{array}{l}
 X > [de_1] > wa < \sum / PR \\
 [de_2]; sore \mid \sum / PR = hazu \\
 kare = okoru
 \end{array}$$

Martin also gives example sentences with a double negative, rendering the meaning ‘There is little likelihood (it seems impossible) that not S’ (= ‘It is bound to be S’):

- (3) *o-tenki ga ii kara Hanako ga asobi ni konai hazu wa nai*  
 ‘The weather is so nice, Hanako is bound to come for a visit.’

$$\begin{array}{l}
 \sum / PR > kara < \sum / PR > wa < \sum / PR \\
 otenki = ii \mid \sum / PR = hazu \mid X = nai \\
 Hanako = nai > kuru > [ni_1] \\
 [ni_2]; \sum / INF \\
 X = asobu
 \end{array}$$

- (4) *okane ga nai hazu wa arimasen*  
 ‘You surely must have money.’

$$\begin{array}{l}
 \sum / PR > wa < \sum / POL / NON / PR \\
 \sum / PR = hazu \mid X = aru \\
 okane = nai
 \end{array}$$

### 13.5.5 - *tsumori da*

Martin (2004:738) writes that the postadnominal *tsumori*, unlike *hazu* which makes impersonal expressions, refers to what is in a person’s head – his intention, hope, meaning, supposition, impression, or belief, e.g.:

- (1) *nagaku irassharu o-tsumori desu ka*  
 ‘Do you plan to stay long?’

$$\begin{array}{l}
 \sum / POL / PR > ka \\
 \sum / PR = HON \cap tsumori \\
 X = irassharu > nagai
 \end{array}$$

- (2) *Sore wa iwanai tsumori desu*  
 ‘I plan not to say it.’

$sore > wa < \sum / \text{POL} / \text{PR}$

$\sum / \text{PR} = tsumori$

$X = nai > iu$

- (3) *sore wo suru tsumori wa arimasen*  
 ‘I have no intention of doing that.’

$tsumori \downarrow > wa < \sum / \text{POL} / \text{NON} / \text{PR}$

$-\sum / \text{PR} \quad | \quad X = aru$

$X = [suru_1]$

$[suru_2]; sore$

### 13.6 The expressions -*tai* and *hoshii*

The expressions *-tai* and *hoshii* are similar in meaning, each expressing the desire or wish of someone, but they are different in function; the adjectival suffix *-tai* is attached to the infinitive stem of a verb, thus forming one complex predicate, in which only *tai* inflects; the adjective *hoshii*, however, can be used independently with a *ga* marked subject and/or an object marked by *wo*, or it can occur after a verb in the gerund form. In the following sections example sentences with these constructions will be analyzed.

#### 13.6.1 -*tai*

Makino&Tutsui (1995:441-444) write that *-tai* is an “auxiliary adjective which expresses a desire to do something”, e.g.:

- (1) *watashi wa Nihon he ikitai desu*  
 ‘I want to go to Japan.’  
 (as for me, [I] wish to the extent of going to Japan)

$watashi > wa < \sum / \text{POL} / \text{PR}$

$X = tai > iku > [he_1]$

$[he_2]; Nihon$

As already has been described in section 4.1, V-*tai* may be preceded by a noun phrase marked by either the accusative particle *wo* or the nominative particle *ga*.

- (2a) *boku wa ima piza wo tabetai*  
 ‘I want to eat pizza now.’  
 (as for me, [I] wish to the extent of eating pizza now)

$$boku > wa < \sum / PR$$

$$X = tai > [taberu_1] > ima$$

$$[taberu_2]; piza$$

- (2b) *boku wa ima piza ga tabetai*  
 ‘I want to eat pizza now.’  
 (as for me, pizza is desirable to the extent of eating now)

$$boku > wa < \sum / PR$$

$$piza = tai > taberu > ima$$

Furthermore, Makino&Tutsui explain that since *-tai* expresses a personal feeling, it is usually used only for the first person in declarative sentences and for the second person in interrogative sentences. For the third person, the verb *-garu* in the construction *-ta-gatte iru* (lit. ‘is showing signs of wanting to do something’) is commonly used, as in example (3):

- (3) *Suzuki-san wa Amerika he ikitagatte iru*  
 ‘Mr. Suzuki wants to go to America.’

$$Suzuki \cup san > wa < \sum / PR$$

$$X = iru \supset ta \cap garu > iku > [he_1]$$

$$[he_2]; Amerika$$

The construction with *-tai* can be used for the third person in the following cases:

- a) in the past tense

- (4) *Kazuo wa totemo ikitakatta*  
 ‘Kazuo wanted to go very badly.’

$$Kazuo > wa < \sum / PA$$

$$X = tai > iku > totemo$$

- b) in indirect or semi-direct speech

- (5) *Ichiroo mo ikitai to itte iru*  
 ‘Ichiro says he wants to go, too.’

$$Ichiroo > mo < \sum / PR$$

$$X = iru \supset iu > to < \sum / PR$$

$$X = tai > iku$$

- (6) *Toshiko wa Nihon he kaeritai soo da*  
 ‘I heard that Toshiko wants to go back to Japan.’

$$\begin{aligned} \text{Toshiko} > \text{wa} < \sum / \text{PR} \\ \sum / \text{PR} &= \text{soo} \\ \text{X} = \text{tai} > \text{kaeru} > [\text{he}_1] \\ &[\text{he}_2]; \text{Nihon} \end{aligned}$$

- c) in explanatory situations

- (7) *Nomura-san wa anata to hanashitai n desu yo*  
 ‘(The explanation is that) Miss Nomura wants to talk with you.’

$$\begin{aligned} \text{Nomura} \cup \text{san} > \text{wa} < \sum / \text{POL} / \text{PR} > \text{yo} \\ \text{X} &= \sum / \text{PR} \\ \text{X} &= \text{tai} > \text{hanasu} > \text{to} < \text{anata} \end{aligned}$$

- d) in conjecture expressions

- (8) *Murayama-san wa Noriko to odoritai rashii*  
 ‘It seems that Mr. Murayama wants to dance with Noriko.’

$$\begin{aligned} \text{Murayama} \cup \text{san} > \text{wa} < \sum / \text{PR} \\ \sum / \text{PR} &= \text{rashii} \\ \text{X} &= \text{tai} > \text{odoru} > \text{to} < \text{Noriko} \end{aligned}$$

When *-tai* is linked to the infinitive form of *miru* ‘to see/look’ the combination *mitai* can have two meanings. Tanimori (1994:110-111) classifies these meanings as follows:

- a) *mitai* after the *-te* form of a verb, this is the “adjective meaning” ‘would like to (do), feel like (doing), feel inclined to (do)’, e.g.:

- (9) *itsuka gaikoku ni itte mitai*  
 ‘I’d like to travel abroad some day.’

$$\begin{aligned} \text{itsu} > \text{ka} < \sum / \text{PR} \\ \text{X} &= \text{tai} > \text{miru} \supset \text{iku} > [\text{ni}_1] \\ &[\text{ni}_2]; \text{gaikoku} \end{aligned}$$

- b) after a noun, a verb or an adjective in the indicative form, *mitai* has an “noun meaning”, ‘like, seem to, look like’, as in:

- (10) *anata mitai ni nihongo ga hanasemasen*  
 ‘I can’t speak Japanese like you.’

$$\sum / \text{POL} / \text{NON} / \text{PR}$$

$$\text{nihongo} = \text{eru} > \text{Y} > [\text{ni}_1]$$

$$\text{hanasu} \mid [\text{ni}_2]; \text{anata} \cap \text{mitai}$$

- (11) *kanojo wa tsukarete iru mitai da*  
 ‘She seems to be tired.’

$$\text{kanojo} > \text{wa} < \sum / \text{PR}$$

$$\sum / \text{PR} = \text{mitai}$$

$$\text{X} = \text{iru} \supset \text{tsukareru}$$

- (12) *paatii wa tanoshikatta mitai desu*  
 ‘It seems that the party was fun.’

$$\text{paatii} > \text{wa} < \sum / \text{POL} / \text{PR}$$

$$\sum / \text{PR} = \text{mitai}$$

$$\text{X} = \text{tanoshii}$$

The use of *mitai* after a noun is similar in function to *rashii*, and *mitai* also closely resembles *rashii* in meaning; the difference between the two is generally taken to be that the use of *mitai* is based upon the view that what the speaker sees/observes/perceives may well be true, whereas *rashii* expresses a resemblance, not a true similarity.

- (13a) *kare wa sensei mitai desu*  
 ‘He looks like a teacher.’ (he looks like a teacher and may indeed be one)

$$\text{kare} > \text{wa} < \sum / \text{POL} / \text{PR}$$

$$\text{X} = \text{sensei} \cap \text{mitai}$$

- (13b) *kodomo rashii*  
 ‘[He] is child-like’ (he is an adult, but looks/behaves like a child)

$$\sum / \text{PR}$$

$$\text{X} = \text{kodomo} \cap \text{rashii}$$



### 13.6.2 - *hoshii*

Makino&Tutsui (1995:144-147) classify *hoshii* into two categories:

1. as an adjective expressing a person's desire; since it is a personal feeling it is often used referring to the speaker, or in questions to the hearer; for the third person *hoshigaru* is used.

- (14) *watashi wa kuruma ga hoshii*  
'I want a car.'

$$watashi > wa < \sum / PR$$

$$kuruma = hoshii$$

- (15) *otooto wa boku no jitensha wo hoshigatte iru*  
'My little brother wants my bike.'

$$otooto > wa < \sum / PR$$

$$X = iru \supset [hoshi \cap garu_1]$$

$$[hoshi \cap garu_2]; jitensha \downarrow$$

$$- boku$$

The categories for the use of *hoshii* referring to a subject in the third person are:

- a) past tense

- (16) *Moorisu wa ii sutereo ga hoshikatta*  
'Maurice wanted a good stereo set.'

$$Moorisu > wa < \sum / PA$$

$$sutereo - ii = hoshii$$

- b) indirect/semi-direct speech

- (17) *Joi mo hoshii to itte iru*  
'Joy says she wants it, too.'

$$Joi > mo < \sum / PR$$

$$X = iru \supset iu > to < \sum / PR$$

$$X = hoshii$$

- c) explanatory situations

- (18) *Pamera wa iyaringu ga hoshii n desu*  
 ‘(The explanation is that) Pamela wants a pair of earrings.’

$$Pamera > wa < \sum / \text{POL} / \text{PR}$$

$$X = \sum / \text{PR}$$

$$iyaringu = hoshii$$

- d) conjecture expressions

- (19) *Furanshisu wa udedokei ga hoshii rashii*  
 ‘It seems that Francis wants a wristwatch.’

$$Furanshisu > wa < \sum / \text{PR}$$

$$\sum / \text{PR} = rashii$$

$$ude \cap dokei = hoshii$$

2. *hoshii* as an “auxiliary adjective”; it is preceded by a verb in the *-te* form, and has the meaning “want someone (who is not higher in status than the speaker) to do something”. In the mathematical descriptions for these sentences the symbol ‘Y’ is inserted because there are two situations and subjects; in (20) someone is wishing and someone (else) is teaching, and in (21) someone wants and someone (else) comes.

- (20) *watashi wa anata ni eigo wo oshiete hoshii*  
 ‘I want you to teach me English.’

$$watashi > wa < \sum / \text{PR}$$

$$X = hoshii \supset Y > [ni_1]$$

$$oshieru ; eigo \mid [ni_2] ; anata$$

- (21) *anata wa dare ni kite hoshii desu ka*  
 ‘Who do you want to come?’

$$anata > wa < \sum / \text{POL} / \text{PR} > ka$$

$$X = hoshii \supset Y > [ni_1]$$

$$X = kuru \mid [ni_2] ; dare$$

## Conclusion

The aim of this research was to establish if Ebeling's theory and method of semiotactic analysis could be applied to Modern Japanese and to make mathematical descriptions of Japanese sentences that are consistent, clear and easy to understand. For this I analyzed example sentences from various sources and described the most frequently used structures and expressions of Modern Japanese. I soon discovered that Japanese sentences contain elements that, since they are not found in Dutch or English, were not analyzed in Ebeling's work. During my research I came to the conclusion that these elements could be adequately described by making specific adaptations in the descriptions, such as the use of reversed relation symbols. At the end of this project a great number of Japanese words and constructions have been analyzed and described in order to give a good insight in the structure and meaning of Japanese sentences. Analyzing complex Japanese sentences often causes problems in that it is sometimes difficult to recognize how the various sentence parts are interrelated, in other words, which part refers to which. The mathematical descriptions are very helpful in this respect because one is forced to break up the sentences in such a way that the positions of the sentence parts inside the description indicate their function and the relation symbols between them show how their meanings are interrelated. In doing so, new light has been shed on various aspects of the Japanese language. Firstly, the general assumption that particles, also called postpositions, are similar in meaning and function to the prepositions in English proved to be true only for a number of the particles; for other groups of particles, however, it was concluded that they have a different function, such as the basic case particles nominative *ga*, accusative *wo* and genitive *no*, the topical and restrictive particles, and the sentence final particles. That this method yields a better insight into the structure of the Japanese language is also demonstrated by the fact that, contrary to the classification commonly assumed until now, I came to the conclusion that there are no indirect objects in Japanese. Also the commonly assumed classification of noun phrases marked by the particle *ga* as direct objects has been rejected here, in favor of the view that all noun phrases marked by nominative *ga* are subjects. After analyzing the particles, various verb constructions have been discussed, starting with the derived verb constructions, viz. the passive, potential and causative, followed by complex verb constructions consisting of combinations of the gerund form of a verb with another verb, such as the frequently occurring combinations *V-te iru* and *V-te aru*, and verbs of giving and receiving. In the last chapter a number of other constructions, such as nominalizations, the use of numerals and counters, and the expressions for wishing *-tai* and *hoshii* have been analyzed.

Within the scope of this project it was not intended to give a complete and all-inclusive description of the Japanese language, instead the aim was to provide a new kind of description for Japanese, namely, by applying a semiotactic approach. And although a great number of words, phrases and expressions of Modern Japanese have been analyzed in this work, there still remain other items that have not been discussed yet. In this light, this book should be considered as a start, not as the endpoint of the research. I hope that this work will lead to further research into this method, not only for Japanese, but for other languages as well. In my experience making such mathematical descriptions is a great tool for getting a better understanding of the structure of languages and as a result, for making better translations. Finally, breaking up the sentences in such a mathematical way may prove to be very helpful in future attempts to finally get computers to make better translations as well.

## Sample text

After having analyzed a great number of Modern Japanese example sentences from various sources, I decided to put the theory further to the test by analyzing and describing one complete Japanese written sample text. For this purpose an older literary text was chosen, the short story *Dai sanya*, 'The third night' from the book *Yume juuya* 'Ten Nights' Dreams' by Natsume Sōseki, first published in 1908. The Japanese text and English translation of this story are quoted from 'Breaking into Japanese Literature' by Giles Murray (2003).

In this text a number of literary and classical expressions are used, such as *jibun* 'self' instead of *wata(ku)shi* for the first person 'I' and its plural form *jibunra* for *watashitachi* 'we', *omae* for *anata* 'you', *asuko* for *asoko* '(over there)', *otossan* for *otoosan* 'father', and the question particle *kai* for *ka*. Furthermore there are a few constructions that have not been described in this work: the form *tte*, which, according to Makino&Tutsui (1995:507511) is either a colloquial topic-introducer, such as *datte* in sentence (12), or a colloquial quotation marker used instead of *to* or *to iu*. The frequently used abbreviated form *-teru* for the construction V-*te iru*, such as *obutteru* in the second sentence, will be described in the same way as the original construction V-*te iru*. Finally, the contracted form *ja nai* in sentences (12, 37, 44) is described as its full form *de wa nai*.

***Dai sanya***  
**‘The third night’**

1. *konna yume wo mita.*  
I had a dream.

$$\begin{array}{l} \sum / \text{PA} \\ X = [\text{miru}_1] \\ [\text{miru}_2]; \text{yume} - \text{konna} \end{array}$$

2. *muttsu ni naru kodomo wo obutteru.*  
I was carrying a six-year-old child on my back.

$$\begin{array}{l} \sum / \text{PR} \\ X = \text{iru} \supset [\text{obuu}_1] \\ [\text{obuu}_2]; \text{kodomo} \downarrow \\ \quad \quad \quad - \sum / \text{PR} \\ \quad \quad \quad X = \text{naru} > [\text{ni}_1] \\ \quad \quad \quad [\text{ni}_2]; \text{mut} \cap \text{tsu} \end{array}$$

3. *tashika ni jibun no ko de aru.*  
I am sure that it was my own child.

$$\begin{array}{l} \sum / \text{PR} \\ \sum / \text{GER} = \text{aru} > [\text{ni}_1] \\ X = \text{ko} \downarrow \quad | \quad [\text{ni}_2]; \text{tashika} \\ \quad \quad \quad - \text{jibun} \end{array}$$

4. *tada fushigi na koto ni wa itsu no ma ni ka me ga tsuburete, aoboozu ni natte iru.*  
The extraordinary thing was that at some point it had gone blind, and its head had been shaved.

$$\begin{array}{l} \text{tada} < X > [\text{ni}_1] > \text{wa} \quad < \sum / \text{GER} \quad \subset \sum / \text{PR} \\ [\text{ni}_2]; \text{koto} - Y \quad | \text{me} = \text{tsubureru} > [\text{ni}_1] > \text{ka} \quad | X = \text{iru} \supset \text{naru} > [\text{ni}_1] \\ \quad \quad \quad \text{fushigi} \quad \quad \quad [\text{ni}_2]; \text{ma} \downarrow \quad \quad \quad [\text{ni}_2]; \text{ao} \cap \text{booze} \\ \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad - \text{itsu} \end{array}$$

5. *jibun ga omae no me wa itsu tsubureta no kai to kiku to, nani mukashi kara sa to kotaeta.*

I asked it when it had gone blind, to which its casual reply was, "Oh ages back."

$$\begin{array}{l} \sum < me \downarrow > wa < \sum / PR > to < \infty \\ jibun = X \mid - omae \mid X = kiku > to < X \downarrow > kai \mid \\ - \sum / PA \mid \\ X = tsubureru > itsu \mid \end{array}$$

$$\infty \sum / PA$$

$$X = kotaeru > to < Y > sa$$

$$X = [kara_1]$$

$$[kara_2]; mukashi > nani$$

6. *koe wa kodomo no koe ni sooi nai ga, kotobatsuki wa marude otona de aru.*  
The voice was, without doubt, the voice of a child, but the way it talked was wholly grown-up.

$$\begin{array}{l} koe > wa < \sum / PR > ga < kotoba \cap tsuki > wa < \sum / PR \\ X = nai > sooi > [ni_1] \mid \sum / GER = aru \\ [ni_2]; koe \downarrow \mid X = otona > marude \\ - kodomo \end{array}$$

7. *shikamo taitoo da.*  
Moreover, it spoke to me as an equal.

$$\begin{array}{l} shika > mo < \sum / PR \\ X = taitoo \end{array}$$

8. *sayuu wa aota de aru.*  
On both sides of us there were rice paddies.

$$\begin{array}{l} sayuu > wa < \sum / PR \\ \sum / GER = aru \\ X = ao \cap ta \end{array}$$

9. *michi wa hosoi.*  
The path was narrow.

$$\begin{array}{l} michi > wa < \sum / PR \\ X = hosoi \end{array}$$

10. *sagi no kage ga tokidoki yami ni sasu.*  
From time to time the shadowy shapes of herons punctured the darkness.

$$\begin{array}{l} \sum / \text{PR} \\ \text{kage} \downarrow = \text{sasu} > [ni_1] > \text{toki} \bullet \text{doki} \\ - \text{sagi} \mid [ni_2]; \text{yami} \end{array}$$

11. *[tanbo he kakatta ne] to senaka de itta.*  
“So we’ve reached the rice paddies then,” said the thing on my back.

$$\begin{array}{l} \sum / \text{PA} \\ \text{X} = \text{iu} > [de_1] > \text{to} < \sum / \text{PA} > \text{ne} \\ [de_2]; \text{senaka} \mid \text{X} = \text{kakaru} > [he_1] \\ [he_2]; \text{tanbo} \end{array}$$

12. *[dooshite wakaruru] to kao wo ushiro he furimukeru yoo ni shite kiitara, [datte, sagi ga naku ja nai ka] to kotaeta.*  
“How can you tell?” I asked, turning my head. “Because a heron is squawking, that’s why,” it replied.

$$\begin{array}{l} \sum / \text{COND} \qquad \qquad \qquad \qquad \qquad \qquad \qquad \qquad \qquad \qquad \qquad \qquad \qquad \infty \\ \text{X} = \text{kiku} \supset \text{suru} > [ni_1] > \text{to} < \sum / \text{PR} \\ [ni_2]; \text{yoo} \downarrow \qquad \qquad \qquad \qquad \qquad \qquad \qquad \qquad \qquad \qquad \qquad \qquad \qquad \mid \text{X} = \text{wakaru} > \text{dooshite} \\ - \sum / \text{PR} \\ \text{X} = [\text{furimukeru}_1] > [he_1] \\ [\text{furimukeru}_2]; \text{kao} \mid [he_2]; \text{ushiro} \end{array}$$

$$\begin{array}{l} \infty \sum / \text{PA} \\ \text{X} = \text{kotaeru} > \text{to} < \text{Y} > \text{tte} :: \sum / \text{GER} > \text{wa} < \sum / \text{PR} > \text{ka} \\ \text{da} \mid \text{X} = \sum / \text{PR} \mid \text{X} = \text{nai} \\ \text{sagi} = \text{naku} \end{array}$$

13. *suru to sagi ga hatashite futakoe hodo naita.*  
At which moment, sure enough, a heron squawked twice.

$$\begin{array}{l} \text{Y} > \text{to} < \sum / \text{PA} \\ \text{suru} \mid \text{sagi} = \text{naku} > \text{futa} \cap \text{koe} > \text{hodo} > \text{hatashite} \end{array}$$

14. *jibun wa wagako nagara sukoshi kowakunatta.*  
For all it was my own child, I began to feel afraid.

$$\begin{array}{l}
 jibun > wa < Y > nagara < \sum / PA \\
 waga \cap ko & | X = naru > Y \\
 & kowai > sukoshi
 \end{array}$$

15. *konna mono wo shotte ite wa kono saki doo naru ka wakaranai*  
Carrying this thing on my back, I had no idea what might happen to me.

$$\begin{array}{l}
 \sum / GER > wa < \sum / PR \\
 X = iru \supset [shou_1] & | X = nai > wakaruu > ka < \sum / PR \\
 [shou_2]; mono - konna & | X = naru > Y > saki - kono \\
 & doo
 \end{array}$$

16. *dokoka utcharu tokoro wa nakaroo ka to mukoo wo miru to, yami no naka ni ooki na mori ga mieta.*  
I looked ahead, searching for a place where I could get rid of it, and, in the darkness, saw a large forest.

$$\begin{array}{l}
 tokoro \downarrow > wa < \sum / SUB > ka > to < \sum / PR > to < \infty \\
 - \sum / PR & | X = nai & | X = [miru_1] & | \\
 X = utcharu > doko > ka & | & [miru_2]; mukoo & | \\
 \infty & \sum / PA \\
 mori - Y = eru > Y \\
 ooki & | & miru > [ni_1] \\
 & & [ni_2]; naka \downarrow \\
 & & - yami
 \end{array}$$

17. *asuko naraba to kangaedasu totan ni, senaka de [fufun] to iu koe ga shita.*  
“That’s the place!” No sooner had the thought occurred to me than from by back I heard a sniggering sound.

$$\begin{array}{l}
 X > [ni_1] < \sum / PA \\
 [ni_2]; totan \downarrow & | koe \downarrow = suru > [de_1] \\
 - \sum / PR & | - \sum / PR & | [de_2]; senaka \\
 X = kangae \cap dasu > to < \sum / OPT & | X = iu > to < Y \\
 & X = naru > Y & | fufun \\
 & asuko
 \end{array}$$



18. *[nani wo warau n da]*  
 “What are you laughing at?”

$$\begin{aligned} & \sum / \text{PR} \\ X = & \sum / \text{PR} \\ & X = [\text{warau}_1] \\ & \quad [\text{warau}_2]; \text{nani} \end{aligned}$$

19. *kodomo wa henji wo shinakatta.*  
 The child did not reply.

$$\begin{aligned} \text{kodomo} > \text{wa} < \sum / \text{PA} \\ X = & \text{nai} > [\text{suru}_1] \\ & \quad [\text{suru}_2]; \text{henji} \end{aligned}$$

20. *tada [otossan, omoi kai] to kiita.*  
 It just asked, “Heavy am I then, father?”

$$\begin{aligned} \text{tada} < \sum / \text{PA} \\ X = & \text{kiku} > \text{to} < \quad Y \quad \because \sum / \text{PR} > \text{kai} \\ & \text{otos} \cup \text{san} \mid X = \text{omoi} \end{aligned}$$

21. *[omoi kaa nai] to kotaeru to [ima ni omoku naru yo] to itta.*  
 “You are not heavy” was my reply. “Well, I am going to get heavier and heavier,” it said.

$$\begin{aligned} & \sum / \text{PR} > \text{to} & < \sum / \text{PA} \\ X = & \text{kotaeru} > \text{to} < \sum / \text{PR} & \mid X = \text{iu} > \text{to} < \sum / \text{PR} > \text{yo} \\ & X = \text{nai} > \text{omoi} > \text{kaa} \mid & X = \text{naru} > Y > [\text{ni}_1] \\ & & \text{omoi} \mid [\text{ni}_2]; \text{ima} \end{aligned}$$

22. *jibun wa damatte mori wo mejirushi ni aruite itta.*  
 I said nothing, but walked on, making for the forest.

$$\begin{aligned} \text{jibun} > \text{wa} < \sum / \text{GER} \subset \sum / \text{PA} \\ X = & \text{damaru} \mid X = \text{iku} \supset [\text{aruku}_1] > [\text{ni}_1] \\ & \quad [\text{aruku}_2]; \text{mori} \mid [\text{ni}_2]; \text{mejirushi} \end{aligned}$$

23. *ta no naka no michi ga fukisoku ni unette nakanaka omou yoo ni derarenai.*  
The path between the rice paddies snaked so wildly that I could not get across as I had imagined.

$$\begin{array}{l}
 \sum / \text{GER} \qquad \qquad \qquad \subset \sum / \text{PR} \\
 \text{michi} \downarrow \qquad = \text{uneru} > [ni_1] \qquad | X = \text{nai} > \text{rareru} > Y \\
 \quad - \text{naka} \downarrow \quad | \qquad [ni_2]; \text{fukisoku} \quad | \qquad \text{deru} > [ni_1] > \text{naka} \bullet \text{naka} \\
 \qquad \quad - \text{ta} \quad | \qquad \qquad \qquad \qquad \qquad \qquad [ni_2]; \text{yoo} \downarrow \\
 \qquad \qquad \qquad \qquad \qquad \qquad \qquad \qquad \qquad \qquad \qquad \qquad - \sum / \text{PR} \\
 \qquad \qquad \qquad \qquad \qquad \qquad \qquad \qquad \qquad \qquad \qquad \qquad X = \text{omou}
 \end{array}$$

24. *shibaraku suru to futamata ni natta.*  
After a while there was a fork in the path.

$$\begin{array}{l}
 Y > \text{to} \qquad \qquad \qquad < \sum / \text{PA} \\
 \text{suru} > \text{shibaraku} \quad | X = \text{naru} > [ni_1] \\
 \qquad \qquad \qquad \qquad \qquad \qquad \qquad \qquad \qquad \qquad \qquad \qquad [ni_2]; \text{futamata}
 \end{array}$$

25. *jibun wa mata no ne ni tatte, chotto yasunda.*  
I stood at the point where the paths met and rested a moment.

$$\begin{array}{l}
 \text{jibun} > \text{wa} < \sum / \text{GER} \qquad \qquad \qquad \subset \sum / \text{PA} \\
 \qquad \qquad \qquad X = \text{tatsu} > [ni_1] \qquad \qquad \qquad | X = \text{yasumu} > \text{chotto} \\
 \qquad \qquad \qquad \qquad \qquad \qquad \qquad \qquad \qquad \qquad \qquad \qquad [ni_2]; \text{ne} \downarrow \\
 \qquad \qquad \qquad \qquad \qquad \qquad \qquad \qquad \qquad \qquad \qquad \qquad - \text{mata}
 \end{array}$$

26. *[ishi ga tatteru hazu da na] to kozoo ga itta.*  
“There should be a milestone around here,” said the child.

$$\begin{array}{l}
 \sum / \text{PA} \\
 \text{kozoo} = \text{iu} > \text{to} < \sum / \text{PR} > \text{na} \\
 \qquad \qquad \qquad \sum / \text{PR} = \text{hazu} \\
 \text{ishi} = \text{iru} \supset \text{tatsu}
 \end{array}$$

27. *naruhodo hassunkaku no ishi ga koshi hodo no takasa ni tatte iru.*  
Sure enough, there was an eight-inch-square marker stone that reached to my waist.

$$\begin{array}{l}
 \text{naruhodo} :: \sum / \text{PR} \\
 \text{ishi} \downarrow \qquad \qquad \qquad = \text{iru} \supset \text{tatsu} > [ni_1] \\
 \quad - \text{hassun} \cap \text{kaku} \quad | \qquad \qquad \qquad \qquad \qquad \qquad [ni_2]; \text{takasa} \downarrow \\
 \qquad \qquad \qquad \qquad \qquad \qquad \qquad \qquad \qquad \qquad \qquad \qquad - \text{koshi} > \text{hodo}
 \end{array}$$

28. *omote ni wa hidari Higakubo, migi Hottahara to aru.*  
On the front it said that Higakubo was to the left, Hottahara to the right.

$$\begin{aligned}
 X > [ni_1] > wa &< \sum / PR \\
 [ni_2]; omote \mid X = aru > to &< Y \\
 &hidari = Higakubo \\
 &migi = Hottahara
 \end{aligned}$$

29. *yami da no ni akai ji ga akiraka ni mieta.*  
It was dark, but the red letters were clearly visible.

$$\begin{aligned}
 X > [ni_1] &< \sum / PA \\
 [ni_2]; X \downarrow &\mid ji - akai = eru > Y \\
 - \sum / PR \mid &miru > [ni_1] \\
 X = yami \mid &[ni_2]; akiraka
 \end{aligned}$$

30. *akai ji wa imori no hara no yoo na iro de atta.*  
The red letters were the color of the underbelly of a newt.

$$\begin{aligned}
 ji - akai > wa &< \sum / PA \\
 \sum / GER = aru \\
 X = iro - Y \\
 &yoo \downarrow \\
 &- hara \downarrow \\
 &- imori
 \end{aligned}$$

31. *[hidari ga ii daroo] to kozoo ga meirei shita.*  
“We want to go left, of course,” ordered the boy.

$$\begin{aligned}
 &\sum / PA \\
 kozoo = meirei \cap suru > to &< \sum / SUB \\
 X = \sum / PR \\
 hidari = ii
 \end{aligned}$$

32. *hidari wo miru to, sakki no mori ga yami no kage wo takai sora kara jibunra no atama no ue he nagekakete ita.*  
I looked to the left and there was the same forest rearing skyward and casting its dark shadow upon our heads.

$$\begin{array}{l} \sum / \text{PR} > to < \sum / \text{PA} \\ X = [\text{miru}_1] \quad | \text{mori} \downarrow = \text{iru} \supset [\text{nage} \cap \text{kakeru}_1] > \infty \\ \quad [\text{miru}_2]; \text{hidari} | \quad - \text{sakki} | \quad [\text{nage} \cap \text{kakeru}_2]; \text{kage} \downarrow | \\ \quad | \\ \quad - \text{yami} | \\ \infty [\text{he}_1] > [\text{kara}_1] \\ \quad [\text{he}_2]; \text{ue} \downarrow \quad | \quad [\text{kara}_2]; \text{sora} - \text{takai} \\ \quad - \text{atama} \downarrow \\ \quad - \text{jibun} \cup \text{ra} \end{array}$$

33. *jibun wa chotto chuucho-shita.*  
I hesitated for an instant.

$$\begin{array}{l} jibun > wa < \sum / \text{PA} \\ X = \text{chuucho} \cap \text{suru} > \text{chotto} \end{array}$$

34. *[enryo shinai de mo ii] to kozoo ga mata itta.*  
“Don’t dillydally,” chided the child once more.

$$\begin{array}{l} \sum / \text{PA} \\ \text{kozoo} = \text{iu} > \text{mata} > to < \sum / \text{GER} > mo < \sum / \text{PR} \\ X = \sum / \text{PR} \quad | \quad X = ii \\ X = \text{nai} > \text{enryo} \cap \text{suru} \end{array}$$

35. *jibun wa shikata nashi ni mori no hoo he aruki-dashita.*  
Reluctantly I set off toward the forest.

$$\begin{array}{l} jibun > wa < \sum / \text{PA} \\ X = \text{aruki} \cap \text{dasu} > [\text{he}_1] > [\text{ni}_1] \\ \quad | \\ \quad [\text{he}_2]; \text{hoo} \downarrow \quad | \quad [\text{ni}_2]; \text{nashi} > \text{shikata} \\ \quad - \text{mori} \end{array}$$

36. *hara no naka de wa yoku mekura no kuse ni nandemo shitteru na to kangaenagara, hitosuji michi wo mori he chikazuite kuru to, senaka de [doomo mekura wa fujiyuu de ikenai ne] to itta.*  
 As I headed straight for the forest, I was wondering to myself how a miserable blind brat could know so much, when the thing on my back said, “Yes, blindness is a despicable inconvenience, is it not?”

$X > [de_1] > wa < \sum / INF > nagara < \infty$   
 $[de_2]; naka \downarrow \mid X = kangaeru > to < \sum / GER > mo < \sum / PR > na \mid$   
 $- hara \mid X = nan \mid X = iru \supset shiru > [ni_1] > yoi \mid$   
 $[ni_2]; kuse \downarrow$   
 $- mekura$

$\infty \sum / PR > to < \infty$

$X = kuru \supset [chikazuku_1] > [he_1] \mid$   
 $[chikazuku_2]; hitosuji \cap michi \mid [he_2]; mori \mid$

$\infty \sum / PA$

$X = iu > [de_1] > to < Y > wa < \sum / PR$   
 $[de_2]; senaka \mid doomo \cap mekura \mid \sum / GER = nai > eru > Y$   
 $X = fujiyuu \quad iku$

37. *[da kara, obutte yaru kara ii ja nai ka]*  
 “I’m carrying you, so it is no trouble at all.”

$Y > kara < \sum / PR > kara < \sum / GER > wa < \sum / PR > ka$   
 $da \quad X = yaru \supset obuu \mid X = \sum / PR \mid X = nai$   
 $X = ii$

38. *[obutte moratte sumanai ga doomo hito ni baka ni sarete ikenai]*  
 “I’m very much obliged to you for carrying me, but I really do not like being looked down on by people.

$\sum / GER \subset \sum / PR > ga < \sum / GER \subset \infty$   
 $X = morau \supset Y \mid X = sumanai \mid X = rareru > Y > [ni_1] \mid$   
 $obuu \mid suru > [ni_1] \mid [ni_2]; doomo \cap hito \mid$   
 $[ni_2]; baka$

$\infty \sum / PR$

$X = nai > eru > Y$   
 $iku$

39. *[oya ni made baka ni sareru kara ikenai]*  
And I particularly do not like being looked down on by my own father.”

$$\begin{array}{l}
 X > [ni_1] > made < \sum / PR > kara < \sum / PR \\
 [ni_2]; oya \quad | X = sareru > Y \quad | X = nai > eru > Y \\
 suru > [ni_1] \quad | \quad iku \\
 [ni_2]; baka
 \end{array}$$

40. *nandaka iya ni natta.*  
Why I am not sure, but suddenly I felt disgusted.

$$\begin{array}{l}
 Y > ka < \sum / PA \\
 X = nan \quad | X = naru > [ni_1] \\
 [ni_2]; iya
 \end{array}$$

41. *hayaku mori he itte sutete shimau to omotte isoida.*  
I hastened to get to the woods so I could get rid of it once and for all.

$$\begin{array}{l}
 \sum / PA \\
 X = isogu \supset omou > to < \sum / PR \\
 X = shimau \supset suteru \supset iku > [he_1] > hayai \\
 [he_2]; mori
 \end{array}$$

42. *[moo sukoshi iku to wakaru. choodo konna ban datta na] to senaka de hitorigoto no yoo ni itte iru.*  
“Go a little further, then you will understand. It was a night just like this,” muttered the thing on my back, as if talking to itself.

$$\begin{array}{l}
 \sum / PR \\
 X = iru \supset iu > [ni_1] > [de_1] > to < \sum / PR > to < \infty \\
 [ni_2]; yoo \downarrow \quad | [de_2]; senaka \quad | X = iku > sukoshi > moo \quad | \\
 - hitorigoto
 \end{array}$$

$$\begin{array}{l}
 \infty \sum / PR \quad :: \sum / PA > na \\
 X = wakaru \quad | X = ban - konna > choodo
 \end{array}$$

43. *[nani ga] to kiwadoi koe wo dashite kiita.*  
 “Understand what?” I asked, my voice almost hysterical.

$$\sum / \text{PA}$$

$$X = kiku \supset [dasu_1] > to < Y$$

$$[dasu_2]; koe - kiwadoi \mid nani = X$$

44. *[nani ga tte, shitteru ja nai ka] to kodomo wa azakeru yoo ni kotaeta.*  
 “What? You know very well what,” sneered the child in reply.

$$Y > tte < \sum / \text{GER} > wa < \sum / \text{PR} > ka > to < kodomo > wa < \infty$$

$$nani = X \mid X = \sum / \text{PR} \mid X = nai \mid$$

$$X = iru \supset shiru \mid$$

$$\infty \sum / \text{PA}$$

$$X = kotaeru > [ni_1]$$

$$[ni_2]; yoo \downarrow$$

$$- \sum / \text{PR}$$

$$X = azakeru$$

45. *suru to, nandaka shitteru yoo na ki ga shidashita.*  
 I had a vague sense that I did know what it was talking about.

$$Y > to < \sum / \text{PA}$$

$$suru \mid ki - Y = shi \cap dasu$$

$$yoo \downarrow$$

$$- Y > ka < \sum / \text{PR}$$

$$X = nan \mid X = iru \supset shiru$$

46. *keredomo, hakkiri to wa wakaranai.*  
 But I didn't fully understand.

$$keredo > mo < Y > to > wa < \sum / \text{PR}$$

$$hakkiri \mid X = nai > wakaruru$$

47. *tada, konna ban de atta yoo ni omoeru.*  
I did feel that, whatever this was, it might have happened on a night like this.

$$\begin{aligned}
 & \text{tada} < \sum / \text{PR} \\
 & \quad X = \text{omoeru} > [ni_1] \\
 & \quad \quad [ni_2]; \text{yoo} \downarrow \\
 & \quad \quad \quad - \sum / \text{PA} \\
 & \quad \quad \quad \quad \sum / \text{GER} = \text{aru} \\
 & \quad \quad \quad \quad X = \text{ban} - \text{konna}
 \end{aligned}$$

48. *soo shite moo sukoshi ikeba wakaruu yoo ni omoeru.*  
I did feel that if I went on a bit further, I might understand.

$$\begin{aligned}
 & \sum / \text{GER} \quad \subset \sum / \text{OPT} \quad < \sum / \text{PR} \\
 & X = \text{suru} > \text{soo} \mid X = \text{iku} > \text{sukoshi} > \text{moo} \mid X = \text{omoeru} > [ni_1] \\
 & \quad \quad \quad \quad \quad \quad \quad \quad [ni_2]; \text{yoo} \downarrow \\
 & \quad \quad \quad \quad \quad \quad \quad \quad \quad - \sum / \text{PR} \\
 & \quad \quad \quad \quad \quad \quad \quad \quad \quad X = \text{wakaru}
 \end{aligned}$$

49. *wakatte wa taihen da kara, wakaranai uchi ni hayaku sutete shimatte, anshin shinakute wa naranai yoo ni omoeru.*  
And I did feel that to understand was a terrible thing, so I should keep my peace of mind by disposing of the child quickly while I was still in ignorance.

$$\begin{aligned}
 & \sum / \text{GER} > \text{wa} < \sum / \text{PR} > \text{kara} < \sum / \text{GER} \quad \subset \infty \\
 & X = \text{wakaru} \quad \mid X = \text{taihen} \quad \mid X = \text{shimau} \supset \text{suteru} > \text{hayai} > [ni_1] \\
 & \quad \quad \quad \quad \quad \quad \quad \quad [ni_2]; \text{uchi} \downarrow \\
 & \quad \quad \quad \quad \quad \quad \quad \quad \quad - \sum / \text{PR} \\
 & \quad \quad \quad \quad \quad \quad \quad \quad \quad X = \text{nai} > \text{wakaru}
 \end{aligned}$$

$$\begin{aligned}
 & \infty \sum / \text{GER} > \text{wa} \quad < \sum / \text{PR} \\
 & X = \text{nai} > \text{anshin} \cap \text{suru} \mid X = \text{omoeru} > [ni_1] \\
 & \quad \quad \quad \quad \quad \quad \quad \quad [ni_2]; \text{yoo} \downarrow \\
 & \quad \quad \quad \quad \quad \quad \quad \quad \quad - \sum / \text{PR} \\
 & \quad \quad \quad \quad \quad \quad \quad \quad \quad X = \text{nai} > \text{naru}
 \end{aligned}$$



50. *jibun wa masumasu ashi wo hayameta.*  
I quickened my pace.

$$jibun > wa < \sum / PA$$

$$X = [hayameru_1] > masu \bullet masu$$

$$[hayameru_2]; ashi$$

51. *ame wa sakki kara futte iru.*  
The rain had been falling a while now.

$$ame > wa < \sum / PR$$

$$X = iru \supset furu > [kara_1]$$

$$[kara_2]; sakki$$

52. *michi wa dandan kuraku naru.*  
The path grew darker and darker.

$$michi > wa < \sum / PR$$

$$X = naru > Y > dan \bullet dan$$

$$kurai$$

53. *hotondo muchuu de aru.*  
I was almost in a trance.

$$\sum / PR$$

$$\sum / GER = aru$$

$$X = muchuu > hotondo$$

54. *tada senaka ni chiisai kozoo ga kuttsuite ite, sono kozoo ga jibun no kako, genzai, mirai wo kotogotoku terashite, sunbun no jijitsu mo morasanai kagami no yoo ni hikatte iru.*

But there was a little child stuck to my back, and that child was flooding my past, my present and my future with a merciless light, like a mirror that overlooks nothing, no matter how small.

$$\begin{array}{l}
 \text{tada} < \sum / \text{GER} & \subset & \sum / \text{GER} & \subset \infty \\
 \text{kozoo} - \text{chiisai} = \text{iru} \supset \text{kuttsuku} > [ni_1] & | & \text{kozoo} - \text{sono} = [\text{terasu}_1] > \text{kotogotoku} \\
 & [ni_2]; \text{senaka} | & & [\text{terasu}_2]; \text{kako} \bullet \text{genzai} \bullet \text{mirai} \downarrow \\
 & & & - \text{jibun} \\
 \infty \text{ jijitsu} \downarrow > \text{mo} < \sum / \text{PR} \\
 - \text{sunbun} | X = \text{iru} \supset \text{hikaru} > [ni_1] \\
 & & & [ni_2]; \text{yoo} \downarrow \\
 & & & - \text{kagami} \downarrow \\
 & & & - \sum / \text{PR} \\
 & & & X = \text{nai} > \text{morasu}
 \end{array}$$

55. *shikamo sore ga jibun no ko de aru.*  
But it was my child;

$$\begin{array}{l}
 \text{shika} > \text{mo} < \sum / \text{PR} \\
 \sum / \text{GER} = \text{aru} \\
 \text{sore} = \text{ko} \downarrow \\
 - \text{jibun}
 \end{array}$$

56. *soo shite mekura de aru.*  
and it was blind.

$$\begin{array}{l}
 \sum / \text{GER} \subset \sum / \text{PR} \\
 X = \text{suru} > \text{soo} | \sum / \text{GER} = \text{aru} \\
 X = \text{mekura}
 \end{array}$$

57. *jibun wa tamaranaku natta.*  
I could not bear it.

$$\begin{array}{l}
 \text{jibun} > \text{wa} < \sum / \text{PA} \\
 X = \text{naru} > Y \\
 \text{tamaranai}
 \end{array}$$

58. *[koko da, koko da. choodo sono sugi no ne no tokoro da]*  
 “Here! It is here! Here, just at the root of that cedar.”

$$\sum / \text{PR} :: \sum / \text{PR} :: \sum / \text{PR}$$

$X = koko \mid X = koko \mid X = tokoro \downarrow > choodo$   
 $- ne \downarrow$   
 $- sugi - sono$

59. *ame no naka de kozoo no koe wa hakkiri kikoeta.*  
 The voice of the child rang out above the sound of the rain.

$$X > [de_1] < koe \downarrow > wa < \sum / \text{PR}$$

$[de_2]; naka \downarrow \mid - kozoo \mid X = eru > Y > hakkiri$   
 $- ame \mid kiku$

60. *jibun wa oboezu tomatta.*  
 Without thinking I stopped.

$$jibun > wa < \sum / \text{INF} / \text{NON} < \sum / \text{PA}$$

$X = oboeru \mid X = tomaru$

61. *itsu shika mori no naka he haitte ita.*  
 At some point we had entered the forest.

$$itsu > shika < \sum / \text{PA}$$

$X = iru \supset hairu > [he_1]$   
 $[he_2]; naka \downarrow$   
 $- mori$

62. *ikken bakari saki ni aru kuroi mono wa tashika ni kozoo no iu toori sugi no ki to mieta.*  
The dark mass just six feet in front of me was a cedar tree, just as the boy had said.

$$\begin{array}{ccccccc}
 ik \cap ken > bakari < mono - kuroi \downarrow > wa < X & & > [ni_1] & & < toori \downarrow & < \infty \\
 & & & - \sum / PR & & | [ni_2]; tashika | & - iu \downarrow & | \\
 & & & X = aru > [ni_1] & & | & & - kozoo | \\
 & & & & & & & [ni_2]; saki
 \end{array}$$

$$\begin{array}{l}
 \infty \sum / PA \\
 X = eru > Y
 \end{array}$$

$$\begin{array}{l}
 miru > to < ki \downarrow \\
 - sugi
 \end{array}$$

63. *[otossan, sono sugi no ne no tokoro datta ne]*  
“Father, it was here! It was at the root of that cedar, was it not?”

$$\begin{array}{l}
 otos \cap san :: \sum / PA > ne \\
 X = tokoro \downarrow \\
 - ne \downarrow \\
 - sugi - sono
 \end{array}$$

64. *[un, soo da] to omowazu kotaete shimatta.*  
“Yes, so it was,” came my automatic reply.

$$\begin{array}{l}
 \sum / PA \\
 X = shimau \supset kotaeru > \sum / INF / NON > to < Y :: \sum / PR \\
 X = omou & | un | X = soo
 \end{array}$$

65. *[bunka gonen tatsudoshi daroo]*  
“It was 1808, the year of the dragon, was it not?”

$$\begin{array}{l}
 \sum / SUB \\
 X = bunka \cap gonen \cap tatsu \cap doshi
 \end{array}$$

66. *naruhodo bunka gonen tatsudoshi rashiku omowareta.*  
Come to think of it, I suppose it had been 1808, the year of the dragon.

$$\begin{array}{l}
 naruhodo :: \sum / PA \\
 X = rareru > Y > bunka \cap gonen \cap tatsu \cap doshi \cap rashii \\
 omou
 \end{array}$$

67. [*omae ga ore wo koroshita no wa, ima kara choodo hyakunen mae da ne*]  
 “You murdered me a hundred years ago to the day, didn’t you?”

$$\begin{array}{l}
 X \downarrow > wa & < \sum / PR > ne \\
 - \sum / PA & | X = hyakunen \cap mae > choodo > [kara_1] \\
 omae = [korosu_1] & | & [kara_2]; ima \\
 & [korosu_2]; ore
 \end{array}$$

68. *jibun wa kono kotoba wo kiku ya ina ya, ima kara hyakunen mae bunka gonen no tatsudoshi no konna yami no ban ni, kono sugi no ne de, hitori no mekura wo koroshita to iu jikaku ga, kotsuzen to shite atama no naka ni okotta.*  
 And as I heard him say those words, the knowledge suddenly welled up inside me that a hundred years ago to the say, on just such a dark night as this, at the root of this very cedar, I had indeed killed a man.

$$\begin{array}{l}
 jibun > wa < \sum / PR > ya > ina < ya < \infty \\
 X = [kiku_1] \\
 [kiku_2]; kotoba - kono
 \end{array}$$

$$\begin{array}{l}
 \infty \quad \sum / PA \\
 jikaku \downarrow = okoru & > [ni_1] \supset suru > to < kotsuzen \\
 - iu > to < \sum / PA & | [ni_2]; naka \downarrow \\
 X = [korosu_1] & > [de_1] & > \infty \infty & - atama \\
 [korosu_2]; mekura \downarrow & | [de_2]; ne \downarrow & | \\
 & - hitori | & - sugi - kono |
 \end{array}$$

$$\begin{array}{l}
 \infty \infty [ni_1] > hyakunen \cap mae & > [kara_1] \\
 [ni_2]; ban \downarrow & | [kara_2]; ima \\
 - yami - konna \downarrow \\
 & - tatsudoshi \downarrow \\
 & - bunka \cap gonen
 \end{array}$$

69. *ore wa hitogoroshi de atta n da na to, hajimete ki ga tsuita totan ni, senaka no ko ga kyuu ni ishi jizoo no yoo ni omoku natta.*  
 The instant I realized that I was a murderer, the child on my back suddenly grew heavy as a stone image of Jizo himself.

<i>ore</i> > <i>wa</i> < $\sum$ / PR > <i>na</i> > <i>to</i> < X > [ <i>ni</i> <sub>1</sub> ]	< $\infty$
$X = \sum$ / PA	[ <i>ni</i> <sub>2</sub> ]; <i>totan</i> ↓
$\sum$ / GER = <i>aru</i>	- $\sum$ / PA
X = <i>hito</i> ∩ <i>goroshi</i>	<i>ki</i> = <i>tsuku</i> > <i>hajimete</i>

$\infty$	$\sum$ / PA	
<i>ko</i> ↓	= <i>naru</i> > Y	> [ <i>ni</i> <sub>1</sub> ]
- <i>senaka</i>	<i>omoi</i> > [ <i>ni</i> <sub>1</sub> ]	[ <i>ni</i> <sub>2</sub> ]; <i>kyuu</i>
	[ <i>ni</i> <sub>2</sub> ]; <i>yoo</i> ↓	
	- <i>ishi</i> ∩ <i>jizoo</i>	

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## Abbreviations

ALT	alternative
APR	appropriate referent
COND	conditional
GER	gerund
HON	honorific
IMP	imperative
INF	infinitive
N	noun
NON	negation
NP	noun phrase
OPT	optative
PA	past indicative
PLUR	plural
POL	polite
PR	present indicative
SING	singular
SUB	subjunctive
S	sentence
SOV	subject, object, verb
SP	semantic particle
SVO	subject, verb, object
V	verb

## List of symbols

$\cup$		- close knitting
$\cap$		- close knitting, reversed order
$>$		- gradation
$<$		- gradation, reversed order
$\supset$		- temporal gradation
$\subset$		- temporal gradation, reversed order
$-$		- convergent limitation
$\downarrow$		- divergent limitation
$-$		- other (non-specified) convergence
$\bullet$		- other (non-specified) convergence
$/$		- stratification
$;$		- convergence with dominating element
$::$		- syntactic sentence boundary
$ $		- no syntactic relation
$\infty$		- division sign for mathematical descriptions which are too wide too fit the paper size
$\sum_{a=b}$	nexus	- situation with a time frame
$\Upsilon_{a=b}$	projection as entity	- situation without a time frame
$\sum / \text{GER} \subset S$	V – <i>te</i> S	- gerund, conjunctive, temporal
$\sum / \text{COND} \subset S$	V – <i>tara</i> S	- conditional, conjunctive, temporal
$\sum / \text{ALT} \subset S$	V – <i>tari</i> S	- alternative, conjunctive, temporal
$\sum / \text{OPT} < S$	V – <i>(e)ba</i> S	- optative, conjunctive, non-temporal

$\sum/\text{INF} < S$	$V - i S$	- infinitive, conjunctive, non-temporal
$\sum/\text{PR}$ $X = \text{rareru} > Y$ V	$V - \text{rareru}$	- passive, 'is affected by'
$\sum/\text{PR}$ $X = \text{saseru} > Y$ V	$V - \text{saseru}$	- causative, 'is causing'
$\sum/\text{PR}$ $X = \text{eru} > Y$ V	$V - \text{eru}$	- potential, 'is enabled to'

## List of particles

<i>de</i>	instrumental; ‘with’, ‘by’; ‘in’	$[de_1]$ $[de_2]$ ;
<i>ga</i>	1. nominative; first valence of the predicate 2. clause conjunction, ‘but additionally’ 3. sentence final	= $S > ga < S$ $S > ga$
<i>he</i>	directive; ‘to’	$[he_1]$ $[he_2]$ ;
<i>ka</i>	1. alternative possibility, ‘or’ 2. sentence final particle, ‘?’	$NP > ka < NP$ $S > ka$
<i>kara</i>	1. ablative; (time or place) ‘from’ 2. clause conjunction, ‘from’	$[kara_1]$ $[kara_2]$ ; $S > kara < S$
<i>ke(re)do</i>	clause conjunction, ‘however’	$S > ke(re)do < S$
<i>made</i>	1. allative; (time or place) ‘up to’, ‘until’ 2. clause conjunction, ‘up to’ 3. topic	$[made_1]$ $[made_2]$ ; $S > made < S$ $NP > made < S$
<i>mo</i>	1. topic, ‘too’ 2. non-topical ‘also, too’	$NP > mo < S$ $NP > mo$
<i>na</i>	divergent characteristic	$b - Y$ $a$
<i>ne (nee)</i>	sentence final particle	$S > ne$ ( $S > nee$ )
<i>ni</i>	dative, locative, ‘in’, ‘at’, ‘to’	$[ni_1]$ $[ni_2]$ ;

<i>no</i>	1. genitive	$b \downarrow$ $- a$
	2. nominalization	$X \downarrow$ $-\Sigma$
<i>sa</i>	sentence final particle	$S > sa$
<i>sae</i>	1. topic, ‘even’	$NP > sae < S$
	2. ‘even’, ‘if only’	$NP > sae$
<i>shi</i>	clause conjunction, ‘and’	$S > shi < S$
<i>shika</i>	1. topic, ‘being excluded’	$NP > shika < S$
	2. ‘with the exception of’, ‘only’	$NP > shika$
<i>to</i>	1. coordinative, exhaustive listing, ‘and’	$a > to < b$
	2. quotative	$V > to < S$
	3. clause conjunction, ‘when’	$S > to < S$
<i>wa</i>	topic, ‘as for’	$NP > wa < S$
<i>wo</i>	accusative, second valence of the predicate	$[V_1]$ $[V_2];$
<i>ya</i>	coordinative, inexhaustive listing, ‘and (so on)’	$NP > ya < NP$
<i>yo</i>	sentence final particle	$S > yo$
<i>zo</i>	sentence final particle	$S > zo$

## Index of Japanese words

*ageru* 241-246  
*aida* 51-53  
*anata* 14  
*anna* 14  
*ano* 14  
*are* 14  
*aru* 17, 54-55, 116, 188  
*-(a)zu* 18, 23-24  
*bakari* 131, 145-150, 151, 154, 156  
*chan* 28  
*da* 14, 15, 22, 24, 192-193, 203  
*dake* 131, 136-144, 145, 149-150, 151  
*dare* 13, 14, (+ *mo*) 120-121, 190  
*de* 45, 50, 67-77, 106, 115, 116, 121, 124, 212  
*de aru* 237-238  
*de nai* 237-238  
*dekiru* 224  
*desu* 14, 15, 22  
*doko* 13, 14  
*-eba* 16, 19, 125, 174, 184-185  
*-eru* 210, 222, 224  
*ga* 13, 21, 30-38, 42, 54, 106, 112, 135, (conjunctive) 162-164, (sentence final) 164-165, 190, 222, 226  
*-(ta)garu* 291  
*go-* (honorific) 17  
*gurai* see *kurai*  
*hazu da* 285, 288-289  
*he* 20, 50, 78-79, 84, 106, 115, 127  
*hodo* 131, 151-153, 154, 156  
*hoo* 160-161  
*hoshii* 36, 37, 290, 294-295  
*i*-adjectives 14, 24-26  
*issho* 93  
*itadaku* 64, 241  
*jibun* 15, 266-267  
*ka* 13, 88, (coordinate) 101-102, 162, (sentence final) 190-196  
*kanojo* 14  
*kara* 21, 50, 80-83, 84-85, 106, 114, 129-130, 157, 162, (conjunctive) 166-170, 171, 212, 242  
*kare* 14  
*ke(re)do* 162, 181-183, 190  
*konna* 14  
*kono* 14  
*kore* 14  
*koto* 268-275, 276  
*koto ga aru* 270-273  
*koto ga dekiru* 273  
*koto ga nai* 270-273

*koto ni naru* 274  
*koto ni suru* 275  
*kun* 28  
*kudasaru* 241-246  
*kurai* 131, 154-156  
*kureru* 241-246  
*made* 50, 80, 84-87, 103, 106, (topical) 127-130, 162, (conjunctive) 171-173  
*mae* 56  
*-masen* 18, 23  
*-masu* 17-18, 23  
*-mitai* 292-293  
*mo* 103, 111-122, 123, 125, 173, 181, 188  
*morau* 64-65, 241-242  
*na(naa)* (sentence final) 190, 200-202  
*na* (noun+*na*) 14-15, 24-26, 27  
*-nagara* 162, 188-189  
*nai* 18, 23  
*nani* 13, 14  
*nara(ba)* 162, 184-187  
*naru* 15, 17, 57-58, 96  
*ne (nee)* 190, 197-199, 207, 209  
*ni* 13, 21, 27, 30, 43, 45, 50-66, 54-55, 64, 69, 70-75, 78-79, 84, 88, 89-92, 106, 113-115, 128-129, 155, 161, 212, 222, 226-228, 242  
*no* 14-15, 21, 26, 30, 32, (genitive) 46-49, 184, 261, 268, (nominalization) 268, 276-278  
*nomi* 136  
*o-* (honorific) 17  
*ore* 14  
*-ra* 14, 28  
*-rareru* 40, 210, (passive) 211-221, (potential) 222-225  
*rashii* 285-286, 293  
*-reba* see *-eba*  
*-(r)umai* 18, 23  
*sa* 190, 203-204  
*sae* 103, 123-126  
*sama* 28  
*san* 28  
*-saserareru (sasareru)* (causative-passive) 230-232  
*-saseru* (causative) 210, 226-229  
*sensei* 28-29  
*shi* 162, 178-180, 181  
*shika* 103, 131-135, 136, 141-144, 145, 149-150  
*sonna* 14  
*sono* 14  
*soo da* 285, 286-287  
*sore* 14  
*-sugiru* 17  
*suki* 32  
*sura* 102, 123  
*suru* 17, 22, 43-45, 57-58, 115-116, 168, 224, 254  
*-tachi* 14, 28

*-tai* 290-293  
*tame* 58-59  
*-tara* 16, 19, 125-126, 174, 184-185  
*-tari* 16, 19  
*-te* 16-17, 19  
*-te aru* 16, 233, 235-236, 238-240  
*-te iku* 233, 247-252  
*-te iru* 16, 233-235, 238-240  
*-te kuru* 233, 247-252  
*-te miru* 233, 253-254  
*-te oku* 16, 233, 253, 254-257  
*-te shimau* 16, 233, 253, 258-260  
*to* 21, 43, 64, 88-99, 100, 106, 115, 117, 162, (conjunctive) 174-177, 194, 263  
*to iu* 95  
*toki* 51-52, 174  
*tokoro* 279-284  
*tomo* 93  
*tsumori da* 285, 289-290  
*uchi* 51, 53  
*wa* 20, 31, 68, 103-110, 112, 121-122, 163-164, 171, 179, 190  
*wata(ku)shi* 14  
*wo* 13, 20, 21, 30, 31, 33, 39-45, 70-72, 82, 133-134, 145-146, 152, 222, 226-228, 261  
*ya* 21, 88, 100, 190  
*yaru* 241-246  
*yo* 190, 198-199, 205-207, 208-209  
*yoo da* 285, 288  
*yoo to suru* 254  
*yoru* 106, 131, 157-161  
*zo (ze)* 190, 208-209