A Lexico-semantic Study on the Synonyms and Polysemy of Seven Japanese Visual Verbs

by

NARUKI ENOMOTO

This volume is a sub-thesis submitted for the degree of

MASTER OF ARTS (ASIAN STUDIES) IN

APPLIED JAPANESE LINGUISTICS

THE AUSTRALIAN NATIONAL UNIVERSITY AT CANBERRA November 1998

A LEXICO-SEMANTIC STUDY ON THE SYNONYMS AND POLYSEMY OF SEVEN JAPANESE VISUAL VERBS

This sub-thesis is my own work except where otherwise indicated, and in partial fulfillment of the requirements for the degree of Master of Arts (Asian studies) in Applied Japanese Linguistics.

nomer enous NARUKI ENOMOTO

November 1998

ACKNOWLEDGEMENTS

Many people helped me to finish this thesis both in Australia and in Japan, so I would here like to express my appreciation publicly.

First, I would like to express my gratitude to the members of my thesis committee who spent many hours in assisting me. Special thanks to Dr. A.E.Backhouse and Dr. D.Y.Lee. Dr. A.E.Backhouse led me to the semantic study and suggested the direction for this thesis. After Dr. A.E.Backhouse left for Hokkaido University, Dr. D.Y.Lee supervised and encouraged me in various ways. I am also grateful to other Asian studies faculty staff, and especially Japan Centre staff at the Australian National University.

I would like to express my special thanks to Professor J.E.Strain at Himeji Dokkyo University, who checked my English and discussed the contents while I was writing this thesis in Japan. My thanks expand to other staff at Himeji Dokkyo University in Japan.

I am grateful to my wife, Mariko, who faithfully endured hardships with me and encouraged me. Without her this thesis could not be completed.

A number of Christian friends, especially those who are from Belconnen Baptist Church, Crossroads Christian Church, and Himeji Baptist Church, prayed for me and for this work. They strengthened me by prayer. Praise God, hallelujah!

Finally, I am most grateful to my Lord and savior, Jesus. To Him alone be all the glory.

"For we cannot do anything against the truth, but only for the truth. 2 Corinthians 13:8"

November 1998

ABSTRACT

This thesis presents a semantic analysis of seven visual verbs in the Japanese language. This study is primarily built on the basis of Tanaka (1996), Sakota (1980), and Kunihiro (1979). Seven visual verbs are involved in this study, while those previous studies deal with three visual verbs out of seven. The analysis deals with the core meaning and extended meanings of each verb. Semantic properties of the verbs are investigated to provide the semantic descriptions of the core and extended meanings of the verbs, which confirm their lexical hierarchy. The investigation illustrates their similarities and differences.

In addition to investigating the meanings of the seven visual verbs in Japanese, this thesis surveys intermediate learners' recognition of visual verbs. The surveys are based on the semantic descriptions of the core and extended meanings. The surveys show general patterns of learner understanding of synonymous words and polysemic words which can be applied to other groups of Japanese language learners. In the conclusion, pedagogical suggestions for teachers are made: the guidelines for teaching the seven visual verbs and for the teaching order of the target verbs

iv

TABLE OF CONTENTS

ACK	NOWLEDGEMENTSiii
ABS	Γ R A C T iv
LIST	OF TABLESv
NOTI	E ON TRANSCRIPTION vi
-	PTER 1 Introduction1
	Purpose1
1.2 P	Primary sources
	Scope
1.4 \$	Synonym3
	Polysemy4
1.6	Core and extended meanings5
1.7	Grammatical features of the seven visual verbs
1.8	The notion of semantic property6
	PTER 2 The description of the core meanings
	he core meanings of visual verbs
	ne core meanings: categories of semantic property9
2.3 Th	e core meanings: semantic properties of performance11
	2.3.1 The common properties12
	VISUAL
	PERCEPTION
	2.3.2 The relevant properties15
	DURATION
	VISUAL POINT
	INTENTION
	ATTENTION
	DISTANCE
2.4 Tł	he core meanings: semantic properties of objects
2.4	4.1 Semantic properties of objects restricted by visual performance
	VISIBLE
	DURATION OF APPEARANCE
	LARGENESS OF OBJECTS
	QUANTITY
	2.4.2 Essential semantic properties of objects50
	INTERESTING
	BEAUTIFUL
2.5	Summary

3.2 The extended meanings: categories of semantic property	60
3.3 The extended meanings of the visual verbs	
3.3.1 <i>Miru</i>	61
3.3.2 Mitsumeru	
3.3.3 Miiru and mitoreru	84
3.3.4 Nagameru	85
3.3.5 Miwatasu	
3.3.6 Nozomu	
3.4 Summary	
 4.1 Methods 4.1.1 Data collection 4.1.2 Subjects 	96 97
4.2 Survey on the synonyms	
4.2.1 Procedure	
4.2.2 Results: synonym survey of the seven visual verbs 4.3 Survey on polysemy	
4.3.1 Procedure	
4.3.2 Results	
Miru, mitsumeru, nagameru, miwatasu, nozomu	
4.4 Summary	
CHAPTER 5 Implications of the surveys	
5.1 Visual verbs the learners of Japanese knew	
Difficulty of learning	
Necessity of learning	
5.2 The kinds of meanings the learners knew	112
5.3 Pedagogical suggestions	114
CHAPTER 6 Conclusions	116
6.1 Findings	
6.2 Implications for further study	118
APPENDIX	119
	133

· · ·

LIST OF TABLES

Table 1. Summary of the semantic properties for the seven visual verbs
Table 2. Semantic properties of objects for each visual verb
Table 3. Semantic descriptions of the core meanings for the seven visual verbs.57
Table 4. Total number of correct responses
Table 5. Number of responses for the core meanings
Table 6. Number of responses for the extended meanings
Table 7. Correct responses for the meanings of miru
Table 8. Correct responses for the meanings of mitsumeru104
Table 9. Correct responses for the meanings of nagameru
Table 10. Correct responses for the meanings of miwatasu106
Table 11. Correct responses for the meanings of nozomu106
Table 12. Number of semantic properties for the core meanings and the109
mean of the subjects who knew the core meanings of the verbs
Table 13. The percentage-means of the subjects who knew113
the polysemic meanings of the verbs
Table 14. Semantic properties for the meanings of miru113

NOTE ON TRANSCRIPTION

The basic romanisation system for Japanese in this thesis is a variant of the Hepburn system. Its additional features are that long vowels are written double (aa, oo, etc.) and glottal fricative with u is written hu. This system is employed throughout the thesis for Japanese examples and words.

Japanese names appearing as part of the English text are given in Hepburn romanisation, but without indication of long vowels (Kyoto, Fuji, etc.). All Japanese sentence examples start with a capital letter.

Abbreviations and symbols used in text are shown below:

ACC ----- accusative case

CON ----- connective form

DAT ----- dative case

IMP ----- imperative form

NEG ----- negative form

NOM ---- nominative case

PAST --- past form

PROG -- progressive form

TOP ----- topic marker

VOL ----- volitional form

 $\langle X \rangle$ ---- X in $\langle ... \rangle$ is a semantic property.

* Asterisk indicates semantic inappropriateness.

ø

CHAPTER 1

Introduction

This study aims (i) to investigate and analyse the semantic structures of Japanese visual verbs, *miru*, *mitsumeru*, *mitoreru*, *miiru*, *nagameru*, *miwatasu*, and *nozomu*, and (ii) to shed light on some problems in teaching these verbs to learners of Japanese.

This study is organised as follows. Chapter 1 provides a general overview and background for this study of synonymy and polysemy of Japanese visual verbs. Chapters 2 and 3 discuss the linguistic meanings of the visual verbs. In Chapter 2 the core meanings of the seven visual verbs are described by examining their semantic features. In Chapter 3 the extended meanings of the visual verbs are presented according to various combinations of their semantic properties. Chapters 4 and 5 deal with the core meaning and extended meaning surveys. In Chapter 4 the subjects, methods and results of the surveys are presented; i.e. questions related to both the core and extended meanings of the verbs are described in Chapter 2 and 3. It will be shown how intermediate learners deal with the synonyms of visual verbs and polysemic meanings. In Chapter 5 implications of the synonym and polysemy surveys are discussed. Chapter 6 concludes the thesis with findings and some suggestions for teaching Japanese as a foreign language.

1.1 Purpose

In learning a second language, synonyms and polysemic words are one of the most important issues which must inevitably be considered. It is essential for learners to study the synonyms and polysemic meanings of a word in order to improve their Japanese. Despite the importance of synonyms and polysemic

meanings in second language learning, it is not easy for teachers to teach synonyms and polysemic words because they are concerned with meanings which are rather elusive to illustrate.

This study presents an attempt to describe the elusive meanings of visual verbs, and to throw light on some problems in learning those verbs in the area of teaching Japanese as a foreign language. The purpose of this study is to investigate synonymous and polysemic visual verbs in Japanese. First the core and extended meanings of the Japanese visual verbs will be described in terms of semantic features. Both the differences between and the similarities of the target words will be clarified. Then, this thesis will investigate intermediate Japanese language learners' comprehension of the synonymous visual verbs and their polysemic meanings.

1.2 Primary sources

The primary sources on which this study is based are Tanaka (1996), Sakota (1980), and Kunihiro (1979). This study deals with a wider variety of Japanese visual verbs than these primary sources with the assumption that a wider variety provides clearer perspectives of the similarity and difference of the visual verbs. Furthermore, this study includes synonymy and polysemy surveys by which Japanese learners' recognition of each meaning for the defined meanings of the visual verbs were investigated.

1.3 Scope

Japanese visual verbs are those verbs which are related to vision, i.e. verbs of seeing. The scope of this study is limited to seven Japanese visual verbs; they are *miru*, *mitsumeru*, *miiru*, *mitoreru*, *nagameru*, *miwatasu* and *nozomu*. Their

appropriate English meanings are 'to look at', 'to gaze at', 'to stare at', 'to look admiringly at', 'to see', 'to look around/over' and 'to view', respectively¹.

As will be discussed in Chapter 2, these visual verbs have a certain hierarchical relationship. For example, they can be categorised as superordinate and hyponym: *Miru* is the superordinate and the other verbs are hyponyms of *miru*. Superordinate is a general lexical item which includes hyponyms, and hyponym is a specific lexical item, e.g. 'animal' is a superordinate to 'dog' and 'cat' etc.

The hierarchy in which the six verbs are hyponyms of *miru* and *miru* is the superordinate can be described by the diagnostic frame 'X is a kind of Y'; when Y is a superordinate to X, the sentence is appropriate, and when Y is not a superordinate to X, the sentence is inappropriate (Cruse, 1986: 137). Regarding the seven visual verbs, *miru* is not a kind of any of the six verbs, whereas the six verbs are a kind of *miru*. For example, it is appropriate to say that *mitsumeru* 'to gaze at' is a kind of *miru* 'to look at', *miiru* 'to stare at' is a kind of *miru* 'to look at', but it is inappropriate to say that *miru* is a kind of *miru* is a kind of *miru* is a kind of *miru*.

1.4 Synonyms

According to the Australian Concise Oxford Dictionary (ACOD) 'synonym' is defined as "a word or phrase that means exactly or nearly the same as another in the same language, e.g. *shut* and *close*." However, strictly speaking absolute synonyms (a word that means exactly the same as another in the same language) do not exist. Taking the ACOD statement into account, I shall define 'synonym'

¹Note that Japanese and English words do not have a one-to-one semantic relationship. Translations for the examples throughout this thesis may have different words depending on the context although they are visual verbs.

as 'a word or phrase that means nearly the same as another in the same language.' Accordingly, synonyms must have a significant degree of semantic overlap (Cruse 1986: 266, Nida 1975). This means that synonyms belong to the same semantic field and may be interchangeable with each other in sentences.

In this regard, our target words are synonyms as they are interchangeable and belong to the same semantic field, namely the semantic field of vision. They have a significant degree of semantic overlap; that is, as Cruse (1986: 267) points out, "a synonym is often employed as an explanation, or clarification, of the meaning of another word." This is illustrated in the *Koojien Japanese Dictionary*, where each of the target visual verbs is explained by another target visual verb circularly. For example, *mitsumeru* 'to gaze at' is explained by *miiru* 'to stare at' and this *miiru* is explained by *mitoreru* 'to look admiring at', and reversely *mitoreru* is explained by *miiru*. The other target words are explained in a similar fashion.

1.5 Polysemy

The ACOD defines 'polysemy' as "the existence of many meanings (of a word etc.)." Similar definitions are found in Cann (1993: 8), Cruse (1986: 80), and Crystal (1992: 307). Cruse (1986: 80), for example, states "It is commonplace to describe a lexeme which has a number of senses as polysemy...". From this quotation, it is clear that polysemy refers to a word which has a number of meanings. However, the above statement is not completely satisfactory. A number of meanings of a word should be semantically related, as Kunihiro (1986: 111) mentions. If the various meanings of a word are not semantically related, the word is referred to as homonym². In Crystal's terms, homonyms are defined as "words which have the same form but different meanings, as in *ear* ('of a

²See Lyons (1977: 550-69) for a discussion of 'homonym' and 'polysemy.'

body', or 'of corn')." In short, in this study the term 'polysemy' is used as "a word which has a number of semantically related meanings."

Some of the target words are polysemic words. For example, *miru* is one of the polysemic words, as will be discussed in Chapter 3. *Miru* is used in the sentences *Shashin o miru* 'to look at a photo' and *Kodomo o miru* 'to take care of a child.' The meaning of *miru* in the former sentence is different from that in latter sentence, in the sense that the former *miru* is essentially based on a visual activity, while the latter is not.

1.6 Core and extended meanings

As noted in 1.5, a polysemic word has a number of meanings which are semantically related. A polysemic word involves two meaning categories; namely, 'core meaning' and 'extended meaning.' The former, 'core meaning', is a fundamental meaning of a word³, from which extended meanings derive; and 'extended meaning' is a meaning which is related with and derived from the core meaning of a polysemic word (Tanaka 1996, Morita 1986, Okuda 1985). Take *head* for example: it has several meanings, i.e. it is polysemous. The core meaning of *head* is the uppermost part of a human body as in *He hit me on the head*. Some extended meanings of *head* include A good idea came into my head, There are fifty head of cattle in our pasture, the head a school, and head of cabbage, all of which are derived from the core meaning.

 $^{{}^{3}}$ A core meaning, or fundamental meaning, is a typical meaning of a word. The notion of typical meaning is the same as the notion of sememe in Kunihiro (1982: 44, 1989: 213), and others (Kokuritsu kokugo kenkyuujo 1985: 82, Nagashima 1968). In this thesis, the term sememe is not employed because the notion of sememe is primarily concerned with core meaning and does not refer to extended meanings; that is, the notion of sememe is a proper approach to core meaning, however, it is not to extended meanings (Shibata 1988: 59).

1.7 Grammatical features of the seven visual verbs

Of the seven visual verbs, five are transitive and two are intransitive: *Miru*, *mitsumeru*, *nagameru*, *miwatasu*, and *nozomu* are transitive verbs, and *miiru* and *mitoreru* are intransitive verbs. Note that *nozomu* can also be an intransitive verb; for example, *nozomu* in *umi ni nozomu* 'to look at an ocean from afar' is a transitive verb and *nozomu* in *umi o nozomu* 'to face an ocean' is an intransitive verb. The intransitive *nozomu*, which means 'to face', is not considered in this study for the reason that it does not have the sense of vision.

Transitive and intransitive verbs take different particles in Japanese in order to mark what is seen. The transitive visual verbs are accompanied by the accusative particle (ACC) o to indicate their objects. The sentence structure is 'X o verb', e.g. X o miru 'to see X' where the object is X. The intransitive verbs are accompanied by the dative particle (DAT) ni to indicate what is seen. The sentence structure is 'X ni verb', e.g. X ni miiru 'to gaze at X.'

1.8 The notion of semantic property

A semantic property is a general conceptual element or component of a sense of a word. That is, several semantic elements make up a meaning of a word. (Kokuritsu kokugo kenkyuujo 1985: 82-3). The semantic property denotes an abstract sense rather than a concrete sense. Let us consider *boy* as in *There is a boy*. There are innumerable boys in the world. They share common properties, i.e. they are human, male, and young, although they are different in face, personality, etc. From the semantic property perspective, *boy* fulfills the semantic properties of <human>, <male>, and

⁴See Ikegami (1975: 164) for further explanation.

in *He is a bachelor*. *Bachelor* is a person who is male, adult, and single. This word consists of four semantic properties, which are <human>, <male>, <adult>, and <single>⁵. The meaning of *bachelor* can be re-written as *bachelor* = <human> + <male> + <adult> + <single>. In this study, the term 'semantic property' is used as a conceptual semantic component.

This chapter has provided a general overview and background for the study of synonymous and polysemic Japanese visual verbs. The background defined the meanings of the terms used in this study.

Chapter 2 will present the analysis of the core meaning for each visual verb, and clarify the similarities and differences of these synonymous verbs. The similarities and the differences will show the characteristics of the verbs.

⁵The semantic property of *bachelor* is sometimes controversial. One issue is whether or not the property <unmarried> should take the place of <single>; however, issues related to sociolinguistic criteria rather than semantic properties are not part of this study.

CHAPTER 2

The description of the core meanings

This chapter presents the semantic descriptions of the core meanings of the seven visual verbs by examining their semantic properties. This chapter provides insights into the synonymous verbs: The similarities and differences of the seven verbs in question are clarified by the semantic descriptions. Lexical hierarchy and specialisation for each verb are also illustrated.

2.1 The core meanings of visual verbs

The core meaning is the general meaning of a word as defined in 1.6. A general meaning is found in a typical sentence in which visual verbs are used for something visible as their object⁶. When something invisible occurs as the object of the verb, the sense of the verb in the sentence is the extended meaning, unless the word is used metaphorically in context. Following are typical sentences in which the core meanings of the visual verbs are used:

- (1) Inu o miru
 dog ACC
 'to look at a dog'
- (2) Kagami o mitsumeru mirror ACC
 'to look in the mirror'

⁶The term 'object' is used as 'patient' in this study unless it has a note. 'Object' indicates something the agent sees, and therefore, something which is marked by dative case particle is also treated as 'object'.

- (3) Terebi ni miiruTV DAT watch'to watch TV'
- (4) Bijin ni mitoreru
 beautiful woman DAT
 'to gaze at a beautiful woman'
- (5) Umi o nagameruocean ACC'to look at the ocean'
- (6) Mawari o miwatasu around ACC'to look [at all the things] around [the agent]'
- (7) Shidonii wan o nozomu
 Sydney bay ACC
 'to see Sydney Harbour'

2.2 The core meanings: categories of semantic property

In order to characterise the seven Japanese visual verbs we will take a close look at the semantic properties of the ways of looking and the objects of the visual verbs. While the visual verbs involved describe some kind of visual activity, the differences among these verbs reside in the ways that agents look. Investigating the objects of the verbs is also important because they reflect the characteristics of each verb. As for the ways of looking, the analysis requires the following nine semantic properties: <visual>, <perception>, <continuity>, <visual point movement>, <fixed visual point>, <intention>, <non-intention>, <attention>, and <distance>.

The first and the second properties are $\langle visual \rangle$ and $\langle perception \rangle$. The former property represents a work of eyes, and the latter indicates perceiving something. These properties are contained in *miru* (Tanaka, 1996), Vision is one of the manners of perception and, hence, the work of eyes implies the existence of perceiving. Whether or not the $\langle visual \rangle$ property should include perceiving is arguable. In the investigation below, both the $\langle visual \rangle$ and $\langle perception \rangle$ properties are employed for ease of dealing with meanings without perceiving (2.3.1).

The third semantic property is <continuity>. This semantic property refers to whether the agent takes only a moment or a relatively long time to perform the activity. Kunihiro (1979: 72) studies the duration of the visual activities for *miru*, *nagameru*, and *mitsumeru*. He states that the visual activities for *nagameru* and *mitsumeru* should not cover a short period. This statement can be interpreted to mean that both verbs require a relatively long time, and thus, they have the <continuity> property.

The fourth and fifth semantic properties are <visual point movement> and <fixed visual point>. These semantic properties refer to whether the agent has to move his visual point from one object to another or one spot of an object to another, or has to fix his visual point upon the object. The property <fixed visual point> is found in *mitsumeru* (Sakota 1980)⁷.

⁷Kunihiro (1979: 73-4) claims that *mitsumeru* has the semantic property <fixed eye>. He uses the term <eye> in the analysis of the semantic properties of *mitsumeru* and *nagameru*. Sakota reexamines the synonymous pair of *mitsumeru* and *nagameru*. She points out that the term <visual point> describes semantic properties of *mitsumeru* and *nagameru* more accurately than using the term <eye>. She points out as following: Performing *mitsumeru* is to keep looking at the object, that is, <fixed eye>. When the object is not moving, it is fine to use <fixed eye>. However, when the object is moving, the semantic property <fixed eye> is not correct because the agent has to move his eye to keep looking at it. On the other hand, <fixed visual point>, unlike <fixed eye>, is correct with the moving object. As long as the visual point is fixed on the object, the movement of the object does not make any difference.

With the properties <intention> and <non-intention> we examine whether the agent performs the verbs with or without intention. The property <attention> refers to whether or not the agent is required to pay special attention.

The ninth semantic property is <distance>, which refers to whether or not the agent is far away from the object. Kunihiro (1979) and Sakota (1980) point out that *mitsumeru* and *nagameru* have the <distance> property.

Furthermore, we need two more semantic properties for objects. They are <interesting> and <beautiful>. As will be discussed shortly, they are important for the distinction of *miiru* and *mitoreru* (2.4.2).

2.3 The core meanings: semantic properties of performance

Regarding the semantic properties, among those which are in synonymous relationship, two types of properties are involved in synonyms: common property and relevant property. Kokuritsu kokugo kenkyuujo *Goi no kenkyuu to kyooiku ge* (1985: 85) refers to 'synonyms' as 'words which contain some common semantic components' (translation mine). Below, I will discuss common components (i.e. common properties) of the seven visual verbs, and different components (i.e. relevant properties).

First, the common properties shared by the seven verbs are discussed: they are <visual> and <perception>. The relevant properties follow the common properties and are: <continuity>, <visual point movement>, <fixed visual point>, <intention>, <non-intention>, <attention>, and <distance>.

2.3.1 The common properties

VISUAL

The property <visual> is one of the common properties where the core meanings of the visual verbs are concerned because all seven verbs belong to the semantic field of vision, and hence, the work of eyes is essential for each visual verb. The sentence, for example, *I looked at it* sounds natural but *I looked at it with my eyes closed* does not make sense unless it is used in a metaphorical sense. This is because visual verbs, in this case *to look at*, inherit the sense of <visual> and, therefore, *with the eyes closed* conflicts with it. No visual verb occurs with the opposite phrase *me o tsumutte* 'with the eyes closed.' Examples are shown below:

- (8) *Me o tsumutte tomodachi no kao o miru
 eye ACC close-CON friend of face ACC
 ('to look at the friend's face with the eyes closed')
- (9) *Me o tsumutte tomodachi no kao o mitsumeru('to look at the friend's face with the eyes closed')
- (10) *Me o tsumutte tomodachi no kao ni *miiru* DAT

('to stare at the friend's face with the eyes closed')

(11) *Me o tsumutte tomodachi no kao ni mitoreru('to gaze at the friend's face with the eyes closed')

(12) *Me o tsumutte tomodachi no kao o nagameru ACC

('to see the friend's face with the eyes closed')

(13) *Me o tsumutte keshiki o miwatasu scenery

('to look at all the scenery with the eyes closed')

(14) *Me o tsumutte keshiki o nozomu

('to see the scenery with the eyes closed')

What the examples show is that the visual verbs inherently have the semantic property <visual>.

PERCEPTION

The second semantic property which is commonly seen among the visual verbs is <perception>. This property means that the agent perceives something as a consequence of seeing visually. This semantic property is commonly seen because seeing something is equal to perceiving something visually, i.e. 'seeing' is 'perceiving visually.'

Seeing something without perceiving occurs only in contexts involving the analysis of miru (Tanaka 1996). Tanaka explains it with the example: Watashi wa kare no kao o miteita ga, jitsuwa nanimo miteinakatta 'Although I was looking at his face, in fact I did not see anything (translation mine).' In the example, *miru* appears twice. She claims that the first *miru*, in the example miteita 'was looking' which is in the past-progressive form, is understood as *miru* without <perception> because in the second part it says nanimo miteinakatta '[I] did not see anything.' The first miru involves only the <visual> property (i.e. work of eyes). If the first miru had <perception>, the

whole sentence would not make sense due to the conflict of the first and the second *miru*. Without the second part of the example, in the first part itself, *miru* is surely understood as 'to perceive visually.' Thus, *miru* without <perception> appears only as context.

Furthermore, the same difference between the verb itself and the verb in context is found with the other six verbs. The example that Tanaka introduced for *miru* is used for observation. The six verbs are collocated at the first position of *miru* in the example as follows:

(15) Kare no kao o *mitsumeteita* ga jitsuwa nanimo *miteinakatta*. he of face ACC *mitsumeru*-PAST, PROG but in fact nothing *see*-PAST, PROG, NEG

'[I] was looking at his face, but in fact [I] did not see anything.'

(16) Kare no kao ni *miitteita* ga jitsuwa nanimo *miteinakatta*. DAT *miiru*-PAST, PROG

'[I] was looking at his face, but in fact [I] did not see anything.'

(17) Kare no kao ni mitoreteita ga jitsuwa nanimo miteinakatta. mitoreru-PAST, PROG

'[I] was gazing at his face, but [I] did not see anything.'

(18) Kare no kao o nagameteita ga jitsuwa nanimo miteinakatta. ACC nagameru-PAST, PROG

'[I] was looking at his face, but [I] did not see anything.'

(19) Mawari o miwatashiteita ga jitsuwa nanimo miteinakatta.
around ACC miwatasu-PAST, PROG
'[I] was looking around, but in fact [I] did not see anything.'

(20) Tsuki o nozondeita ga jitsuwa nanimo miteinakatta. moon nozomu-PAST, PROG

'[I] was looking at the moon, but in fact [I] did not see anything.'

The above examples are appropriate: the verbs are not interpreted as having the <perception> property because of the second sentence *jitsuwa nanimo miteinakatta* 'in fact [I] did not see anything.' The appropriateness indicates that the six verbs without <perception> appear only in context. Like the case of *miru*, without the second sentence each verb in the first sentence has <perception>.

2.3.2 The relevant properties

Seven semantic features are further relevant to the visual verbs. They are <continuity>, <visual point movement>, <fixed visual point>, <intention>, <nonintention>, <attention>, and <distance>. These properties are essential and significant elements which constitute the core meanings of the seven visual verbs. As will see shortly the seven features distinguish the seven visual verbs.

DURATION

Kunihiro (1979) and Morita (1986) point out that *miru* is neutral⁸ in respect of duration. This statement indicates that the performance of *miru* takes either a moment or a long time. Consider the following:

(21) Zutto mirulong time'to see for a long time'

⁸In this paper, the term 'neutral' is used as 'free from' or 'does not have.'

(22) Chiratto miru

instant

'to see in an instant '

Zutto is an adverb meaning 'for a long time' and *chiratto* is an adverb meaning 'in an instant.' The examples (21) and (22) demonstrate that performing *miru* can take either a long time or a short time.

On the other hand, studying *mitsumeru*, *miiru*, *mitoreru*, *nagameru*, *miwatasu*, and *nozomu* gives a different result. These verbs have a restriction with respect to duration. In Examples (23) to (28) the verbs collocate with *zutto* 'for a long time', and Examples (29) to (34) have *chiratto* 'in an instant.' All of the verbs can appear with *zutto*, but no verbs can appear with *chiratto*.

(23) Zutto mitsumeru

for a long time

'to gaze [at something] for a long time'

(24) Zutto miiru

'to look [at something] for a long time'

(25) Zutto mitoreru

'to gaze [at something] for a long time'

(26) Zutto nagameru

'to see [something] for a long time'

(27) Zutto miwatasu

'to look [at something] around [you] for a long time'

(28) Zutto nozomu

'to see [something] for a long time'

As shown above, all verbs can occur with *zutto*. This means that the action of the verbs can take a relatively long time.

- (29) *Chiratto mitsumeru
 in an instant
 ('to look in an instant')
- (30) *Chiratto *miiru* ('to stare in an instant')
- (31) *Chiratto *mitoreru* ('to gaze in an instant')
- (32) *Chiratto *nagameru* ('to see at in instant')
- (33) *Chiratto miwatasu('to look around in an instant')
- (34) *Chiratto *nozomu* ('to see in an instant')

The above examples from (29) to (34) indicate that the six verbs *mitsumeru*, *miiru*, *mitoreru*, *nagameru*, *miwatasu* and *nozomu* cannot appear with *chiratto*, whereas *miru* in (22) can. What the examples (21) to (34) suggest is that the actions of the six verbs *mitsumeru*, *miiru mitoreru*, *nagameru*, *miwatasu*, and *nozomu* need a relatively long duration to perform.

This observation can be enforced by examining the objects of the verbs. If a verb needs a long visual activity, the verb must take objects which can be seen for a long time. Collocation with objects which can be seen only for a moment should be inappropriate. If a verb can take either a long visual action or a short visual action, the object of the verb may be something which can be seen for a long time or something which can be seen only for a second. *Inazuma* 'a flash of lightning', for example, is an object which can be seen only in an instant, and *Fujisan* 'Mt. Fuji' is an object which can be seen for a long time. All of the seven verbs may appear with *Fujisan*, whereas only *miru* may occur with *inazuma*.

(35) Inazuma o miru
a flash of lightning ACC
'to see a flash of lightning'

(36) *Inazuma o mitsumeru

('to look at a flash of lightning')

(37) *Inazuma ni *miiru* DAT ('to stare at a flash of lightning')

(38) *Inazuma ni *mitoreru*

('to gaze at a flash of lightning')

(39) *Inazuma o *nagameru* ACC

('to view a flash of lightning')

(40) *Inazuma o miwatasu

('to look at a flash of lightning [around you]')

(41) *Inazuma o nozomu

('to see a flash of lightning')

It is clear from the above examples that no verbs except *miru* can occur with *inazuma* 'a flash of lightning.' This coincides with the fact that only the performance of *miru* can take a second. In following examples *Hujisan* 'Mt. Fuji' is used, which confirm that all the seven verbs involved can take a long time visual activity.

(42) Hujisan o miruMt. Fuji ACC'to see Mt. Fuji'

- (43) Hujisan o mitsumeru'to stare at Mt. Fuji'
- (44) Hujisan ni *miiru* DAT 'to gaze at Mt. Fuji'
- (45) Hujisan ni mitoreru'to be fascinated with Mt. Fuji'
- (46) Hujisan o *nagameru* ACC 'to view Mt. Fuji'

(47) Hujisan o *miwatasu* 'to look at Mt. Fuji'

(48) Hujisan o nozomu 'to look at Mt. Fuji' The fact that all seven verbs can collocate with *Hujisan* 'Mt. Fuji' whereas only *miru* can collocate with *inazuma* 'lightning' suggests that the six verbs *mitsumeru*, *miiru*, *mitoreru*, *nagameru*, *miwatasu*, and *nozomu* contain the semantic property <continuity>. This property means that when the agent performs the action of a verb, the action needs a relatively long time to be performed. *Miru*, on the other hand, is neutral in this property because it can be performed either in a second or for a relatively long time.

VISUAL POINT

With the <visual point> property, visual point movement is investigated in the action of the visual verbs. Kunihiro (1979) and Sakota (1980) examine *mitsumeru* and *nagameru* in this respect. Kunihiro employs the term 'eye' and claims that *mitsumeru* has <fixed eye> and *nagameru* is neutral in respect of eye movement: *nagameru* allows the agent to move his eyes whereas *mitsumeru* does not allow him to (Kunihiro, 1979: 73-4). Sakota reexamined this claim and argues that whether or not the eyes of the agent are fixed does not matter but what is important is whether or not the visual point is fixed. When the object of the verb moves, the term 'eye' is not sufficient to present the semantic features of *mitsumeru* and *nagameru*; however, the term 'visual point' is (Sakota, 1980: 37). Following Sakota (1980), I employ the term 'visual point movement' for this study. In this respect, we have <visual point movement> and <fixed visual point>.

Sakota (1980: 37) claims that *mitsumeru* has <fixed visual point> and *nagameru* is free from this property. We will investigate other visual verbs regarding this point.

For the examination of 'visual point movement', *jitto* 'fixedly/ steadily' is used as a first diagnostic word. *Jitto* represents motionless of the visual point. Examples are shown below.

(49) Jitto *miru* fixedly

'to see [something] fixedly'

(50) Jitto mitsumeru

'to look at [something] fixedly'

(51) Jitto miiru

'to stare at [something] fixedly'

(52) Jitto mitoreru

'to be fascinated [with something] fixedly'

(53) Jitto nagameru

'to look at [something] fixedly'

(54) *Jitto miwatasu

('to look [at something] around [you] fixedly')

(55) Jitto nozomu

'to see [something] fixedly'

What the examples above demonstrate is that *miwatasu* does not allow the agent to fix his visual point upon the object while the other six verbs do.

Jirojiro '(eyes) moving around restlessly' and *gurutto* 'around (the agent)' are second diagnostic words. They have a sense of visual point movement.

(56) Jirojiro miru moving the eyes

'to stare at [something]'

(58) *Jirojiro miiru

(59) *Jirojiro mitoreru

(60) Gurutto nagameru
around
'to look [at something] around [you]'

(61) Gurutto miwatasu

'to look at [all the things] around [the agent]'

(62) Gurutto nozomu

'to look [at something] over around [you]'

The above examples suggest that miru, nagameru, miwatasu, and nozomu allow the agent to move his visual point.

Let us consider other examples which show that the agent need not move his visual point in performing *miru*, *mitsumeru*, *miiru*, *mitoreru*, *nagameru*, *miwatasu*, and *nozomu*. In Examples (63) to (69) *hoshi* 'a star' collocates with the verbs. *Looking at a star* does not need visual point movement but the visual point is fixed on the star.

(63) Hoshi o miru star ACC 'to see a star'

(64) Hoshi o *mitsumeru* 'to look at a star'

(65) Hoshi ni *miiru* DAT

'to stare at a star'

(66) Hoshi ni *mitoreru*'to gaze at a star'

(67) Hoshi o *nagameru* ACC 'to view a star'

(68) *Hoshi o miwatasu

('to look at a star [over around]')

(69) Hoshi o nozomu

'to look at a star'

The examples above show that the result obtained is the same as in the examples with *jitto*, that is, only *miwatasu* is inappropriate with the object *hoshi* 'a star.' This fact supports the view that the agent has to move his visual point in performing *miwatasu*.

The examples from (70) to (76) below have the object *yozora ichimen no hoshi* 'stars across the whole sky.' This object makes the agent move his visual point. The stars across the whole sky cannot all be seen at one time so the agent has to move his visual point to see.

(70) Yozora ichimen no hoshi o miru night sky across the whole of star ACC
'to see stars across the whole night sky'

(71) *Yozora ichimen no hoshi o mitsumeru

('to look at stars across the whole night sky fixedly')

(72) *Yozora ichimen no hoshi ni miiru

DAT

('to gaze at stars across the whole night sky')

- (73) *Yozora ichimen no hoshi ni *mitoreru*('to be fascinated with stars across the whole night sky')
- (74) Yozora ichimen no hoshi o nagameru ACC

'to view stars across the whole night sky'

- (75) Yozora ichimen no hoshi o miwatasu'to look at stars across the whole night sky'
- (76) Yozora ichimen no hoshi o nozomu'to see stars across the whole night sky'

What the above examples show is that *miru*, *nagameru*, *miwatasu*, and *nozomu* may occur with *yozora ichimen no hoshi* 'the stars across the whole night sky', whereas *mitsumeru*, *miiru*, and *mitoreru* may not. This result coincides with the examples (56) to (62), in which either *jirojiro* or *gurutto* is used, demonstrating that *miru*, *nagameru*, *miwatasu*, and *nozomu* allow the agent to move his visual point.

To sum up the results of Examples (49) to (76), *miru*, *nagameru*, and *nozomu* are neutral with respect to visual point movement. The agent may or may not move his/her visual point in performing these verbs. However, in the performance of *mitsumeru*, *miiru*, and *mitoreru*, the visual point cannot move

but has to be fixed on the object. These three verbs have a <fixed visual point> semantic property. When the agent has to move his/her visual point in the visual activity as in the performance of *miwatasu*, the verb has the semantic property <visual point movement>.

INTENTION

Next is the agent's intention in the performance of *miru*, *mitsumeru*, *miiru*, *mitoreru*, *nagameru*, *miwatasu*, and *nozomu*. In order to observe whether or not an agent can perform these visual verbs with intention, we will take a closer look at their volitional and imperative forms, both of which convey the sense of intention. The volitional forms are found in Examples (77) to (83), and the imperative forms are found in Examples (84) to (90).

(77) Miyoo miru-VOL'Let's see [it].'

(78) Mitsumeyoo mitsumeru-VOL

'Let's look intently at [it].'

(79) *Miiroo

miiru-VOL

('Let's be attracted.')

(80) **Mitoreyoo*

mitoreru-VOL

('Let's be fascinated.')

(81) Nagameyoo nagameru-VOL

'Let's view [it].'

(82) Miwatasoo

miwatasu-VOL

'Let's look around.'

(83) Nozomoo

nozomu-VOLITIONAL

'Let's look over [it].'

Examples (77) to (83) reveal that the volitional forms of *miiru* and *mitoreru* are inappropriate. In the following examples the verbs are in imperative form:

(84) Miro miru-IMP'Look at [it]!'

(85) Mitsumero mitsumeru-IMP

'Look intently at [it]!'

(86) **Miire*

*miiru-*IMP

('Be attracted to [it]!')

(87) *Mitorero

mitoreru-IMP

('Be fascinated with [it]!')

(88) Nagamero

nagameru-IMPERATIVE

'Observe [it]!'

(89) Miwatase miwatasu-IMP

'Look around!'

(90) Nozome

nozomu-IMP

'See [it]!'

Neither the volitional nor the imperative form of *miiru* and *mitoreru* is acceptable.

The following examples have a diagnostic item *-temiru* 'to try to do' with the verbs, which are in connective form. The item *-temiru* also conveys the sense of intention.

- (91) Mitemiru
 miru-CON-try to
 'to try to see'
- (92) Mitsumetemiru mitsumeru-CON-try to

'to try to look fixedly at [it]'

(93) *Miittemiru

miiru-CON-try to

('to try to be attracted')

.

(94) **Mitoretemiru mitoreru*-CON-try to

('to try to be fascinated')

- (95) Nagametemiru
 nagameru-CON-try to
 'to try to view [it]'
- (96) Miwatashitemiru
 miwatasu-CON-try to
 'to try to look around'
- (97) Nozondemiru
 nozomu-CON-try to
 'to try to see [it]'

What is clear from the above examples is that the semantic property <intention> distinguishes *miiru* and *mitoreru* from the other five verbs; *miru*, *mitsumeru*, *nagameru*, *miwatasu*, and *nozomu* can be performed with intention while *miiru* and *mitoreru* cannot. Thus, it is suggested that *miru*, *mitsumeru*, *nagameru*, *miwatasu*, and *nozomu* have a semantic feature <intention>, and *miiru* and *mitoreru* do not.

ATTENTION

The seven visual verbs are next examined in terms of the degree of attention. Paying attention may be a presupposition when we look at something. This presupposed attention is an ordinary attention. However, there are verbs which require full attention rather than ordinary attention, e.g. *gyooshisuru* 'stare at'. We employ *isshinni* 'intently', *jitto* 'steadily/fixedly', and *bonyari* 'absentmindedly'. The first two items present the sense of full attention, and the third item presents the sense of lack of attention or a low degree of attention. Let us first consider the verbs with *isshinni* 'intently' and *jitto* 'steadily/ fixedly.' Following are examples in which *isshinni* or *jitto* is used with the verbs:

(98) Isshinni miru intently

'to look intently at [it]'

(99) Isshinni mitsumeru'to look intently at [it]'

(100) Isshinni *miiru*'to look intently at [it]'

(101) Jitto *mitoreru* steadily

'to be fascinated [with something] fixedly'

(102) Jitto nagameru

'to see [it] steadily'

(103) Isshinni miwatasu

'to look steadily around'

(104) Isshinni nozomu

'to look intently at [it]'

The above examples show that all the verbs are appropriate. This indicates that the agent may perform these verbs with full attention to the object. Second, we examine the verbs which can occur with *bonyari* 'absentmindedly.' This is semantically opposite to *isshinni* and *jitto*, which are used in (98) to (104) above.

(105) Bonyari miru absent-mindedly
'to see [something] absent-mindedly'

(106) *Bonyari mitsumeru

(107) *Bonyari miiru

(108) Bonyari mitoreru

'to gaze absent-mindedly at [it]'

(109) Bonyari nagameru

'to view [something] absent-mindedly'

(110) Bonyari miwatasu

'to look around absent-mindedly'

(111) Bonyari nozomu

'to look at [something] absent-mindedly'

The above examples show that *bonyari* does not occur with *mitsumeru* and *miiru*. This fact indicates that the agent may perform *miru*, *mitoreru*, *nagameru*, *miwatasu* and *nozomu* without attention to the object while *mitsumeru* and *miiru* may not be performed without special attention.

Summarising the results, the above examples demonstrate that full attention has to be paid to the object in the performance of *mitsumeru* and *miiru*,

whereas attention may or may not paid to the object when the agent performs *miru*, *mitoreru*, *nagameru*, *miwatasu* and *nozomu*. Note that it was mentioned by Kunihiro (1979: 75-7) that in the performance of *mitsumeru* the agent may pay full attention to the object, namely <attention>. It can be said, therefore, that *mitsumeru* and *miiru* have a semantic property <attention>, which indicates that the agent pays a high degree of attention to the object; and that *miru*, *mitoreru*, *nagameru*, *miwatasu* and *nozomu* are neutral regarding the property <attention>.

DISTANCE

Syntactically speaking, the visual verbs that we are dealing with take both the agent, who looks at, and an object which is something/somebody to be seen. We will investigate the distance between the agent and the object for each verb.

The distance between the agent and the object for *mitsumeru* and *nagameru* is examined by Kunihiro (1979). He argues that both *mitsumeru* and *nagameru* are neutral with distance: The objects for the verbs may be either close to or far away from the agent.

Let us examine the seven verbs with respect to distance. The objects in (112) to (118) are *tooku no yama* 'a mountain/ mountains in the far distance' and the objects in (119) to (125) are *sora no hoshi* 'a star/ stars in the sky', both of which are far away from the agent:

(112) Tooku no yama o miru far away of mountain ACC
'to look at a mountain in the far distance'

(113) Tooku no yama o mitsumeru

'to look fixedly at a mountain in the far distance'

(114) Tooku no yama ni miiru

DAT

'to gaze at a mountain in the far distance'

(115) Tooku no yama ni mitoreru

'to be fascinated with a mountain in the far distance'

(116) Tooku no yama o nagameru
 ACC
 'to view a mountain in the far distance'

(117) Tooku no yama o miwatasu

'to look at all mountains in the far distance'

(118) Tooku no yama o nozomu

'to see a mountain in the far distance'

The above examples show that the seven visual verbs can occur with *tooku no* yama 'a mountain/ mountains in the far distance.' This means that there may be far distance between the agent and the object for these verbs. Following are examples in which the object is sora no hoshi 'a star/ stars in the sky.' Sora no hoshi is also far away from the agent.

(119) Sora no hoshi o miru
sky of star ACC
'to look at a star in the sky'

(120) Sora no hoshi o mitsumeru'to look fixedly at a star in the sky'

(121) Sora no hoshi ni *miiru* DAT

'to gaze at a star in the sky'

(122) Sora no hoshi ni *mitoreru*'to be fascinated with a star in the sky'

(123) Sora no hoshi o *nagameru* ACC 'to view a stars in the sky'

(124) Sora no hoshi o miwatasu'to look at all the stars in the sky'

(125) Sora no hoshi o *nozomu* 'to see stars in the sky'

All the examples from (112) to (125) are also acceptable. This acceptability illustrates again that the distance between the agent and the object can be great far for the verbs in question.

The seven verbs in (126) to (132) and (133) to (139) are investigated in order to see whether or not the objects can be close to the agent. The examples from (126) to (132) have *te ni motta shashin* 'a photo in hand' for the objects which are very close to the agent.

(126) Te ni motta shashin o miru hand in holding photo ACC'to look at a photo in hand'

(127) Te ni motta shashin o *mitsumeru*'to look fixedly at a photo in hand'

(128) Te ni motta shashin ni miiru
DAT
'to look intently at a photo in hand'

(129) Te ni motta shashin ni *mitoreru*'to be fascinated with a photo in hand'

(130) Te ni motta shashin o *nagameru* ACC

'to view a photo in hand'

(131) *Te ni motta shashin o miwatasu

(132) *Te ni motta shashin o nozomu

These statements show that *miwatasu* and *nozomu* cannot occur with *te ni motta shashin* 'a photo in hand.' For a slightly farther distance, the examples from (133) to (139) have *menomae no kabe* 'the wall right ahead' for the objects.

- (133) Menomae no kabe o miru
 right ahead of wall ACC
 'to see the wall right ahead'
- (134) Menomae no kabe o mitsumeru'to look steadily at the wall right ahead'

(135) Menomae no kabe ni miiru

DAT

'to look intently at the wall right ahead'

(136) Menomae no kabe ni *mitoreru*'to be fascinated with the wall right ahead'

(137) Menomae no kabe o nagameruACC'to view the wall right ahead'

(138) *Menomae no kabe o miwatasu

(139) *Menomae no kabe o nozomu

The above examples show the same results as (126) to (132).

To sum up, the examples from (112) to (139) demonstrate that *miwatasu* and *nozomu* do not occur with objects close to the agent; they are used only when the distance between the agent and the object is far. The other five verbs *miru*, *mitsumeru*, *miiru*, *mitoreru*, and *nagameru* may occur with the object either near or far from the agent. This leads to the view that *miwatasu* and *nozomu* have the semantic property <distance>, which denotes that these verbs need a long distance between the agent and *nagameru*, are neutral with respect to the semantic property <distance>.

In this section (2.3), we have investigated the core meanings of the visual verbs in terms of semantic properties of performance. The investigation has involved nine semantic properties by which the characteristics of the target verbs were partially revealed. Table 1 summarises these nine semantic properties for the seven visual verbs.

	miru	nagameru	nozomu	mitoreru	mitsumeru	miiru	miwatasu
<visual></visual>	+	+	+	+	+	+	+
<perception></perception>	+	+	+	+	+	+	+
<continuity></continuity>		+	+	+	+	+	+
<intention></intention>	+	+	+		+		+
<non-intention></non-intention>				+		+	
<fixed point="" visual=""></fixed>				+	+	+	
<visual point<br="">movement></visual>							+
<attention></attention>					+	+	
<distance></distance>			+				+

Table 1. Summary of the semantic properties for the seven visual verbs

In the table above, the symbol "+" indicates that the verb has the property. Blank means that the verb does not have the property, e.g. *miru* has the properties <visual>, <perception>, and <intention>, but does not have the properties <continuity>, <fixed visual point>, etc.

Table 1 illustrates that the <perception> and <visual> semantic properties are common to all the seven visual verbs. The other seven properties specify the characteristics of the target verbs. The <continuity> property is found in all the verbs except *miru*. This property distinguishes the superordinate word, i.e. *miru* from the hyponyms, i.e. the other verbs. Furthermore, the <continuity> property distinguishes *nagameru* from *miru*. Properties <intention> and <non-intention> differentiate *miiru* and *mitoreru* from the other verbs. They also distinguish *mitsumeru* from *miiru*. The <attention> property is a characteristic of *mitsumeru* and *miiru*. At the same time, this property distinguishes *miiru* from *mitoreru*. The property <fixed visual point> differentiates *mitsumeru*, *miiru* and *mitoreru* from the other verbs. On the other hand, a <visual point movement> property is found in *miwatasu*. The <visual point movement> property makes a distinction between *miwatasu* and *nozomu*. Finally, <distance> is a property that only *miwatasu* and *nozomu* have.

2.4 The core meanings: semantic properties of objects

The purpose of this section is to illustrate that there are restrictions on objects for the seven verbs. As mentioned in 2.2, the restrictions on objects are reflections of the semantic properties of the visual activities. That is, conversely, the objects of the verbs are determined by specific semantic properties of the verbs themselves. Nevertheless, some features of the objects do not seem to be determined by the semantic properties of the verbs. These features are essential to define the meanings of the visual verbs in this study because they are inherent features of the collocation. We might call such features essential properties throughout this thesis.

The semantic properties of the objects which are predictable from the semantic properties of the visual performances are discussed below, which is followed by the essential properties of objects. Since the core meanings of the visual verbs are our concern, the scope is limited to those objects which are visible.

2.4.1 Semantic properties of objects restricted by visual performance

Four kinds of semantic properties of objects are discussed in this sub-section. The semantic properties are: <visible>, <duration of appearance>, <largeness of objects>, and <quantity>. These four features are restricted by the features of the activities of the visual verbs.

VISIBLE

The seven verbs have the semantic property <visual> (2.3.1). Accordingly, the objects of the verbs have a semantic property <visible>. This can be verified by

Examples (1) to (7) in 2.1. which are reproduced below as (140) to (146) for convenience.

(140) Inu o miru dog ACC
'to look at a dog'

- (141) Kagami o mitsumeru mirror ACC
 'to look in the mirror'
- (142) Terebi ni *miiru* TV DAT 'to watch TV'
- (143) Bijin ni mitoreru
 beautiful woman
 'to gaze at a beautiful woman'
- (144) Umi o *nagameru* ocean ACC 'to look at an ocean'
- (145) Mawari o miwatasu around

'to look [at things] around [you]'

(146) Shidonii wan o nozomu
Sydney bay
'to see Sydney Harbour'

The objects in the above examples are *inu*, *kagami*, *terebi*, *bijin*, *umi*, *mawari*, and *Shidonii wan*, all of which are visible.

Non-visible objects cannot collocate with the visual verbs. Following are examples in which the object is *mushi no koe* 'noise of insects' which is non-visible:

- (147) *Mushi no koe o miru
 insects of noise ACC
 ('to look at noise of insects')
- (148) *Mushi no koe o mitsumeru
- (149) *Mushi no koe ni *miiru* DAT

(150) *Mushi no koe ni mitoreru

(151) *Mushi no koe o nagameru ACC

(152) *Mushi no koe o miwatasu

(153) *Mushi no koe o nozomu

As shown above, Examples (147) to (153) are all inappropriate. The inappropriateness of them and the appropriateness in (140) to (146) indicate that the objects should be visible for all the seven verbs.

DURATION OF APPEARANCE

For all the verbs in question, except *miru*, their objects have to be seen for a while because these six verbs have the property <continuity>, i.e. the activities of seeing take place for a while. The momentary light of a camera flash, for example, cannot collocate with the six verbs, whereas Sydney Tower can, as shown in Examples (154) to (174). This is because the flash can be seen only for a second and Sydney Tower can be seen for a long time.

- (154) Kamera no hurasshu o miru
 camera of flash ACC
 'to see a light of a camera flash'
- (155) *Kamera no hurasshu o mitsumeru('to look at a light of a camera flash')
- (156) *Kamera no hurasshu ni miiru DAT

('to stare at a light of a camera flash')

- (157) *Kamera no hurasshu ni mitoreru('to gaze at a light of a camera flash')
- (158) *Kamera no hurasshu o *nagameru* ACC

('to view a light of a camera flash')

(159) *Kamera no hurasshu o miwatasu

(160) *Kamera no hurasshu o nozomu('to see a light of a camera flash')

In the examples above only *miru* may cooccur with the object *Kamera no hurasshu* 'a light of a camera flash.'

Following are examples in which the object is *shidoniitawaa* 'Sydney Tower', which can be seen for a long time:

(161) Shidoniitawaa o miruSydney Tower ACC'to see Sydney Tower'

- (162) Shidoniitawaa o mitsumeru'to stare at Sydney Tower'
- (163) Shidoniitawaa ni miiruDAT'to gaze at Sydney Tower'
- (164) Shidoniitawaa ni mitoreru'to be fascinated with Sydney Tower'
- (165) Shidoniitawaa o nagameru

ACC

'to look at Sydney Tower'

(166) Shidoniitawaa o miwatasu'to look at Sydney Tower [from bottom to top]'

(167) Shidoniitawaa o nozomu'to look at Sydney Tower'

With *shidoniitawaa* 'Sydney Tower' for the objects of the visual verbs, all examples are appropriate. This indicates that all the verbs can take an object which lasts long. Therefore, the objects for *mitsumeru*, *miiru*, *mitoreru*, *nagameru*, *miwatasu*, and *nozomu* have the property <last> to fulfill the <continuity> property of the visual performance, while the object for *miru* is neutral with respect to this property. The property of the <last> object means that the view of the object lasts, at least for a while.

LARGENESS OF OBJECTS

Recall that *miwatasu* and *nozomu* have the semantic property <distance> while the other verbs do not (See 2.3). Furthermore, *miwatasu* has the <visual point movement> property (See 2.3). These properties delimit the size of the objects. The object of *miwatasu* has to be large and wide, and the object of *nozomu* has to be large. With a small object the activities of *miwatasu* and *nozomu* cannot be achieved, because a small object cannot be seen from a long distance. For example, *ari* 'an ant' is very small, and it cannot collocate with *miwatasu* and *nozomu*:

(168) *Ari o miwatasu ant ACC

(169) *Ari o nozomu

On the other hand, a view, setonaikai no shimajima 'the islands in the Inland sea of Japan' is very large and wide-spread so it can be seen from far away and it enables the visual point to move. Setonaikai no shimajima 'the islands in the Inland sea of Japan' can collocate with miwatasu and nozomu as follows:

(170) Setonaikai no shimajima o miwatasu
the Inland sea of Japan of islands ACC
'to look at all the islands in the Inland sea of Japan'

(171) Setonaikai no shimajima o nozomu

'to see the islands of the Inland sea of Japan'

In a physical sense, *tsuki* 'moon' is far away and enormous so it can be seen from the Earth. *Tsuki* can occur with *nozomu* but it cannot occur with *miwatasu*, because *tsuki* does not enable the visual point to move:

(172) *Tsuki o miwatasu moon ACC

(173) Tsuki o nozomu

'to see the moon'

Examples (168) to (173) verify that the objects of *nozomu* are large and that the objects of *miwatasu* are large and wide-spread. In other words, the objects of *miwatasu* have two semantic properties <large> and <wide>, and the objects of *nozomu* have the property <large>. As for the <wide> property, whether the object is horizontal or vertical does not matter.

The objects of the other verbs, *miru*, *mitsumeru*, *mitoreru*, *miiru*, and *nagameru*, may be small or large as these verbs are neutral with respect to distance. When the object is small the object would be close to the agent, and when the object is large the object would be far away from the agent. Examples below show that the five verbs may take a small object:

(174) Ari o miru ant ACC 'to look at an ant'

(175) Ari o mitsumeru'to look intently at an ant'

(176) Ari ni miiru
DAT
'to look closely at an ant'

(177) Ari ni mitoreru

'to gaze at an ant'

(178) Ari o nagameru ACC

'to see an ant'

The objects of the verbs in the above examples are *ari* 'an ant', which is small, and all the examples are appropriate, indicating that the five verbs may take small objects.

Look at the following examples in which the objects are zoo 'an elephant', which is large:

(179) Zoo o miruelephant ACC'to look at an elephant'

(180) Zoo o mitsumeru

'to look intently at an elephant'

(181) Zoo ni *miiru*DAT
'to take a close at an elephant'

(182) Zoo ni mitoreru

'to gaze at an elephant'

(183) Zoo o *nagameru* ACC 'to see an elephant'

Examples (179) to (183) are all appropriate, and this means that the five verbs may occur with large objects. Thus, the examples (174) to (183) verify that the objects of *miru*, *mitsumeru*, *miiru*, *mitoreru*, and *nagameru* may be small or large. In other words, the objects of the five verbs, *miru*, *mitsumeru*, *mitoreru*, *mitoreru*, *mitru*, *mitsumeru*, *mitoreru*, *mitoreru*, *mitsumeru*, *mitoreru*, *mitoreru*, *mitsumeru*, *mitoreru*, *mitoreru*, *mitoreru*, *mitsumeru*, *mitoreru*, *mitoreru*

ı

QUANTITY

We now discuss the quantity of the objects for the visual verbs. The objects of *mitsumeru*, *miiru*, and *mitoreru* are delimited in terms of quantity due to their semantic property <fixed visual point>. The agent has to fix his visual point on an object in the activity of seeing, so that it is a single object or a single cluster of something.⁹ Sentences involving *ippiki no hitsuji* 'one sheep' and *ooku no hitsuji* 'lots of sheep' are examples. With *ippiki no hitsuji* 'one sheep' the agent can fix his visual point, and the sentences in which *mitsumeru*, *miiru*, and

⁹The quantity of the objects for *mitsumeru* and *nagameru* is discussed by Sakota (1980). She claims that the object for *mitsumeru* is singular or a single cluster of something, and the object for *nagameru* may be either singular or plural.

mitoreru collocate with *ippiki no hitsuji* 'one sheep' are appropriate, as shown below:

(184) Ippiki no hitsuji o mitsumeruone of sheep ACC'to look at the sheep'

(185) Ippiki no hitsuji ni *miiru* DAT 'to look closely at the sheep'

(186) Ippiki no hitsuji ni mitoreru'to gaze at the sheep'

Examples above (184) to (186) show that *mitsumeru*, *miiru*, and *mitoreru* may occur with *ippiki no hitsuji* 'one sheep'. This cooccurrence is explained by the fact that the object is single and the agent can put his visual point on it.

On the other hand, more than one thing, for example *ooku no hitsuji* 'lots of sheep', is not appropriate as the object for the visual verbs *mitsumeru*, *miiru*, and *mitoreru*. The object consists of many members, and in the case of lots of sheep the agent has to move his visual point actively from one sheep to another to see them. Moving the visual point conflicts with <fixed visual point>. Consider the following examples:

(187) *Ooku no hitsuji o mitsumeru
lots of sheep ACC
('to look intently at lots of sheep')

(188) *Ooku no hitsuji ni *miiru* DAT

('to look closely at lots of sheep')

(189) *Ooku no hitsuji ni mitoreru

('to gaze at lots of sheep')

The examples above are all inappropriate because *ooku no hitsuji* cannot occur with the visual verbs *mitsumeru*, *miiru*, and *mitoreru*. However, when lots of sheep get together and form a flock of sheep, the results are different.

(190) Ooku no hitsuji no mure o mitsumeru
lots of sheep of cluster ACC
'to look intently at a flock of sheep'

(191) Ooku no hitsuji no mure ni miiru
 DAT
 'to look closely at a flock of sheep'

(192) Ooku no hitsuji no mure ni mitoreru

'to gaze at a flock of sheep'

As presented above, Examples (190) to (192) are appropriate. Comparing the inappropriate Examples (187) to (189) *ooku no hitsuji* 'lots of sheep' with the appropriate examples (190) to (192) *ooku no hitsuji no mure* 'flock of many sheep', the difference is whether or not the object is regarded as one or a cluster. Thus, it is clear that the objects of *mitsumeru*, *miiru*, and *mitoreru* have to be either one or a single cluster. These facts lead to the conclusion that the objects of *mitsumeru*, *miiru*, and *mitoreru* have the semantic property <single>. The <single> property indicates that the object is single in terms of quantity.

Let us now take a look at the objects of *miru*, *nagameru*, and *nozomu*. The objects of *miru*, *nagameru*, and *nozomu* may be single or plural since *miru*, *nagameru*, and *nozomu* are neutral with respect to visual point movement.

We will first consider the case where these three verbs may collocate with a single object on which the agent can fix his visual point.

(193) Kuruma o miru car ACC 'to look at a car'

(194) Hana o *nagameru* flower 'to see a flower'

(195) Tooku no shima o nozomu far away of island
'to look at a far away island'

In Examples (193) to (195) the objects are single, and they are appropriate. These examples show that the objects of *miru*, *nagameru*, and *nozomu* may be single.

Similarly, the following examples have plural objects that the agent has to move his visual point to see them:

- (196) Takusan no kuruma o miru many of car ACC 'to look at many cars'
- (197) Ooku no hanabana o nagameru
 lots of flowers ACC
 'to see lots of flowers'

(198) Ooku no shimajima o nozomu
lots of islands
'to look at lots of islands afar'

In Examples (196) to (198) the objects are plural, and yet they are still appropriate. Thus, Examples (193) to (198) demonstrate that the objects of *miru*, *nagameru*, and *nozomu* are neutral with respect to quantity.

Next, we consider *miwatasu*, which has the <visual point movement> and <distance> properties. As for the <distance> property the object must be immensely large. If the object is small, it cannot be perceived from far away. The <visual point movement> property delimits the object: the object has to be so wide that the agent can move his visual point. The condition of width may cause the object to be plural. Example (163) is cited again as (199).

(199) Setonaikai no shimajima o miwatasu
the Inland sea of Japan of islands ACC
'to look at all islands in the Inland sea of Japan' ((199)=(163))

The above example has the plural object *shimajima* 'islands' and it is appropriate. If, however, the object of *miwatasu* should be plural, inappropriateness of the following example cannot be explained. Example (200) also has a plural object.

(200) *Haabaaburijji to operahausu to shidoniitawaa o miwatasu
the Harbor bridge and the opera house and Sydney Tower ACC
('to look at the Harbor bridge, the Opera house, and Sydney Tower')

The contradiction of (199) and (200) is explained by observing that the object for *miwatasu* is a single view or scene. A single view does not conflict with <visual point movement>. A view is widespread in front of the agent, and he/ she

can see the view by moving the view point. The object *shimajima* 'islands' in (199) is treated as a single cluster of islands. In other words, *setonaikai no shimajima* 'the islands in the Inland sea of Japan' is a single view as a whole. On the other hand, *haabaaburijji to operahausu to shidoniitawaa* 'the Harbor bridge, the Opera house, and Sydney Tower' in (200) is not a single view. The following example supports the observation that *miwatasu* requires a single view:

(201) Arupusu no yamayama o miwatasu
Alps of mountains ACC
'to look at all the mountains of Alps'

The object *yamayama* 'mountains' is plural and, at the same time they all together form a single view. Hence, it can be said that the object of the visual verb *miwatasu* is a single view, and has the property <single>.

2.4.2 Essential semantic properties of objects

In 2.4.2, two particular semantic properties of objects will be focused on: <interesting> and <beautiful>. The first property <interesting> means that the object has a quality of 'interesting' to which the agent is attracted. The second property <beautiful> means that the object has a quality of 'beautiful' with which the agent is fascinated.

The properties <interesting> and <beautiful> are significant for two reasons; (i) these properties are not predictable from the semantic properties of the visual activities we have considered (2.3); and (ii), therefore, those properties are indispensable for the semantic descriptions of *miiru* and *mitoreru*: <interesting> is an essential feature for the object of *miiru*, and <beautiful> is an essential feature for the object of *mitoreru*.

INTERESTING

The objects for the seven visual verbs will be examined for the properties <interesting> and <beautiful>. At first, the semantic property <interesting> will be examined. *Omoshiroi terebi* 'interesting TV program/set' and *ii keshiki* 'interesting scene' are employed as the diagnostic items. Consider the following examples:

- (202) Omoshiroi terebi o miru interesting TV ACC'to watch an interesting TV program'
- (203) Omoshiroi terebi o *mitsumeru*'to have a close look at an interesting TV set
- (204) Omoshiroi terebi o nagameru 'to see an interesting TV set

(205) Omoshiroi terebi ni miiru DAT

'to watch an interesting TV program intently'

(206) *Omoshiroi terebi ni mitoreru

('to be fascinated with an interesting TV set)

- (207) Yama no ue kara ii keshiki o miwatasu
 mountain of top from interesting scene ACC
 'to look at all the interesting scene from the top of the mountain'
- (208) Yama no ue kara ii keshiki o nozomu'to look at an interesting scene from the top of the mountain'

All but *mitoreru* are appropriate in the above examples. This fact suggests that the object for *mitoreru* cannot be 'interesting' and the objects for the other six verbs can be 'interesting'.

In contrast, the examples from (209) to (215) have *taikutsuna shibai* 'boring play' and *taikutsuna keshiki* 'boring scene' used for the diagnostic items. *Taikutsu* means 'boring', which is clearly opposite to *omoshiroi* used in the examples (202) to (208).

- (209) Taikutsuna shibai o miru
 boring play ACC
 'to watch a boring play'
- (210) Taikutsuna shibai o mitsumeru'to have a close look at a boring play'

(211) *Taikutsuna shibai ni *miiru* DAT ('to gaze at a boring play')

(212) *Taikutsuna shibai ni *mitoreru*('to be fascinated with a boring play')

- (213) Taikutsuna shibai o *nagameru* ACC 'to see a boring play'
- (214) Yama no ue kara taikutsuna keshiki o miwatasu mountain of top from boring scene ACC'to look at all the boring scene from the top of the mountain'

(215) Yama no ue kara taikutsuna keshiki o nozomu

'to look at a boring scene from the top of the mountain'

The above examples show that neither *miiru* nor *mitoreru* is appropriate with boring objects, while *miru*, *mitsumeru*, *nagameru*, *miwatasu*, and *nozomu* are appropriate.

From Examples (202) to (215) the following points are clear. Neither an interesting object nor a boring object can occur with *mitoreru*. This means that *mitoreru* does not have the properties of the quality of <interesting>. An interesting object can occur with *miiru* but a boring object cannot. This indicates that the object of *miiru* has a semantic property <interesting>. As for *miru*, *mitsumeru*, *nagameru*, and *nozomu*, they are neutral with respect to <interesting>, as indicated by the fact that they can collocate with either an interesting object or a boring object.

BEAUTIFUL

Let us consider the second property
beautiful>. In Examples (216) to (220)
kireena josee 'beautiful woman' is used and in Examples (221) and (222)
kireena keshiki 'beautiful scene' is used. They certainly convey the sense of
being beautiful.

(216) Kireena josee o mirubeautiful woman ACC'to look at a beautiful woman'

(217) Kireena josee o mitsumeru'to look intently at a beautiful woman'

(218) Kireena josee ni *miiru* DAT

'to gaze at a beautiful woman'

(219) Kireena josee ni mitoreru

'to be fascinated with a beautiful woman'

(220) Kireena josee o *nagameru* ACC 'to view a beautiful woman'

- (221) Yama no ue kara kireena keshiki o miwatasu mountain of top from beautiful scene ACC'to look at all the beautiful scene from the top of the mountain'
- (222) Yama no ue kara kireena keshiki o *nozomu*'to look at the beautiful scene from the top of the mountain'

As shown above all the verbs are appropriate with beautiful objects.

The following examples have *gomi no yama* 'mountain(s) of rubbish' for the object. They are not beautiful but rather ugly or unpleasant. The examples are as following:

- (223) Gomi no yama o miru
 rubbish of mountain ACC
 'to see a mountain of rubbish'
- (224) Gomi no yama o mitsumeru'to look fixedly at a mountain of rubbish'

(225) Gomi no yama ni miiru

DAT

'to gaze at a mountain of rubbish'

(226) *Gomi no yama ni mitoreru

('to be fascinated with a mountain of rubbish')

(227) Gomi no yama o *nagameru* ACC 'to view a mountain of rubbish'

(228) Yama no ue kara gomi no yama o miwatasu mountain of top from rubbish of mountain ACC'to look at all mountains of rubbish from the top of the mountain'

(229) Yama no ue kara gomi no yama o *nozomu*'to see the mountain of rubbish from the top of the mountain'

The examples above show that *miru*, *mitsumeru*, *miiru*, *nagameru*, *miwatasu*, and *nozomu* are appropriate with ugly objects. On the other hand, *mitoreru* is inappropriate.

To summarise, as shown in Examples (216) to (229) it is clear that *mitoreru* does not cooccur with something ugly, e.g. *gomi no yama*, while it is appropriate with something beautiful, e.g. *kireena josee*. This suggests that the objects of *mitoreru* have to be beautiful, and that it has the <beautiful> property. In contrast, *miru*, *mitsumeru*, *miiru*, *nagameru*, *miwatasu*, and *nozomu* are neutral with respect to the quality | <beautiful> since they may cooccur with either beautiful or ugly objects.

In summary, there are seven semantic properties for the objects of the seven visual verbs examined above. Table 2 summarises the seven properties for each verb according to the number of semantic properties.

	miru	nagameru	nozomu	mitsumeru	miiru	mitoreru	miwatasu
<visible></visible>	+	+	+	+	+	+	+
<last></last>		+	+	+	+	+	+
<single></single>			,	+	+	+	+
<large></large>			+				+
<wide></wide>							+
<interesting></interesting>					+		
<beautiful></beautiful>						+	

Table 2. Semantic properties of objects for each visual verb

In the table above, the symbol "+" indicates that the verb has the property. Blank means that the verb does not have the property, e.g. *miiru* has <visible>, <last>, <single>, <interesting> properties, and does not have the <large>, <wide>, and <beautiful> properties.

All seven properties define the characteristics of the objects that can occur with each verb. The first five properties are not necessary for the descriptions of the core meanings for they are determined by the semantic properties of the verbs. However, the last two properties are necessary for the descriptions of the core meanings since they are features of collocations; that is, they are not determined by the properties of the verbs.

The first five properties are the reflections of and associated with the semantic properties of the visual activities. The <visible> property is associated with <visual> for the activity, <last> is associated with <continuity>, <single> is associated with <fixed visual point>, <large> is associated with <distance>, and <wide> is associated with both <distance> and <visual point movement>. The properties of the visual activities are the key factors which govern the boundaries of the objects' properties. In this sense, therefore, the first five semantic properties of the objects are not essential but of secondary importance for the

descriptions of the target verbs. On the other hand, the last two properties are essential for the descriptions of the core meanings since they are not associated with the properties of the visual activities.

2.5 Summary

This chapter has investigated the semantic properties of both visual activities and objects for the core meanings of the seven visual verbs. Section 2.3 manifests the distinctive properties for the actions of looking, and section 2.4 discusses the essential properties of the objects.

The semantic descriptions of the core meanings for the seven visual verbs are summarised as follows:

Table 3. Semantic descriptions of the core meanings for the seven visual verbs

Verb	Semantic properties
Miru	<pre><perception>, <visual>, <intention></intention></visual></perception></pre>
Nagameru	<pre><perception>, <visual>, <intention>, <continuity></continuity></intention></visual></perception></pre>
Nozomu	<pre><perception>, <visual>, <intention>, <continuity>, <distance></distance></continuity></intention></visual></perception></pre>
Mitsumeru	<pre><perception>, <visual>, <intention>, <continuity>,</continuity></intention></visual></perception></pre>
	<fixed point="" visual=""> <high attention=""></high></fixed>
Mitoreru	<pre><perception>, <visual>, <non-intention>, <continuity>, <fixed point="" visual="">, <beautiful> object</beautiful></fixed></continuity></non-intention></visual></perception></pre>
Miwatasu	<pre><perception>, <visual>, <intention>, <continuity>, <visual movement="" point="">, <distance></distance></visual></continuity></intention></visual></perception></pre>
Miiru	<pre><perception>, <visual>, <non-intention>, <continuity>, <fixed point="" visual="">, <high attention="">, <interesting> object</interesting></high></fixed></continuity></non-intention></visual></perception></pre>

Note that the above descriptions do not contain the five semantic properties of objects discussed in 2.4.1: <visible>, <last>, <large>, <wide>, and <single>. These five properties are associated with, and determined by, the semantic

properties of the verbs, therefore, they are not required for the descriptions of the seven visual verbs.

From the descriptions, it is clear that *miru* has the fewest semantic properties, which are three. This means that *miru* is the most flexible verb among the seven verbs; in other words, *miru* can be used with little restriction and therefore; in most cases, is interchangeable with the other six visual verbs. At the same time, the flexibility denotes that *miru* is a superordinate word and the others are hyponyms. This verifies the fact that hyponyms have both the properties that the superordinate word has and additional properties (Ogino, 1981: 283).

In contrast, *miiru* has the greatest number of the semantic properties among the seven visual verbs, which means that *miiru* is the least flexible verb. Stated differently, it has the most specific meaning. The more semantic properties the word has, the more limited the contexts where the word occurs (Nagashima, 1968).

CHAPTER 3

The description of the extended meanings

We observed the core meanings of seven visual verbs in Chapter 2, and defined their meanings by nine semantic properties (2.5). In this chapter we will look closely at the extended meanings of the seven verbs, and observe how they are associated with their core meanings.

The polysemic meanings of the visual verbs will be presented by classifying them according to the gain, loss, and change of their semantic properties from the core meanings.

3.1 The extended meanings

The extended meanings are derived from the core meaning and are semantically related to the core meaning. The core meaning and the extended meanings form a continuum, and a clear and definite border between them is not simple to draw (Tanaka 1996: 121). Some words may be on the border which divides two meanings and may therefore appear in two classifications of meaning. However, classifying the meanings of a word is effective for distinguishing the polysemic meanings of the word.

There are three derivational patterns from the viewpoint of semantic properties: (i) an extended meaning which gains semantic properties not seen in a core meaning; (ii) an extended meaning which loses the semantic properties of a core meaning; and (iii) an extended meaning which involves semantic properties transforming from, e.g. the <visual> semantic property to the <non-visual> property.A combination of these patterns may also occur. (See Tanaka 1996.)

3.2 The extended meanings: semantic property categories

Tanaka (1996) proposes the following four semantic properties for the extended meanings of *miru*: <judgement>, <taking measures>, <non-visual>, and <occurrence of a state of affairs>. The proposed properties are not sufficient for the extended meanings of the other verbs in this study. I would like to add the following three properties: <fixed focus>, <focus movement>, and <hope>.

The property <judgement> represents 'judgement' after perceiving. For example, this property is found when one watches TV or reads a novel. He/ she comprehends what he/ she perceives, which is more than perceiving the existence of a TV set or a book. That is, 'judgement' here is used in a broad sense which involves both evaluation and comprehension. The property <taking measures> means that some kind of treatment or measure is taken, if necessary. This is found, for example, when a mechanic looks at a motor in a garage. A mechanic is not supposed to look at and do nothing to it; he/ she is supposed to fix it if something is wrong with it. In this case, fixing is <taking measures>. <Non-visual>, the third property, indicates senses other than the sense of vision. The senses of hearing, tasting, touching, and smelling belong to this property. The <occurrence of a state of affairs> means that affairs occur. For example, reaching an agreement between two countries is an occurrence of a state of affairs.

Two of the added properties, <fixed focus> and <focus movement> are derived from the semantic properties <fixed visual point> and <visual point movement> which were used for the core meaning, respectively. The <fixed focus> and <focus movement> properties are physical activities and the <fixed visual point> and <visual point movement> properties are psychological. The property <fixed focus> indicates that the psychological visual point is fixed on an object. When one looks at the reality, for example, he/ she fixes the focus (i.e. psychological eyes) on reality to find out what is going on. On the other hand, <focus movement> indicates that the psychological focus point moves from

one object to another. Considering various events in the past is an example of <focus movement>. One cannot see the events that happened in the past. When one looks back the past Olympic games, for example, he/ she moves the focus from one Olympic game to another, instead of a moving actual visual point.

Finally, <hope> represents the sense of the agent's desire or wish. This semantic property is involved in such a context as when a happy married couple cannot have a baby for long time because of sterility, they will wish for a baby. To wish for in this case is denoted by the <hope> property.

3.3 The extended meanings of the visual verbs

In 3.3, the extended meanings of the above seven visual verbs are examined and discussed verb by verb. We first consider the visual verb *miru*, followed by *mitsumeru*, *miiru* and *mitoreru*, *nagameru*, *miwatasu*, and *nozomu*. The analysis of the extended meanings are based on Tanaka (1996).

In the following sub-sections, the semantic properties of an extended meaning are provided with examples to justify and illustrate the existence of each of the properties. Then, there are discussions about each semantic property.

3.3.1 Miru

The analysis of *miru* is in principle based on that of Tanaka (1996); however, some distinctive differences should be pointed out in the semantic properties for both the core and extended meanings. Tanaka defines the core meaning of *miru* as <visual> and <perception>, while in this thesis, the verb is defined as <visual>, <perception>, and <intention> (See 2.5). The last property was introduced because Tanaka's definition does not sufficiently distinguish *miru* 'to see/ look at (active verb)' from *mieru* 'to see (stative verb)'. Both *miru* and *mieru* have <visual> and <perception> so one may say either *yama o miru* 'to see (stative verb)'.

look at the mountain (active)' or *yama ga mieru* 'to see the mountain (stative)' when one visually perceives the mountain. The <intention> property distinguishes *miru* from *mieru*; hence, it more fully describes the core meaning of *miru*.

For *miru*, five extended meanings are proposed by Tanaka. The first four extended meanings discussed below are variants of Tanaka since the core meanings, which are the basis of the extended meanings, are defined differently. The fifth extended meaning <occurrence of a state of affairs> is adopted from Tanaka. Three properties cperception>, <intention>, and <judgement> are common properties for the first four extended meanings of *miru*.

First extended meaning¹⁰

Below are examples of the first extended meaning of miru.

- (1) Terebi o miruTV ACC'to watch TV'
- (2) Shinbun o mirunewspaper'to read the newspaper'
- (3) Tesoo o miru
 the line on a palm
 'to read a line on the palm'

The core meaning and the first extended meaning are very closely related. From the semantic property perspective, the first extended meaning differs from the core

¹⁰The first extended meaning corresponds to m2 in Tanaka. The m2 has <visual>, <perception>, and <judgement> properties.

meaning in that it contains an extra property <judgement> which indicates judgement after perceiving. The core meaning does not contain this property. As a whole, the semantic properties for the first extended meaning are four: <perception>, <visual>, <intention>, and <judgement>.

It should be noted that the meaning with the four properties <perception>, <visual>, <intention>, and <judgement> is treated as an extended meaning instead of the core meaning of *miru*, based on the fact that the vast majority of *miru*-without-object utterances do not have a <judgement> property (Tanaka, 1996)¹¹. Consider the following examples.

(4) mite minu huri / mizaru iwazaru kikazaru / miru ni taenai /
 'pretending not to see' 'not to see, not to speak, not to hear' 'unbearable to see'

mirunomo iyada /mirumirumirukarani'(I)do not even want to see' 'while one sees (it)' 'by the look of'

miru mo muzanni / mita tokoro / mi mo shiranu /'too horrible to see' 'from the look of' '(something) I have never ever seen before'

suru yori *miru* hoo ga ii / *mireba* / *mita* me / etc.
'it is better to see than to do' 'if one looks at' 'in appearance'

The above examples are generally used phrases in which *miru* occurs without its agent and object. *Miru* in the examples does not contain the sense of <judgement> but only the sense of <perception>.

Let us now discuss each semantic property of the first extended meaning.

¹¹Momiyama (1992) proposes that a meaning which has no or the fewest usage restrictions should be treated as a core meaning. In this case, *miru* without agent and object represents the meaning which has no usage restriction. Therefore, it is expected that *miru* in the examples present the core meaning. Morita (1986) addresses that a core meaning of a word becomes clear when the word appears with typical

complements of the word. Morita's address, however, 63 involves a problem. It is not easy to tell objectively

which are typical complements for miru.

Judgement

In above Examples (1), (2), and (3), the objects are *terebi* 'TV (program)', *shinbun* 'newspaper', and *tesoo* 'the line on the palm.' They require the agent to judge an object after seeing it. For example, watching a TV program in (1) requires some sort of cognitive activity. In the case of watching a TV program, this activity is to understand the content; thus, 'to understand the content' belongs to the property <judgement>. *Miru* in (2) means to read, and reading the newspaper requires the cognitive activity 'to understand'. Finally, the meaning of *miru* in (3) is to understand what a line on the palm of a hand means; that is, to read and interpret the significance of a line on the palm.

Without $\langle judgement \rangle$, the first extended meaning becomes the core meaning of *miru*. If the above examples were the core meanings, they should be interpreted as 'to look at a TV set', 'to look at a newspaper', and 'to look at the line on the palm.' However, the examples (1) to (3) are interpreted as 'to watch TV', 'to read a newspaper', and 'to read the line on the palm.'

Perception

The first extended meaning has the semantic property $\langle \text{perception} \rangle$, which is also found in the core meaning. It is obvious from Examples (1) to (3) that the extended meaning of *miru* requires the agent to perceive its object: In (1) the agent perceives TV; in (2) the agent perceives a newspaper; and in (3) the agent perceives the line on the palm.

Visual

The first extended meaning of miru is a visual activity. Examples (1) to (3) illustrate that the first extended meaning of miru has <visual>. Consider the

following examples (5), (6), and (7), which are accompanied by the diagnostic phrase *me o tojite* 'with the eyes closed':

- (5) *Me o tojite terebi o mirueyes ACC closed TV ACC('to watch TV with the eyes closed')
- (6) *Me o tojite shinbun o mirueyes ACC closed newspaper('to read the newspaper')
- (7) *Me o tojite tesoo o miru
 eyes ACC closed line of palm
 ('to read the line on the palm')

Examples (5) to (7) are inappropriate because the diagnostic phrase conflicts with the <visual> property. This inappropriateness confirms that the first extended meaning has the <visual> property.

Intention

The <intention> property is also found in the core meaning. The activity of *miru* in its first extended meaning is performed with intention. The existence of <intention> is verified by the appropriateness of the volitional form:

(8) Terebi o miyoo
TV ACC miru-VOL
'(I will) watch TV.'

(9) Shinbun o *miyoo* newspaper *miru*-VOL

'(I will) read a newspaper.'

(10) Tesoo o *miyoo* the line on the palm *miru*-VOL

'(I will) read the line on the palm.'

Second extended meaning¹²

The following are examples of the second extended meaning. Each semantic property for the second extended meaning is discussed after the examples:

- (11) Hitsuyoona okane o goman en to miru
 necessary money ACC fifty thousand yen as
 'to estimate necessary money at fifty thousand yen'
- (12) Keesatsu wa shoonen no jisatsu no genin o ijime to miru police TOP boy of suicide of cause ACC bullying as
 'The police think that the cause of the boy's suicide is bullying.'
- (13) Rainen wa keeki ga kaihukusuru to miru
 next year TOP economy NOM get well as
 'to expect that the economic situation will improve next year'

The above examples illustrate that the meaning of *miru* does not involve an actual visual activity. The second extended meaning has properties <perception>,

 $^{^{12}}$ The second extended meaning corresponds to m3 in Tanaka, which has the <judgement> property. In this thesis, the <intention> and <perception> properties are also members of the second extended meaning because these two properties are prerequisite to judging, i.e. the agent has to see the object to judge.

<intention>, and <judgement>. Notice that the difference between the first and the second extended meaning is whether or not a <visual> property is contained. The second extended meaning does not have this property, while the first extended meaning does. The loss of <visual> indicates that the sense does not have to be visual; <judgement> is of more importance. It is notable that the second extended meaning always takes the particle to. As a whole, the second extended meaning takes the structure '(agent wa) X o Y to miru.'

Judgement

The second extended meaning has a <judgement> property which is not seen in the core meaning of *miru*; however, it is seen in the first extended meaning.

Taking a look at the presented examples, in (11) miru means 'to estimate.' Estimating indicates judgement because to estimate is paraphrased as to judge the approximate cost. In (12) miru is understood as 'to think.' To think is based on judgement, because to think is a judgement resulting from an investigation. Miru is used in the sense of 'expecting' in (13). Expecting implies that there is a judgement of some kind. In the case of (13) a judgement from the analysis of the economic situation underlies the expectation.

Perception and loss of vision

The second extended meaning has <judgement> as seen above. In order to judge something, the prerequisite is to perceive it. That is, the <perception> property is a member of the second extended meaning of *miru*. In Example (11) *hitsuyoona okane* 'necessary money' is perceived before estimating. In Example (12) the existence of a cause for suicide is perceived before the police think that the suicide was caused by bullying. In (13) it seems less clear what is perceived from the grammatical information, for the sentence does not have an accusative case. But the economic situation for next year should be seen to be perceived in

this case, because the sentence can be paraphrased as *rainen no keeki o kaihuku to miru* 'to expect that the economic situation for next year will improve', with an explicit object *rainen no keeki* 'next year's economic situation.'

As for the property <visual>, the second extended meaning of *miru* has dropped this semantic property. Absence of <visual> indicates that the means of perceiving is not specified; every sense, including the sense of vision, may be the means of perceiving. In Example (11) there should be a reason to estimate the amount of the necessary money. The source of reason is normally visual information or aural information. That is, *hitsuyoona okane* 'necessary money' is perceived either visually, aurally, psychologically, or some combination of these factors. In (12) *jisatsu no genin* 'cause of suicide' is perceived by the police investigation. The sense used in the investigation cannot be specified. Hence, the example does not have the <visual> property. Last, in (13) *keeki* 'economic situation' is perceived. We do not know by which sense it is perceived although it is quite likely that the sense is intellectual. The property <visual> is not a member of the second extended meaning.

Intention

The \langle intention> property is found in the second extended meaning. This means that the agent of the second extended meaning performs with intention. In order to confirm the existence of \langle intention>, let us transform *miru* in Examples (11) and (13) above to volitional form since volitional form conveys full intention. Note that Example (12) is not presented below because the verb cannot be transformed to the volitional form for the reason that the topic in the sentence is the third person *keesatsu* 'police'.

(14) Hitsuyoona okane o goman en to miyoo necessary money ACC fifty-thousand yen as miru-VOL
'[Let us] estimate necessary money at fifty thousand yen' (15) Rainen wa keeki ga kaihukusuru to miyoo next year TOP economic situation NOM get well as miru-VOL
'[Let us] expect that the economic situation will improve next year'

Again the examples above are acceptable, and this indicates that the extended meaning of *miru* has the *intention* property.

Third extended meaning¹³

Some examples of the third extended meaning are as follows:

- (16) (Okaasan ga rusu no aida) Kodomo o miru
 (mother SUB away of while) child ACC
 'to take care of a child (while a mother is away)'
- (17) Kanja no kega o mirupatient of injury'to examine the injury of the patient'
- (18) Nimotsu o miruluggage'to keep an eye on the luggage'

The third extended meaning has five properties: <visual>, <perception>, <intention>, <judgement>, and <taking measures>. This extended meaning adds the property <taking measures> to the first extended meaning. In comparison to the core meaning, the third extended meaning contains two extra semantic properties, <judgement> and <taking measures>.

¹³The third extended meaning corresponds to the m4 of Tanaka, which has <visual>, <perception>, <judgement>, and <taking measures> properties.

Taking measures

(16), (17), and (18) are the cases in which *miru* accompanies some kind of measures. The term 'taking measures' is adopted from Tanaka (1996), and is used as actual appropriate actions or treatments by the agent, e.g. fixing, taking care of, and keeping secure. We see some measures in these examples.

Kodomo o miru in (16) literally means 'to look at the child.' However, it is understood as 'to take care of the child.' This indicates that the utterance involves an implication of a measure, which is taking care of. This is explained by the fact that the utterance kodomo o mite kuremasen ka 'Could you look after the child?' is in general used when someone asks a person to look after his/her child.

In (17) the doctor sees the patient to examine an injury. This implies a proper medical treatment after the examination. Therefore, in (17) the measure is medical treatment.

At an airport or bus station the utterance (18) *nimotsu o miru* is often heard. When one says *nimotsu o mite kudasai* 'Please keep an eye on my luggage.' to his/ her friend, for example because he/ she wants to go to the toilet, it means to look after the luggage. Since he/ she keeps the luggage from being stolen, the measure is to keep the luggage safe.

Perception

The semantic property <perception> is found in the third extended meaning since seeing is perceiving. In Examples (16) to (18) above *kodomo* 'child', *kanja no kega* 'injury of patient', and *nimotsu* 'luggage' are the objects, and they are looked at by the agent. This indicates that perception is involved.

Visual

The <visual> property is a member of the third extended meaning. Again Examples (16) to (18) imply the work of eyes. Let us reexamine Examples (16), (17), and (18) above to see whether or not the extended meaning has <visual>. The following examples have a diagnostic phrase *me o tojite* 'with the eyes closed.'

- (19) *Me o tojite kodomo o miru
 eye ACC close- CON child ACC
 ('to look at the child with the eyes closed')
- (20) *Me o tojite kanja no kega o miru
 eye close-CON patient of injury
 ('to examine the injury of the patient with the eyes closed')
- (21) *Me o tojite nimotsu o miru
 eye close-CON luggage
 ('to keep an eye on the luggage with the eyes closed')

As shown above, the *me o tojite* 'with the eyes closed' phrase makes Examples (19) to (21) inappropriate. This inappropriateness indicates that the third extended meaning has the <visual> property.

It should be noted that Example (20) is inappropriate since ordinary doctors examine the injury with the eyes. Even when a doctor examines the patient by a hearing aid, it is a normal sequence that he/ she looks at the injury before a hearing aid. In the procedure, visual activity is involved. However, the example may be appropriate if a blind bonesetter or an acupressurist is the agent of the example. Blind bonesetters and acupressurists examine the patient by touching. They use the sense of touch for examination, instead of the sense of

vision. The sense of touch is treated as <non-visual> in this study. Therefore, it is suggested that Example (20) may become appropriate only when the sense used for the examination is other than vision. In this case, Example (20) is classified in the fourth extended meaning, which is coming next.

Example (20) may belong to both the third and the fourth extended meanings. The meaning is a continuum and it sometimes is not simple to draw the border between extended meanings, as already mentioned (3.1). In this sense, it can be said that this example is one that is on the border between the third and the fourth extended meanings.

Intention

The third extended meaning of *miru* has the *intention* property. This is confirmed by the acceptability of the volitional form:

- (22) Watashi ga kodomo o miyoo
 I NOM child ACC miru-VOL
 'I will take care of the child.'
- (23) Watashi ga kanja no kega o miyoo
 I patient of injury miru-VOL
 'I will examine the injury of the patient.'
- (24) Watashi ga nimotsu o miyoo
 I luggage ACC miru-VOL
 'I will keep an eye on the luggage.'

Judgement

The property <judgement> is a semantic unit included in the third extended meaning. As already mentioned, the objects for the third extended meaning are measures taken by the agent, if needed. Accordingly, the agent has to decide whether or not the object needs measures, and what the object needs before a measure is taken. This decision is a judgement.

Take a look at Examples (16) to (18) above. Example (16) means 'to take care of the child.' When one takes care of a child, he or she decides whether or not the child needs food, help, nappy changed, and the like. In (17) the doctor examines and judges how bad the injury of the patient is, and what kind of medical treatment is needed. In (18) the agent judges whether the luggage should be moved or not when it keeps someone from walking. The agent also judges what to do to prevent someone from stealing it.

Fourth extended meaning¹⁴

Followings are examples in which the fourth extended meaning is observed:

(25) Aji o miru taste ACC
'to taste [in order to see how tasty it is]'

(26) Myaku o miru

pulse

'to feel the pulse'

 $^{^{14}}$ The fourth extended meaning corresponds to the m5 of Tanaka (1996), which has <non-visual>, ception>, and <judgement>.

(27) Yukagen o *miru* temperature of hot water

'to feel the temperature of the hot water'

In Examples (25), (26), and (27) visual activity is not found. Instead, activities of other senses are involved. The fourth extended meaning has <non-visual>, <perception>, <intention>, and <judgement> properties. It has a <non-visual> property which represents senses other than vision. The sense may be smell, hearing, taste, or touch. The property <non-visual> differentiates the fourth extended meaning from the first extended meaning; the first extended meaning has <visual> instead of <non-visual>. We will take a close look at the four semantic properties one by one below.

Non-visual

As noted above, Examples (25) to (27) show that the verb *miru* may be used for a situation which does not involve an actual visual activity. Example (25) *aji o miru* is often heard regarding cooking. The example means to check whether or not the taste is good, or how it tastes. The object *aji* 'taste' is not visible so it has to be tasted; and thus *aji o miru* means to taste. (26) is an example of *miru* used to mean to feel. The phrase *myaku o miru* is used daily between doctors and patients in hospitals. *Myaku* 'pulse' is checked by fingers; to actually see the pulse requires special medical equipment. The phrase *yukagen o miru* in (27) is commonly used, for example, when a mother asks a child to check the temperature of the hot water in the bath tub. One has to touch the water to see whether it is too hot/ hot enough; thus, the meaning of touch for the visual verb *miru* in *yukagen o miru*.

Perception

From Examples (25) to (27) above it is clear that <perception> is a property of the fourth extended meaning. Take a look at Examples (25) to (27). In (25) taste is perceived, in (26) pulse is perceived, and in (27) the temperature of hot water is perceived.

Intention

The fourth extended meaning has the <intention> property, which is commonly seen in the first to the fourth extended meanings. This property is verified by the appropriateness of the volitional form, as shown below:

- (28) Aji o *miyoo* taste ACC *miru*-VOL '[I will] taste [it].'
- (29) Myaku o miyoo
 pulse ACC miru-VOL
 '[I will] feel the pulse.'
- (30) Yukagen o miyoo
 temperature of hot water ACC miru-VOL
 '[I will] feel the temperature of the hot water.'

Examples (28) to (30) illustrate that the fourth extended meaning can occur with the volitional form. Thus, it is clear that the fourth extended meaning has the <intention> property.

Judgement

The fourth extended meaning has the <judgement> property because the extended meaning involves more cognitive activity than simply perceiving.

For example, the meaning of *aji o miru* 'to taste' in (25) is not only to perceive what kind of taste it is, but also to judge whether or not it tastes good or how good it tastes. The example *myaku o miru* 'to feel the pulse' in (26) implies to judge whether or not the pulse is normal. In the same way, Example (27) *yukagen o miru* 'to feel the temperature of the hot water' means to judge whether or not the temperature of the hot water is suitable for a bath. The example does not mean to see visually whether the water is hot or cold.

Fifth extended meaning¹⁵

The visual verb *miru* can denote a sense of experience. Consider, for example, the idiomatic phrases such as *baka o miru* 'to have a bad experience', *itai me o miru* 'to have a hard experience', *ii me o miru* 'to have a good experience.' Furthermore, this experience denotes that some affairs or events actually occur, since experiencing prerequires an occurrence of an affair or event. For example, if a bad situation does not occur, one cannot have a bad experience. Therefore, experience leads to an occurrence of a state of affairs. Some examples of the fifth extended meaning are given below.

(31) Pootoaasaa de wa ookuno giseesha o mita
Port Arthur at TOP many victims ACC miru-PAST
'There were many victims at Port Arthur.'

¹⁵ The fifth extended meaning corresponds to m6 of Tanaka (1996).

- (32) Kare wa yooyaku seekoo o mita he TOP eventually success miru-PAST
 'Eventually he succeeded.'
- (33) Iken no itchi o miru opinion of agreement'to reach an agreement'

Example (31) pootoaasaa de wa ookuno giseesha o mita can be translated as '[They] saw many victims at Port Arthur.' Metaphorically, the example indicates that they had an experience of seeing many victims at Port Arthur, and this in turn means that there were many victims at Port Arthur. The second example (32) literally means 'he saw the success.' This indicates that he has an experience of succeeding. We see that someone is successful when a successful situation occurs. Hence, seekoo o miru in (32) means to succeed. Likewise, in (33) an agreement of opinions is seen. In order to see the agreement, a state of affairs in which people reach an agreement has to occur. The example *iken no itchi o miru* means to reach an agreement.

These examples confirm that the fifth extended meaning contains the semantic property <occurrence of a state of affairs>, which is adopted from Tanaka. The property <occurrence of a state of affairs> means that a state of affairs or experience occurs. Note that the fifth extended meaning is metonymy of the core meaning. Lakoff (1987: 79) defines metonymy as "--- a situation in which some subcategory or member or submodel is used (often for some limited and immediate purpose) to comprehend the category as a whole. In other words, there are cases where a part (a subcategory or member or submodel) stands for the whole category ---." A subcategory parallels *miru* and the whole category parallels experience, because *miru* 'to see' is one of the ways to experience something.

In summary, the five extended meanings of *miru* have been discussed. For reference, the five extended meanings of *miru* are summarised below:

- 1 <visual>, <perception>, <intention>, and <judgement>
- 2 <perception>, <intention>, and <judgement>
- 3 <visual>, <perception>, <intention>, <judgement>, and <taking measures>
- 4 <non-visual>, <perception>, <intention>, and <judgement>
- 5 <occurrence of a state of affairs>

3.3.2 Mitsumeru

The visual verb *mitsumeru* has one extended meaning. Following are examples in which the extended meaning is used:

- (34) Jibun o mitsumeruoneself ACC'to look into oneself'
- (35) Genjitsu o mitsumerureality'to look intently at reality'
- (36) Chuugoku henkan go no honkon no yukue o mitsumeru
 China hand over after of Hong Kong of future
 'to look intently at the future of Hong Kong after [it is] handed over to China'

The semantic properties of the extended meaning are: <perception>, <fixed focus>, <intention>, <attention>, and <judgement>. Compared with its core meaning (i.e. <perception>, <visual>, <intention>, <continuity>, <fixed visual point>, and <high

attention>), the extended meaning of *mitsumeru* does not have the property <visual>, and contains a <fixed focus> property instead of <fixed visual point>. The semantic properties of the extended meaning are discussed below.

Perception and loss of <visual>

The sense of perception, more precisely psychological perception, is found in the extended meaning of *mitsumeru*. Let us consider above Example (34), which is reproduced as (37).

(37) Jibun o mitsumeru oneself ACC
'to look into oneself' ((37)=(34))

In the sentence *jibun* 'oneself' is perceived, and it is perceived psychologically not physically. Therefore, it can be understood as self-inspection. Thus, the extended meaning has the property <perception>, but it does not have the property <visual>.

In the derivational meaning the property <visual> is lost because vision is not essential for the reason noted above. One may *mitsumeru* 'look into' something with the eyes closed. Consider the following example:

(38) Me o tojite jibun o mitsumerueye ACC close oneself ACC'to look into oneself with the eyes closed'

Example (38) does not have the physical activity of vision because the eyes are closed. This example supports the above statement that *jibun* is perceived psychologically not physically.

Shifting from visual perception to general perception widens the semantic domain of *mitsumeru*. *Mitsumeru*, therefore can be used in a broader sense, which is psychological perceiving.

Fixed Focus

In accordance with loss of <visual>, the property <fixed visual point> is no longer a member of the extended meaning. In a physical sense the visual point does not exist without the sense of vision for they are closely related. Instead, the new semantic property <fixed focus> takes the place of <fixed visual point>. As already referred to, visual perception shifts to general perception in the procedure of a <visual> property loss. However, the visual point is fixed on the object psychologically even though it is not fixed on the object physically. The property <fixed focus> indicates that the psychological visual point is fixed on the object. This is seen in (34) to (36) above. An additional example (39) highlights this fixed focus property:

(39) Jitto mirai o mitsumeru
still future ACC
'to look intently at the future'

The example above contains *jitto* 'still/ steadily/ intently', which accompanies the sense of motionless. In (39) *jitto* is used to describe psychological motionlessness, not physical lack of motion, as indicated by the fact that the object *mirai* 'future' cannot be seen with the eyes but can be seen in the mind. That is to say, the psychological viewpoint is fixed on the future.

Intention

The extended meaning of *mitsumeru* has the property <intention>. This is observed in the fact that *mitsumeru* may have the volitional form as an extended meaning. The volitional form conveys full intention.

- (40) Jibun o mitsumeyoooneself ACC look-VOL'[I will] look into myself.'
- (41) Genjitsu o mitsumeyoo reality ACC'[I will] look into reality.'
- (42) Chuugoku henkan go no honkon no yukue o mitsumeyoo
 China hand over after of Hong Kong of future
 '[I will] look into the future of Hong Kong after it is handed over to China.'

(40), (41), and (42) are examples in which the volitional form of *mitsumeru* is used, and they are appropriate. This fact indicates that the performance of *mitsumeru* is done with intention. Therefore, the extended meaning of *mitsumeru* has the property <intention>.

Attention

The extended meaning also has a high degree of attention; thus <attention> is another property inherited from the core meaning. It is examined in Examples (43) to (48) below by means of *jikkuri* 'closely' and *bootto* 'blankly': (43) to (45) with *jikkuri* and (46) to (48) with *bootto*. First, focussing on (43) to (45), *jikkuri* is a word that means full of attention and *bootto* is a word meaning little attention.

- (43) Jibun o jikkuri mitsumeru oneself ACC closely
 'to look closely into oneself'
- (44) Genjitsu o jikkuri *mitsumeru*reality
 'to look closely into reality'
- (45) Chuugoku henkan go no honkon no yukue o jikkuri mitsumeru
 China hand over after of Hong Kong of future
 'to look closely into the future of Hong Kong after [it is] handed over to China'

The examples with *jikkuri* are appropriate. This indicates that *mitsumeru* in the extended meaning contains the sense of full attention.

On the other hand, *mitsumeru* does not collocate with *bootto* 'blankly', as shown below:

- (46) *Jibun o bootto mitsumeru oneself ACC blankly
- (47) *Genjitsu o bootto mitsumeru reality
- (48) *Chuugoku henkan go no honkon no yukue o bootto mitsumeruChina hand over after of Hong Kong of future

What is clear from the above examples is that the extended meaning of *mitsumeru* involves a high degree of attention, as indicated by the fact that it can collocate with *jikkuri* but it cannot collocate with *bootto*.

Judgement

The extended meaning of *mitsumeru* has a semantic property <judgement> which the core meaning of *mitsumeru* does not have. Now let us consider some previous examples regarding the semantic property <judgement>. In Examples (34) to (36) above the objects are looked at so that their agents can judge something.

For example, the agent inspects himself in above (34), which is cited again as (49):

(49) Jibun o mitsumeru oneself ACC
'to look into oneself' ((49)=(34))

Self-inspection involves the sense of judgement. By self-inspection the agent will know what his personality is like, what kind of situation he/ she faces, or what he/ she has done, etc.; then he/ she will decide what he/ she will do. There is a judgement by the agent.

In the same way, (35) above implies that the agent will inspect the reality he/ she is in, and will decide what to do about it. The example is reproduced as (50) for reference.

(50) Genjitsu o mitsumeru
reality ACC
'to look intently at reality'

Likewise, (36) above implies that the agent predicts or considers 'the future of Hong Kong.' It is cited again as (51).

(51) Chuugoku henkan go no honkon no yukue o mitsumeru
China hand over after of Hong Kong of future
'to look intently at the future of Hong Kong after [it is] handed over to China'

Thus, the judgement property is found in the extended meaning of mitsumeru.

3.3.3 Miiru and mitoreru

Miiru and *mitoreru* do not have an extended meaning. They collocate only with visible objects, whereas the other five verbs may occur with invisible objects when they are used as extended meanings. Consider Examples (52), (53), and (54), which have *mirai* 'future', *seekoo* 'success', and *aji* 'taste' for their objects:

- (52) *Mirai ni *miiru | mitoreru* future DAT
- (53) *Seekoo ni *miiru | mitoreru* success DAT
- (54) *Aji ni *miiru | mitoreru* taste

The examples confirm that *miiru* and *mitoreru* do not collocate with invisible objects. Their inappropriateness indicates that neither *miiru* nor *mitoreru* has an extended meaning. In the case that the objects are visible, the meaning of the verb is always the core meaning, e.g. *eega ni miiru* 'to watch a movie closely' and *e ni mitoreru* 'to gaze at a picture.'

It is deemed that the specialised nature of the core meanings cause the two verbs to have no extended meaning. Recall that *miiru* and *mitoreru* are hyponyms of *miru*. In terms of the number of semantic properties, both *miiru* and *mitoreru* have a greater number of semantic properties for their core meanings

than , for example, the basic verb *miru*; *miiru* has seven properties and *mitoreru* has six, while *miru* has only three (See 2.5). A specialised meaning restricts the use of a word to limited contexts (Nagashima 1968: 77). Furthermore, it should also be noted that only *miiru* and *mitoreru* have essential semantic properties for their objects, namely <interesting> and <beautiful> respectively (2.4). The essential properties of the objects strictly limit the lexical environment in which they can occur. For example, a verb *to murder* is a specialised verb (hyponym of *to kill*), and has an essential property for its object, namely <human>. This essential object property restricts the collocation of the verb to human objects, and prevents the verb from having polysemic meanings.

In addition, polysemy is concentrated in basic words, those which have fewer semantic properties (Morita 1989: 268). In fact, *miru*, which has the fewest semantic properties, has five extended meanings (See 3.3.1).

These provide straightforward explanations why *miiru* and *mitoreru* do not have an extended meaning.

3.3.4 Nagameru

The visual verb *nagameru* has one extended meaning. Some examples are shown in (55), (56), and (57), followed by two significant points about the semantic properties involved:

(55) Kono juunenkan no naigai no bungaku o nagameru these ten years of world of literature ACC'to look over these ten years of world literature'

- (56) Bundan no keekoo o nagameruliterary world of trend ACC'to look over the trend of the literary world'
- (57) Keezai no ugoki o nagameru
 economy of development ACC
 'to observe economic development'

The above examples do not involve actual visual activities; their semantic properties are two: ception> and <intention>. Recall that nagameru has the semantic properties ception>, <visual>, <intention>, and <continuity> as its core meaning. Thus, the extended meaning of nagameru is derived from its core meaning by means of the loss of <visual> and <continuity>.

Perception and loss of <visual>

Let us first consider the sense of perception for the extended meaning of *nagameru*. In Examples (55), (56) and (57) the objects are *naigai no bungaku* 'literature of the world', *bundan no keekoo* 'trend of the literary world', and *keezai no ugoki* 'economic development' respectively. They are perceived by the agent through the means of looking over. This confirms the fact that the <perception> property exists in the extended meaning of *nagameru*.

As for the <visual> property, on the other hand, it cannot be seen in the extended meaning because visual activity is not necessarily involved in this extended meaning. The sentence in (55) *kono juunenkan no naigai no bungaku o nagameru* means to look over these ten years of world literature. This does not mean to look at the literature with the eyes, but rather to consider by some means. The means is not specified. In the same way, *keekoo* 'trend' in (56) may be observed by reading or by listening, and *ugoki* 'development' in (57) may be observed by reading or by listening.

Intention

The extended meaning of *nagameru* contains the <intention> property. This can be observed in (55) to (57). For the purpose of highlighting <intention>, (58), (59), and (60) will be examined, each of which is a modified sentence of (55), (56) and (57) respectively; each verb phrase contains *-temiru* 'to try to do.' The phrase *-temiru* conveys the intention of the agent. Consider the examples below:

- (58) Kono juunenkan no naigai no bungaku o nagametemiru these ten years of world of literature ACC nagameru-CON-try to 'to try to look over these ten years of world literature'
- (59) Bundan no keekoo o nagametemiruliterary world of trend'to try to look over the trend of the literary world'
- (60) Keezai no ugoki o nagametemiru
 economy of development ACC
 'to try to observe economic development'

In (58) to (60), the connection of *nagameru* and *-temiru* is appropriate. The fact that *-temiru* can be joined with *nagameru* indicates that the extended meaning of *nagameru* is performed with the agent's intention. That is, the extended meaning of *nagameru* has the inherent property <intention>.

3.3.5 Miwatasu

The visual verb miwatasu has one extended meaning. Following are examples.

- (61) Yooroppa no rekishi o miwatasu
 Europe of history ACC
 'to look over European history'
- (62) Kokontoozai o *miwatashite* mo anoyoona rippana hito wa inai ancient and modern *miwatasu*-CON even like that great person TOP there isn't the East and the West

'There is no one great like you even looking around the world and over the whole of history.'

(63) Seken ippan o miwatashite mo anatanoyoona kangae o society in general even like you idea
 suru hito wa inai
 do person TOP there isn't

'There is no one who thinks the way you do even if one looks all over the world.'

The extended meaning consists of three semantic properties: <perception>, <focus movement>, and <intention>, while the core meaning has six properties: <perception>, <visual>, <intention>, <continuity>, <visual point movement>, and <distance>.

Perception and loss of <visual>

Both <perception> and <visual> are common properties of the core meaning of the seven visual verbs. The activity of perceiving is also found in the extended meaning of *miwatasu*. Looking at the above examples, (61) to (63), it is clear

that the objects are recognised: To look over European history in (61); to look around the world and over the whole of history in (62); and to look all over the world in (63). This verifies that the extended meaning of *miwatasu* has the <perception> property.

The extended meaning of *miwatasu* does not have the semantic property <visual>. Taking (61) as an example, *rekishi* 'history' is the object and is not visible. In spite of the feature that the <visual> semantic property needs a visible object, the non-visible noun 'history' collocates with the visual verb *miwatasu*. This collocation shows that <visual> is not a member of *miwatasu* in its extended meaning. In (61) *rekishi* is looked at psychologically not physically. Thus, like the extended meanings of the other visual verbs, the extended meaning of *miwatasu* does not have the property <visual>.

Focus movement

The core meaning of *miwatasu* has the <visual point movement> property (see 2.3.2). Since the property <visual> is lost in the extended meaning of *miwatasu*, the property <visual point movement> turns into <focus movement>. The property <focus movement> denotes that the psychological focus point moves from one end of an object to the other. This implies that the whole object is looked at. Compare Examples (64) with (65):

(64) Kabuka no booraku o mitsumeru share price of fall ACC
'to inspect the fall of share prices'

(65) *Kabuka no booraku o miwatasu

In (64) and (65) the objects are the same, kabuka no booraku 'fall of share prices', but the verbs are different: *mitsumeru* in (64) and *miwatasu* in (65).

Example (64) is appropriate while (65) is inappropriate. The cause rests with the collocation of the verbs with the object.

In (64), the verb *mitsumeru* has the <fixed focus> property, as illustrated in 3.3.2, and is appropriate. This is explained by the fact that the object *kabuka no booraku* is a momentary event and does not have width in the semantic and psychological sense. This is confirmed by the fact that *kabuka no booraku* is used as the turning point, e.g. *kabuka no booraku o kini enyasu ga susunda* '[The Japanese] yen became weaker to the point that share prices fell.'

However, (65) has the verb *miwatasu* and it is inappropriate. This indicates *miwatasu* has the <focus movement> property. The <focus movement> makes (65) inappropriate because it requires objects to be wide in order to be seen widely, and the object *kabuka no booraku* is not a wide but rather a momentary event.

Example (66) also supports that *miwatasu* has <focus movement>:

(66) Kabuka booraku no haikee o miwatasu share price fall of background ACC

'to consider the background of the share price fall'

In (66) the object is *kabuka booraku no haikee* 'background of the share price fall' and in the semantic sense it can have width. Thus, Example (66) is appropriate and verifies, as noted above, that *miwatasu* has <focus movement>. The sentence in (61) above is another example where <focus movement> is observed. Example (61) is re-cited as (67).

(67) Yooroppa no rekishi o miwatasu
Europe of history ACC
'to look over European history'

In the sentence *yooroppa no rekishi* 'European history' is looked at while the focus of the agent moves from one end to the other, i.e. from the ancient to the modern age in Europe.

Intention

The extended meaning of *miwatasu* has <intention>, which is also found in its core meaning. Example (68) illustrates this property:

(68) Yooroppa no rekishi o miwatashitemiru
Europe of history ACC miwatasu-CON-try to
'to try to look over European history'

In (68) *miwatasu* is in connective form and joined to *-temiru* 'to try to do.' The lexical item *-temiru* conveys the sense of intention. As (68) is appropriate, the performance of *miwatasu* in the extended meaning can be done with intention. Hence, it has the property *<*intention>.

3.3.6 Nozomu

Nozomu is a hyponym of miru as discussed in 1.3; e.g. Sidoniitawaa o nozomu 'to look out over Sydney tower' is appropriate and it can be paraphrased as Shidoniitawaa o tookuni miru 'to look over Sydney tower in the far distance.' The visual verb nozomu has an extended meaning, which is 'to hope'. That is, a semantic property for the extended meaning of nozomu is <hope>.

(69) Kodomo o nozomu
child ACC
'to hope to have a child'

(70) Seekoo o nozomu
 success
 'to hope for success'

(71) Kekkon o nozomu marriage'to hope to marry'

Hope

Sentences in (69), (70), and (71) are examples of the extended meaning of *nozomu*. As their English translations show, *nozomu* is used to indicate the agent's desire or wish¹⁶. Important to our concern is that it does not involve the visual activity, and this feature identifies the meaning of *nozomu* in such context as an extended one. The property <hope> means to want, to wish, to hope, and to desire, depending on the object, and it denotes a psychological state.

Recall that *nozomu* has the properties <perception>, <visual>, <intention>, <continuity>, and <distance> as its core meaning (See 2.5). The sense of <hope> is associated with the core meaning of *nozomu* as follows. The notion of intentionally perceiving something out of reach for a long time leads to hope; 'intentionally perceiving something' stands for <perception>, (<visual>) and <intention>, 'out of reach' stands for <distance>, and 'for a long time' stands for <continuity>. This derivation is explained by the principle of metonymy

¹⁶According to Iwanami Japanese-Japanese Dictionary *nozomu* is described as "nanika o motomete tookumade *miwatasu* (to look at afar as seeking something)" That is, *nozomu* has a sense of desire inherently although it does not clearly appear. Morita (1989: 905-6) states as follows: the core meaning of *nozomu* is to geographically look over at something far away, and in the extended meaning 'geographically' turns into the sense of time, therefore it is to see something in the future. The object in the future, which is ideal and the object at the present, which is reality, are different. Accordingly the agent hopes for the future image to come true.

(3.3.1). Metonymy is a case where "a subcategory stands for the whole category (Lakoff, 1987: 79)." The core meaning properties cperception>, <visual>, <continuity>, <intention>, and <distance> are subcategories of hope and they stand for the whole <hope> category. The associations between <hope> and each property are illustrated below.

First, regarding the association between <hope> and <perception>, (<visual>), and <intention>, when one hopes something, he/ she perceives something to hope for. Here <visual> is in parentheses because <perception> includes vision and other senses, i.e. vision is one means of perceiving. When one hopes for peace, for example, peace is perceived in his/ her mind as a reality. Take a look at Examples (69), (70), and (71). The objects *kodomo* 'child', *seekoo* 'success', and *kekkon* 'marriage' in the examples are hoped for. This indicates that they are perceived before they are hoped for. Moreover, <perception> accompanies <intention>. To hope for involves the agent's intention. Intentionally perceiving is necessary to hope for, and for this reason it can be said that <perception> and <intention> belong to a subcategory of <hope>.

In relation with the association of <hope> and <perception>, the second property from the core meaning, <continuity>, turns up. The property <hope> needs <perception> and it has to last for some time. Hoping is brought about by perceiving something for a long time. For example, when one hopes for a child, he/ she thinks about having a child for a long time. Conversely, if one thinks about a child for only a second, one would not hope for a child. It can be said that <continuity> also belongs to the subcategory of <hope> because it is essentially needed.

Turning to the association of <hope> and <distance>, when one hopes for something, it is always out of reach. There is a long distance between the agent and the object. If something is in his reach, he/ she would not hope for it. Consider (69) for example. When a child is out of reach, one will hope for a child. But when a child is within reach, that means one has the child and does not hope for it any more. In the same way, *seekoo* in (70) has not been

achieved; i.e. it is out of reach, so it is hoped for. In (71) *kekkon* is hoped for, and even though it may be perceived for a long time, it has not come true; this means that *kekkon* is still out of reach. Thus, <distance> from the core meaning is also needed for <hope>, which is the extended meaning of *nozomu*.

In short, the three properties <perception>, <continuity>, and <distance> are subcategories of <hope>, and that <hope> is extended from those properties by the fact that <hope> is a metonymy of them.

3.4 Summary

In this chapter, the extended meanings of the visual verbs in question have been discussed. Some of the verbs have extended meanings and some do not. Semantic properties of extended meanings for each verb are as follows:

miru: 1 <visual>, <perception>, <intention>, and <judgement>

2 <perception>, <intention>, and <judgement>

- 3 <visual>, <perception>, <intention>, <judgement>, and <taking measures>
- 4 <non-visual>, <perception>, <intention>, and <judgement>
- 5 <occurrence of a state of affairs>

mitsumeru: <perception>, <fixed focus>, <intention>, <attention>, and

<judgement>

miiru: (none)

mitoreru: (none)

nagameru: <perception> and <intention>

miwatasu: <perception>, <focus movement>, and <intention>

nozomu: <hope>

Miru, mitsumeru, nagameru, miwatasu and nozomu are polysemic words which have extended meanings. Miru has the most extended meanings and *mitsumeru*, *nagameru*, *miwatasu* and *nozomu* have one extended meaning. *Miiru* and *mitoreru* are words which do not have an extended meaning. This analysis verifies that *miru* is the most basic word among those seven verbs, in the sense that *miru* has five extended meaning whereas the other six verbs have either one extended meaning or none at all.

Loss of <visual> is the common derivational pattern among the polysemic visual verbs. The loss of this property generalises the extended meanings of the verbs. To be more specific, while the <visual> property presupposes the physical visual activity, and is crucial for visual verbs in distinguishing them from other verbs, the extended meaning of visual verbs is obtained by exploring their use beyond the domain of the physical visual sense, as the meaning shifts from visual perception to general perception. A question that arises would be then: what allows the visual verbs to be used in such a context where the physical visual activity is not involved, given that the essential meaning of the visual verb is to express the visual activity? This is most likely because the way of perceiving invisible objects within the mind is somewhat similar to the perception of physical activity. In other words, although the objects are invisible, they are projected onto the mind as objects to be 'screened' or 'seen' by means of 'psychological eyes', which is implicitly indicated by the semantic properties <intention>, <judgement>, ">attention>, and <hope>.

CHAPTER 4

The survey of learners' knowledge of the visual verbs

In Chapter 4, I will investigate Japanese language learners' knowledge of the meanings of the seven visual verbs *miru*, *mitsumeru*, *miiru*, *mitoreru*, *nagameru*, *miwatasu*, and *nozomu* to find out to what extent they understand the core and extended meanings of these verbs. The investigation involves two lexico-semantic surveys of intermediate learners of Japanese: the synonym survey and the polysemy survey. Both surveys were conducted by a questionnaire method. It is assumed that results obtained from the surveys reflect the subjects' vocabulary level and the degree of their lexical comprehension.

In 4.1 general details about the surveys are presented, which is followed by discussions of the results of the surveys in 4.2 and 4.3.

4.1 Methods

4.1.1 Data collection

Two questionnaires were prepared for data collection; one for the synonym survey and the other for the polysemy survey. They are interrelated. The first questionnaire was to examine what types of synonymous visual verbs the subjects recognised. The second questionnaire investigated how well the subjects knew the polysemic meanings of the seven visual verbs.

The subjects answered the first questionnaire (synonym survey) and then moved onto the second questionnaire (polysemy survey) for those verbs that the subjects were able to identify in the first questionnaire.

The investigator and the subjects met face to face, and one on one. For more than half of the subjects, it was the first time they met the investigator. Subjects were not told the details of the surveys in advance.

The data were collected two times in order to expand the data base for more accurate analysis: The first was from the end of August to the beginning of October 1997; and the second was from the middle of February to the middle of April 1998.

4.1.2 Subjects

The subjects of the surveys were all English native speakers who were in their twenties. The Japanese level of the subjects was intermediate. The subjects had studied Japanese language at tertiary level for one to two years at the time the surveys were carried out.

Thirty subjects were involved in the synonym survey; sixteen males and fourteen females; twenty-six of the subjects were students at the Australian National University (ANU), and four were students at other universities. The average number of years that they had studied Japanese (including university, secondary school, and primary school) was 5.83 years. The average duration of studying Japanese at tertiary level was 2.32 years.

Twenty two subjects out of thirty were also involved in the polysemy survey; eleven males and eleven females; eighteen of them were students at the ANU, and four were students at other universities.

4.2 Survey on the synonyms

4.2.1 Procedure

After subjects completed a few personal information questions, they answered a questionnaire listing the seven visual verbs in Hiragana (Japanese phonetic letters). For the questions Kanji (Chinese ideographic characters) were not used so as to prevent them from guessing the meanings of the verbs from the characters. Since the purpose of the survey was to see which visual verbs were known by the Japanese language learners, the subjects were required to give the English equivalents for the verbs. Moreover, a paraphrase explanation was also required to confirm that they know the meanings of the word. Therefore, the verbs they had heard but did not know the exact meaning of were not counted. The subjects were told to skip any word they did not know. (1) and (2) show the example used in the instructions.

(1)	Example	from	the	synonym	questionnaire
-----	---------	------	-----	---------	---------------

Japanese word	English equivalents
e.g. のぞく	

In the left-hand column, the Japanese word in question was provided. The righthand column is for the English equivalents and paraphrase explanation of the Japanese word. The subjects were asked to fill in this column with the English equivalents and paraphrase explanations of the Japanese word. Below is the example which is filled with the sample answers.

(2) Example used	in the synonym survey filled with the sample answers								
Japanese word	English equivalents								
e.g. のぞく									
のぞく	to peek, to peep								
	to see something or someone by looking through a								
	small hole with one eye								

4.2.2 Results: synonym survey of the seven visual verbs

The results from the synonym survey are shown below. There are three tables. First, Table 4 shows the total number of subjects who knew the meanings of the verbs, no matter whether they were the core or extended meaning.

	4. Total number of correct responses									
	miru	nozomu	nagameru	mitsumeru	miwatasu	miiru	mitoreru			
Total Number	30	12	7	6	3	1	0			
(%)	100	40	23.3	20	10	3.3	0			

(From 30 subjects)

. . ..

Note: The percentage is rounded off to one decimal.

In Table 4, there is a clear contrast between *miru* and the other six verbs. That is, *miru* is known by 100% of the subjects, and the other verbs are known by less than 50%. This contrast reflects the lexical hierarchical relationships. Recall that *miru* is the most basic visual verb and superordinate to the other six verbs (See 1.3 and 2.5). In short, the seven visual verbs were recognised by the subjects in the following order: *miru* (100%), *nozomu* (40%), *nagameru* (23.3%), *mitsumeru* (20%), *miwatasu* (10%), *miiru* (3.3%), and *mitoreru* (0%).

Next, Table 5 below shows the number of subjects who answered the core meanings of the verbs.

		-		e			
	miru	nagameru	mitsumeru	miwatasu	miiru	mitoreru	nozomu
Total Number	30	7	6	3	1	0	0
(%)	100	23.3	20	10	3.3	0	0

Table 5. Number of the responses for the core meanings

(From 30 subjects)

The verbs, except for *nozomu*, have the same pattern of responses as in Table 4. This suggests that the five verbs *miru*, *nagameru*, *mitsumeru*, *miwatasu*, and *miiru* were recognised by their core meanings. The core meaning of *nozomu* was not recognised by the subjects. This implies that the core meaning of *nozomu* is not generally used by Japanese language learners at the intermediate level.

Finally, Table 6 shows the number of the subjects who gave the extended meanings of the verbs.

Table 6. Number of the responses for the extended meanings

	nozomu	miru	nagameru	mitsumeru	miwatasu	miiru	mitoreru
Total Number	12	0	0	0	0	0	0
(%)	40	0	0	0	0	0	0
	•						

(From 30 subjects)

As shown in Table 6, learners gave the extended meaning of *nozomu* 'to hope', instead of the core meaning 'to see over', and no subjects gave extended meanings for any verbs other than *nozomu*. This fact confirms the suggestion above that the five verbs are recognised by their core meaning, and *nozomu* is recognised by its extended meaning.

Summarising the above survey responses, *miru* was known by all the subjects, while the other six verbs were known by less than half of the subjects; *mitoreru* was not known by the subjects; the six visual verbs, *mitsumeru*, *miiru*, *nagameru*, *miwatasu*, and *nozomu*, were recognised by their core meanings; and *nozomu* is commonly known by its extended meaning.

The fact that *miru* is the most-known visual verb is most likely because *miru* is the most basic visual verb. As seen in 2.5, *miru* has three semantic properties for its core meaning. The fact that responses for the other six visual verbs are at a lower percentage is because they are hyponyms of *miru*; that is to say, they are not basic visual verbs. Instead, their meanings are more specified, as outlined in Section 2.5; i.e. *nozomu* has five semantic properties, *nagameru* has four semantic properties, *mitsumeru* has six properties, *miwatasu* has six, *miiru* has seven, and *mitoreru* has six semantic properties.

4.3 Survey on polysemy

4.3.1 Procedure

The polysemic meaning survey of the five visual verbs was conducted with a questionnaire, which had five sections. Each section was for one visual verb. The visual verbs *miiru* and *mitoreru* were not included because they do not have any extended meanings (See 3.3.3). Every section had a number of sentences in which the polysemic meanings of the verbs were used.

In order to see which polysemic meanings of each visual verb are known, each meaning was tested by evaluating the subjects' comprehension of the meanings of the verbs in four different contexts. Six meanings (the core meaning and five extended meanings) were tested in the *miru* section. Two meanings (the core and an extended meaning) were tested in the sections for *mitsumeru*, *nagameru*, *miwatasu*, and *nozomu*.

The sentences were written in Japanese (a mixture of Hiragana, Katakana, and Kanji). The target verbs were all written in Hiragana (phonetic letters) in order to prevent the subjects from guessing the meaning from the Kanji ideographs. The categories of the polysemic meanings were based entirely on the analysis of the extended meanings in Chapter 3 (See 3.4).

Those subjects who gave correct answers in the synonym questionnaire were asked to answer the polysemy questionnaire. The subjects did the sections of the polysemy questionnaire for each of the visual verbs they answered correctly in the synonym questionnaire, e.g. if the subject knew the meaning of Verb I and Verb 4, he/ she answered the sections for Verb I and Verb 4.

In each section the subjects answered whether or not the given sentences made sense. The subjects were instructed to tick a box if the sentences made sense. If the subjects were not sure or thought that the sentences did not make sense, the subjects were required to put 'x' in the boxes. When the subjects ticked a box, they were asked to give the English equivalent words or phrase for the verbs in the sentences below the each questionnaire; the English equivalents ensured that the subjects really understood the meanings of the visual verbs. A sample questionnaire for *miru* is as follows:

(3) Sample of the polysemy questionnaire: the section for miru

1.星をみる 🛛

- 2. 美人をみる 🛛
- 3. 富士山をみる 🛛

4. 夜空をみる 🛛

5. テレビをみる 🛛

6. 患者のけがをみる 口

4.3.2 Results

The results will be presented in the order of *miru*, *mitsumeru*, *nagameru*, *miwatasu* and *nozomu*. For reference, the semantic properties for the verbs are repeated in each sub-sections.

In the tables below, abbreviations are used: CM stands for core meaning; EM for extended meaning.

Miru

In the *miru* section of polysemy survey, subjects involved were twenty two. A total of twenty-four sentences were tested, four sentences for each of the six meanings. As summarised in 3.4, the semantic properties for each meaning of *miru* are as follows:

- C M ... <visual>, <perception>, and <intention>.
- EM 1 ... <visual>, <perception>, <intention>, and <judgement>.
- EM 2 ... <perception>, <intention>, and <judgement>.
- EM 3 ... <visual>, <perception>, <intention>, <judgement>, and <taking measures>.
- EM 4 ... <non-visual>, <perception>, <intention>, and <judgement>.
- EM 5 ... <occurrence of a state of affairs>.

The survey results are presented below:

Table 7. Corr	ect responses	for the meani	ngs of miru			
Meaning	СМ	EM 1	EM 2	EM 4	EM 3	EM 5
(%)	100	84.1	69.3	58	47.7	15.9
(From 22 s	ubjects)					

As seen in the table, the core meaning has the highest percentage (100%) of correct responses, which confirms that all the subjects knew the core meaning of *miru*. The second highest percentage is EM 1 (84.1%) followed by EM 2 (69.3%), 14.8% lower than EM1. EM 4 is above fifty percent (58%) and EM 3 is just below fifty percent (47.7%). The least known meaning was EM 5 (15.9%).

Mitsumeru

Only three subjects went on to the polysemy section for *mitsumeru*. Eight sentences were tested in the *mitsumeru* section, four sentences for the core meaning and four for the extended meaning. The core meaning has the semantic properties <visual>, <perception>, <continuity>, <fixed visual point>, <intention >, and <attention>. The extended meaning semantic properties are <perception>, <fixed focus>, <intention>, <attention>, and <judgement>. The results are shown below:

Table 8. Correct responses for the meanings of mitsumeru

Meaning	CM	EM
(%)	100	75

(From 3 subjects out of 22)

The table shows that the three subjects gave four out of four correct answers for the core meaning of *mitsumeru*, and three out of four correct answers for the extended meaning. As in the results for *miru* (Table 7), the percentage for the core meaning is higher than that for the extended meaning.

Nagameru

Four subjects out of twenty-two gave answers for the section on *nagameru*. A total of eight sentences were tested: four sentences each for the core and extended meaning. The core meaning has <visual>, <perception>, <continuity>, and <intention> semantic properties. The extended meaning semantic properties are <perception> and <intention>. The correct answer percentages for the meanings are shown below:

Table 9. Correct responses for the meanings of nagameru

Meaning	CM	EM
(%)	81.3	68.8

(From 4 subjects out of 22)

The percentage of correct answer for the core meaning is higher than that for the extended meaning by 12.5%; the core meaning is 81.3% and the extended meaning is 68.8%.

Miwatasu

The data were collected from only one subject for the *miwatasu* section in the survey. Although data from one subject is not sufficient to make a general observation, it seems that the questionnaire percentages for *miwatasu* indicate acquisition for the verb. Four sentences for the core meaning and four sentences for the extended meaning were tested. The semantic properties for the core meaning are <visual>, <perception>, <continuity>, <visual point movement>, <intention>, and <distance>, and for the extended meaning they are <perception>, <focus movement>, and <intention>. The results are as follows:

Table 10. Correct responses for the meanings of miwatasu

Meaning	СМ	EM
(%)	100	0

(From 1 subject out of 22)

The results show a clear contrast: one hundred percent knowledge of the core meaning, and zero percent for the extended meaning. As with the other verbs, core meaning is better known that extended meaning.

Nozomu

Six subjects gave answers for the section on *nozomu*. Eight sentences were tested, four for the core meaning and four for the extended meaning. The core meaning has the semantic properties <visual>, <perception>, <continuity>, <intention>, and <distance>. The extended meaning has <hope> as its semantic property. The results are given in Table 11.

Table 11. Correct responses for the meanings of nozomu

Meaning	СМ	EM	
(%)	21.7	100	

(From 6 subjects out of 22)

The results in Table 11 are different from those of the other verbs with respect to knowledge of the subjects. Recall that the other four verbs have core meanings which are better known by the subjects than the extended meanings. For reference the correct responses of each verb are repeated : The core meaning of *miru* is 100% and the most-known extended meaning is 84.1%; the core meaning of *mitsumeru* is 100% and the extended meaning is 75%; the core meaning of *nagameru* is 81.3% and the extended meaning is 68.8%; and the core meaning of *miwatasu* is 100% and the extended meaning is 0%.

The extended meaning result for *nozomu*, however, is one-hundred percent, whereas the core meaning is only about one-fifth that of the extended meaning. That is, the extended meaning was better known by the subjects than the core meaning. This coincides with the result of *nozomu* in the synonym survey (4.2.2).

4.4 Summary

At the beginning of this chapter, the data was assumed to reflect the subjects' vocabulary level and the degree of their lexical comprehension. The surveys were conducted to see which visual verbs the subjects knew, and which meanings of the verbs they knew. There was one primary finding for each of the surveys. The data in synonym survey (See 4.2) clearly show that *miru* is the most known visual verb among the target words. As for the polysemy survey (See 4.3), with the exception of *nozomu*, each of the subject knew the core meanings of all the target visual verbs, and the extended meanings are not as well known as the core meanings. *Nozomu* was better known by its extended meaning.

CHAPTER 5

Implications of the surveys

In Chapters 2 and 3, the core and extended meanings of the seven visual verbs were investigated and their semantic descriptions were illustrated. Based on the semantic descriptions, the synonym and polysemy surveys for intermediate learners of Japanese were introduced and analysed in Chapter 4. The results of the synonym and polysemy surveys present insights about the learning of visual verbs by speakers of English. This chapter discusses the results of the synonym and polysemy surveys, and offers pedagogical suggestions for teaching intermediate Japanese learners.

5.1 Visual verbs the learners of Japanese knew

The results of the synonym survey are discussed from two perspectives: First, in relation to the difficulty of learning the synonymous visual verbs; second, regarding the necessity of learning the synonymy of visual verbs.

Difficulty of learning

It would be safe to say that basic words are easier for learners of a language to study than specialised words, e.g. *to walk* is easier to learn than *to stroll*. Our hypothesis with regard to how well the subjects know the variety of the visual verbs is this: as the number of semantic properties increases, the likelihood that the word is known by learners decreases. Look at Table 12, which contains both the number of semantic properties of each verb and the results from the synonym survey of subjects who knew the core meanings of the verbs.

Table 12. Number of semantic properties for the core meaning and the mean of the subjects who knew the core meanings of the verbs

	miru	nagameru	nozomu	mitsumeru	miwatasu	mitoreru	miiru
Semantic Properties	3	4	5	6	6	6	7
(%)	100	23.3	0	20	10	0	3.3

The table shows that the subjects tend to know basic words better than more specialised words; that is, words that have fewer semantic properties compared to words that have many properties. We will take a closer look at each one of the visual verbs.

First, it should be noted that there is a large percentage gap (100%) to 23.3%) between the most-known verb *miru* and the second most-known verb *nagameru*. This supports the view that *miru* is a superordinate verb and in fact all the others are hyponyms of *miru* (See 1.3 and 2.5); among the seven visual verbs, *miru* has the fewest semantic properties of the verb (three), which is to say, *miru* is the basic visual verb and has the fewest semantic restrictions.

The verb which has the second lowest number of semantic properties (four) is *nagameru*, which was known the second-best by the subjects. Although *nagameru* is one of the hyponyms of *miru* and has a specific meaning, the data indicate that *nagameru* was known better by the subjects than the other hyponyms of *miru*. According to this study, this can be explained by the fact that *nagameru* has a smaller number of semantic properties than the other hyponyms.

Nozomu has the third lowest number of semantic properties (five), although no subjects knew it. This does not follow our expectation. The extended meaning of *nozomu* has to be considered in order to understand this contradiction. The extended meaning of *nozomu* is nearly fivefold better known by the subjects than the core meaning (See Table 11 in Chapter 4). The data indicates that *nozomu* is not recognised as a visual verb by the subjects, but as the verb meaning 'to hope', 'to desire', and 'to want' (3.3.6). Let us compare the two meanings of *nozomu* regarding the number of semantic properties. The

core meaning of *nozomu* -- a specific visual verb -- has five semantic properties. On the other hand, the extended meaning of *nozomu* 'to hope' has only one semantic property, which indicates the generality of the verb; that is, it is a basic verb which conveys the meaning of 'hope'. Therefore, the data, including the extended meaning of *nozomu*, should be interpreted to indicate that the subjects knew the non-specific meaning 'to hope' instead of the specific meaning 'to look': In other words, as outlined earlier, the meaning which has fewer semantic properties is known better than the meaning which has more properties.

Three verbs, *mitsumeru*, *miwatasu*, and *mitoreru* have the same number of semantic properties (six), which is the second highest number. As expected, they have lower responses than *miru* and *nagameru*. However, their responses are notably different (20%, 10%, and 0%). On the one hand, several subjects knew *mitsumeru* and *miwatasu*. On the other, no subject knew *mitoreru*. This difference seems to be caused by the restrictions on their objects. As examined in Chapter 2, the objects for the former two verbs, i.e. *mitsumeru* and *miwatasu*, do not have an essential semantic property (an essential property means $\begin{vmatrix} a \\ property which is necessary for the definition of the meaning). But the objects for the latter verb,$ *mitoreru*do.*Mitoreru*requires the object to be fascinating and beautiful (namely, the <beautiful> semantic property for the object). This restriction makes the meaning of the visual verb*mitoreru*more specific and therefore more difficult to learn.

The number of subjects for *mitsumeru* is twofold larger than that for *miwatasu*. This may be explained by the characteristics of these verbs. Neither *mitsumeru* nor *miwatasu* has an essential property for their objects (See 2.4.2). However, they have semantic properties which are determined by the visual activities of the objects (2.4.1). The number of properties is different between the two verbs: *Mitsumeru* has three properties and *miwatasu* has five for each object. This accounts for the response difference of the subjects between *mitsumeru* and *miwatasu*: The verb which has fewer semantic properties is better known than the verb which has more semantic properties.

Last, *miiru* has the greatest number of semantic properties (seven). *Miiru* was less known than *mitsumeru* and *miwatasu*, which have six properties each. But, at the same time, it was known slightly better than *mitoreru* which has six properties and should be known better than *miiru*. This result does not support the expected property-percentage relationship. The conflict between the expectation and the result might be explained by the limited number of the subjects surveyed. Still both *miiru* and *mitoreru* are at the bottom. There is only 3.3% difference (that is, one subject out of thirty) between them. Nevertheless, the result does not immediately reject the theory that the number of semantic properties determines how well the verb is known. Since *miiru* and *mitoreru* have many semantic properties in comparison to the basic visual verb *miru*, it follows that few subjects knew them. It is expected that further research with a larger number of subjects would clarify this subject.

Necessity of learning

It is commonplace to say that 'necessity' is a very important issue when learning. After they study *miru*, which is the most basic visual verb, learners of Japanese do not need to study such specific visual verbs as *mitsumeru*, *miiru*, *mitoreru*, *nagameru*, *miwatasu*, and *nozomu* for the following two reasons. First, such specific visual verbs are only used occasionally and used only in limited situations. Therefore, learners may not encounter those specific visual verbs. Even though they come across them it is quite likely that learners can guess the general meaning of them from the context.

The second reason is that in most cases when learners use visual verbs, the basic verb *miru* is sufficient. The semantic domain of the basic verb includes the domain of the specific verbs. Even when they want to specify the way of looking, or perhaps the object of looking, *miru* can be substituted for a specific visual verb with some useful adverbs such as *jitto* 'fixedly', *zutto* 'for a long time', *tookuni* 'in the far distance', and *gurutto* 'around'. It must be easier for learners to memorise the use of *miru* with a few adverbs than memorise specific visual verbs one by one. Those adverbs can also be used with other verbs, whereas the meanings of the specified verbs can easily be confused with each other due to their similar meanings.

The above two reasons explain the large gap between the most-known verb *miru* and the second most-known verb *nagameru* (100% to 23.3%).

Summarising what the group of intermediate learners of Japanese in this study knew, the synonym survey has shown that the knowledge of visual verbs is more complex than the hypothesis that the knowledge of visual verbs is directly related with the number of semantic properties. However, the survey has proved that this hypothesis underlies the relationship between semantic property and knowledge. Among the synonymous words, a word which has less semantic properties is better known than a word which has more semantic properties. This is an observation that can be applied to other semantic fields as well.

5.2 The kinds of meanings the learners knew

The polysemy survey is concerned with the knowledge of the verb: the core and extended meanings of the visual verbs involved, that is *miru*, *mitsumeru*, *miwatasu*, *nagameru*, and *nozomu*. *Miru* has one core meaning (CM) and five extended meanings (EM1 to EM5), while the other verbs have one core meaning (CM) and one extended meaning (EM1). Recall that *miiru* and *mitoreru* are not polysemic words so they are not in the table (3.3.3).

For reference, the results presented in Chapter 4 are summarised in Table 13. (The order of the verbs and the meanings are arranged according to the percentage of the responses.)

Table 13. The percentage-means of the subjects who knew the polysemic meanings of the v						verbs	
	miru	mitsumeru	miwatasu	nagameru	nozomu	_	
CM	100(%)	100	100	81.3	21.7		
EM1	84.1	75	0	68.8	100		
EM2	69.3						
EM4	58						
EM3	47.7						
EM5	15.9						

The results indicate that the core meanings of the visual verbs, with the exception of *nozomu*, are better known by the subjects than the extended meanings. This may be explained by the fact that the core meanings are used more often than the extended meanings.

This sub-section primarily concentrates on the polysemic meanings of *miru*. *Mitsumeru*, *miwatasu*, and *nagameru* follow the fact that the core meanings are known better than the extended meanings. The learners' knowledge of the core and extended meanings of *nozomu* has been already discussed in 5.1.

Looking at Table 14 below, semantic properties that are different from the CM meaning of *miru* are underlined. The semantic property difference may be caused by the addition of new properties, losing the original core meaning properties, or a semantic property turning into a similar but different one.

 Table 14. Semantic properties for the meanings of miru

 Meaning
 Semantic Properties

wearing	Semantic Pro	berties			
СМ	<visual></visual>	<perception></perception>	<intention></intention>		
EM1	<visual></visual>	<perception></perception>	<intention></intention>	<judgement></judgement>	
EM2		<perception></perception>	<intention></intention>	<judgement></judgement>	
EM4	< <u>non-visual</u> >	<perception></perception>	<intention></intention>	<judgement></judgement>	
EM3	<visual></visual>	<perception></perception>	<intention></intention>	<judgement></judgement>	< <u>taking measures</u> >
EM5		< <u>occu</u>	rrence of a sta	te of affairs>	

The core meaning of *miru* (<visual>, <perception>, and <intention>) is the most-known meaning, as already mentioned. The most-known extended meaning of

miru is EM1, adding one semantic property <judgement>. EM2, with one new semantic property <judgement>, and at the same time, losing the original core meaning semantic property <visual>, is the second most-known extended meaning of *miru*. The third well-known extended meaning is EM4 (See Table 13), which has the new semantic property <judgement> and changes the original semantic property <visual> to the <non-visual> semantic property. Based on the responses of the subjects, EM3 comes in the fourth position (Table 13). It has the core meaning plus two new semantic properties, <judgement> (as in EM1, 2, 4) and <taking measures>. EM5, the least well-known meaning of *miru*, has a metonymy semantic property, but neither the core meaning properties nor the additional properties.

Stated differently, the degree to which the semantic properties of an extended meaning differ from a core meaning affects how well an extended meaning is learned. That is, the greater the number of semantic differences from the CM, the less well known the extended meaning will be.

5.3 Pedagogical suggestions

The results of the study offer three guidelines for teachers of Japanese. The first is that the definitions of the target visual verbs can be taken advantage of in teaching (See 2.5). Indicating the distinctive properties of each verb should help learners study the meanings of the synonymous visual verbs, and provide a better understanding of them.

The second guideline concerns the teaching order of the target visual verbs. This relies on the degree of the semantic specification for each visual verb. Survey results suggest that effective learning can be increased by first teaching the basic visual verb, then the specific visual verbs. According to the findings in Chapter 2, the effective teaching order is as follows: First *miru*, which is the basic visual verb, then in the order of *nagameru*, *nozomu*, and a

group of *mitsumeru*, *miwatasu* and *mitoreru*. From this point of view, *miiru*, which is the most specific visual verb, should not be taught until last. As for the three verbs in the group, it would be better to teach *mitoreru* last for it contains an essential property for the object.

Finally, visual verbs need to be taught more to learners in order to improve their Japanese levels. Variety of synonymous words enables learners to express their thoughts more precisely and accurately. In teaching visual verbs, not only core meaning but also extended meanings should be taught since native speakers of Japanese use both the core and extended meanings of visual verbs. Moreover, the extended meanings also give more variety of expressions to learners. The extended meanings should be taught in a context rather than just the meanings themselves because the extended meanings of the visual verbs appear in a context, i.e. in collocation with certain types of objects. Pointing out how the extended meanings of a verb are different from its core meaning will be helpful in learning them. This will also provide a better understanding of them.

CHAPTER 6

Conclusions

We have discussed Japanese visual verbs in previous chapters. In chapter 1, background for this thesis was discussed. In Chapters 2 and 3, the semantic descriptions of the core and extended meanings of the seven visual verbs were illustrated. Chapter 4 investigated learners' knowledge of the synonymous and polysemic visual verbs. In Chapter 5, some pedagogical suggestions for teaching Japanese visual verbs were made. In Chapter 6, we conclude the thesis and suggest some directions for further studies.

6.1 Findings

The first part of this thesis (Chapters 2 and 3) discussed the semantic properties of the seven visual words, and defined both the core and extended meanings of the target words.

The core meaning definitions have demonstrated that the <perception> and <visual> semantic properties are commonly seen in the seven visual verbs, and the nine semantic properties, <continuity>, <fixed visual point>, <visual point movement>, <intention>, <non-intention>, <attention>, <distance>, <interesting> object, and <beautiful> object are distinctive properties, depending on the verb.

It should be noted that the core meaning definitions (2.5) indicate the degree of semantic specifications, i.e. speciality of meaning, for each verb, since the number of semantic properties is the parameter for the specifications of the verbs. The order of the specifications is as following: *Miru* is the least specific, followed by *nagameru*; *nozomu* is third; in the fourth position are *mitsumeru*, *miwatasu* and *mitoreru*; *miiru* is the most specific verb.

The extended meaning definitions illustrated that *miru* has five extended meanings, *miiru* and *mitoreru* do not have any, and the other verbs have one extended meaning each. This supports the view that *miru* is a basic word while the others are not. The extended meanings of the visual verbs may occur with non-visible objects, which broadens the meanings of vision to the meanings of perception, i.e. the semantic property of the object <visible> can be lost as an extended meaning. The fact that *miiru* and *mitoreru*, do not have any extended meanings was explained by noting that their core meanings have a large number of semantic properties, and both of them have an essential property for the objects, namely <interesting> object and
beautiful> object respectively.

The second part of the thesis (Chapters 4 and 5) concerns learners of Japanese. Chapter 4 introduced synonym and polysemy surveys based on the above core and extended meaning definitions, and an analysis of the survey results. The synonym survey was conducted in order to see which synonymous visual verbs learners know, and the polysemy survey was conducted to see whether or not there is a pattern in learning polysemic meanings of words. Although the number of the subjects was not large, in the data analysis of the synonym survey it appeared that there is a strong relationship between the knowledge of learners and the number of semantic properties. The analysis of the polysemy survey showed that *nozomu* needs more and further observation.

In Chapter 5 the results of the surveys were further discussed, involving two perspectives: difficulty of learning and necessity of learning. The main findings were that (i) there is a general tendency that a verb which has less semantic properties is better known than a verb which has more semantic properties, (ii) with the exception of *nozomu*, a core meaning is better known than extended meanings, and (iii) the more different the extended meaning is from the core meaning, the less well known it is.

6.2 Implications for further study

Seven visual verbs have been investigated. However, this thesis has dealt with only a few cases of the combination of '*miru* plus adverb.' The combination of '*miru* plus adverb" can substitute for the other six visual verbs. One direction for further research is a comparative study of the combination of '*miru* plus adverb' and the other six visual verbs. Such a study would clarify the semantic relationships between the superordinate verb and hyponyms of the visual verbs.

The synonym and polysemy surveys researched subjects whose first language is English. It is also worth researching subjects whose first language is a language other than English. This would clarify how much a first language influences the acquisition of Japanese synonyms and polysemy.

It is expected that further study will be done for *nozomu*. The results of the polysemy survey have shown that the extended meaning of *nozomu* is known better than the core meaning. It raises the question of whether or not *nozomu* is a polysemic word. If it is, further explanation is needed for the results for *nozomu*. If it is not a polysemic word, the best explanation may be that *nozomu* is a homonym which has two different meanings, 'to view' and 'to hope' for the same form. Furthermore, the intransitive use of *nozomu* should be researched, both with learners of Japanese and native speakers of Japanese.

It is hoped that this study contributes to the field of lexico-semantic study of the Japanese language, and also to the field of teaching Japanese to non-native speakers. In particular, it is hoped that the results from the analysis of the synonyms of the visual verbs will be helpful in predicting the vocabulary that intermediate learners of Japanese know. Similarly, it is hoped that the results from the analysis of the polysemic meanings of the visual verbs provide useful information in understanding the polysemy comprehension of learners of Japanese.

APPENDIX A

Questionnaire for the synonym survey

Please complete your personal information.
 Name Sex Contact number
 The duration of studying Japanese
 The duration of your stay in Japan (for those who have)
 Give English equivalents and paraphrase explanations for the Japanese verbs.

 Japanese verb
 English equivalents

e.g.

- のぞく

to peep, to peek to see something or someone by looking through a small hole with one eye

- みる
- みつめる
- みいる

- みとれる

- ながめる

- みわたす

- のぞむ

APPENDIX B

Questionnaire for the polysemy survey Section for *miru* with English translation

- 1.星をみる口 to look at a star*
- 2.美人をみる口 to look at a beautiful woman
- 3.富士山をみる口 to look at Mt. Fuji
- 4.夜空をみる□ to look at a night sky
- 5.テレビをみる□ to watch TV
- 6.患者の怪我をみる口 to examine a patient's injury
- 7.現実をみる口 to look into a reality

8.警察は自殺の原因をいじめとみる口 The police suspect that the suicide was caused by bullying.

9.成功をみる口 to succeed

* Translations were not given to subjects.

10.痛い目をみる口

to have a bad experience

11.子供をみる口

to take care of a kid

12.世間一般をみてもあなたのような人はいない口 Even though looking through the world, there is no one like you.

13.荷物をみる口

to keep an eye on luggage

14.味をみる口

to taste

15.脈をみる口

to take one's pulse

16.湯加減をみる口

to feel and check the temperature of hot water

17.意見の一致をみる口

to reach an agreement of opinions

18.学生のレポートをみる口 to mark students' essays

19.病人をみる口

to take care of a sick person

20.親の老後をみる口

to take care of one's parents after their retirement

21.ピアノの音をみる口

to tune the piano

22.多くの犠牲者をみる口

to have many victims

23.今度の選挙で労働党が勝つとみる口

to expect that the labour party will win the next election

24.日本語の辞書をみる口

to consult a Japanese dictionary

APPENDIX C

Questionnaire for the polysemy survey Section for *mitsumeru* with English translation

- 1.美人をみつめる口 to gaze at a beautiful woman*
- 2.富士山をみつめる口 to look intently at Mt. Fuji
- 3.空をみつめる口 to look intently at the sky
- 4.現実をみつめる□ to look into a reality
- 5.自分をみつめる口 to look into oneself
- 6.選手の動きをみつめる口 to look hard at players
- 7.アジアの通貨危機の行方をみつめる口 to keep an eye on the changes of Asian currency crisis

8.今の政治をみつめる口 to look into present-day politics

* English translations were not given to subjects.

APPENDIX D

Questionnaire for the polysemy survey Section for *nagameru* with English translation

- 1.新聞をながめる口 to look over a newspaper*
- 2.満月をながめる口 to look at the full moon
- 3.この10年間の文学をながめる口 to look at these ten years literary world
- 4.ヨーロッパの歴史をながめる口 to look at European history
- 5.近ごろの若者の言動をながめる口 to look at current young people's words and deeds
- 6.世の中の移り変わりをながめる口 to observe the changes of the world/generation
- 7.学生のデモ行進をながめる口 to see the demonstration parade of the students
- 8.芝居をながめる口 to observe a play

* Translations were not given to subjects

APPENDIX E

Questionnaire for the polysemy survey Section for *miwatasu* with English translation

- 1.富士山をみわたす口 to look at Mt. Fuji from the far distance*
- 2.世間一般をみわたす口 to look around the society broadly
- 3.世界の歴史をみわたす口 to have a wide view for world history
- 4.古今東西をみわたす口 to look at the Eastern and Western world, both in ancient and modern times
- 5.現代の世界をみわたす口 to look around the modern world
- 6.アルプスの山々をみわたす口 to look at all the mountains of the Alps

7.キャンベラの町全体をみわたす□ to look at the entire Canberra city

8.周りの景色をみわたす口 to look at the surrounding around one

* Translations were not given to subjects.

APPENDIX F

Questionnaire for the polysemy survey Section for *nozomu* with English translation

1.遠くに富士山をのぞむ口 to look at Mt. Fuji in the far distance*

2.成功をのぞむ口 to hope for success

3.問題の解決をのぞむ口 to want the problem to be solved

4.太平洋をのぞむ口 to see the Pacific Ocean over there

5.平和をのぞむ口 to hope for peace

6.アルプスをのぞむ□ to look at the Alps

7.経済の成長をのぞむ口 to hope for economic growth

8.キャンベラの町全体をのぞむ口

to see the whole city of Canberra

* Translations were not given to subjects.

APPENDIX G

The polysemy survey results in detail Section for *miru*

Question	Correct responses
1.星をみる to look at a star	22 (out of 22)
2.美人をみる to look at a beautiful woman	22
3.富士山をみる to look at Mt. Fuji	22
4.夜空をみる to look at a night sky	22
5.テレビをみる to watch TV	22
6.患者の怪我をみる to examine a patient's injury	14
7.現実をみる to look into a reality	17
8.警察は自殺の原因をいじめといる The police suspect that the suicide was caused by bullying.	11
9.成功をみる to succeed	4
10.痛い目をみる to have a bad experience	6
11.子供をみる to take care of a kid	16
12.世間一般をみてもあなたのような人はいない Even though looking through the world, there is no one like you.	18

Correct responses

13.荷物をみる to keep an eye on luggage	13 (out of 22)
14.味をみる to taste	16
15.脈をみる to take one's pulse	16
16.湯加減をみる to feel and check the temperature of hot water	14
17.意見の一致をみる to reach an agreement of opinions	3
18.学生のレポートをみる to mark students' essays	21
19.病人をみる to take care of a sick person	4
20.親の老後をみる to take care of one's parents after their retirement	9
21.ピアノの音をみる to tune the piano	5
22.多くの犠牲者をみる to have many victims	1
23.今度の選挙で労働党が勝つとみる to expect that the labour party will win the next election	15
24.日本語の辞書をみる to consult a Japanese dictionary	7

Question

APPENDIX H

The polysemy survey results in detail Section for *mitsumeru*

Question	Correct responses
1.美人をみつめる to gaze at a beautiful woman	3 (out of 3)
2.富士山をみつめる to look intently at Mt. Fuji	3
3.空をみつめる to look intently at the sky	3
4.現実をみつめる to look into a reality	2
5.自分をみつめる to look into oneself	2
6.選手の動きをみつめる to look hard at players	3
7.アジアの通貨危機の行方をみつめる to keep an eye on the changes of Asian currency crisis	3
8.今の政治をみつめる to look into present politics	2

APPENDIX I

The polysemy survey results in detail Section for *nagameru*

Question	Correct	responses
1.新聞をながめる to look over a newspaper		2 (out of 4)
2.満月をながめる to look at the full moon		4
3.この10年間の文学をながめる to look at these ten years literary world		0
4.ヨーロッパの歴史をながめる to look at European history		4
5.近ごろの若者の言動をながめる to look at current young people's words and deeds		3
6.世の中の移り変わりをながめる to observe the changes of the world/generation		4
7.学生のデモ行進をながめる to see the demonstration parade of the students		3
8.芝居をながめる to observe a play		4

. •

APPENDIX J

The polysemy survey results in detail Section for *miwatasu*

Question	Correct responses
1.富士山をみわたす to look at Mt. Fuji from the far distance	1 (out of 1)
2.世間一般をみわたす to look around the society broadly	0
3.世界の歴史をみわたす to have a wide view for world history	0
4.古今東西をみわたす to look at the Eastern and Western world, both in ancient and modern times	0
5.現代の世界をみわたす to look around the modern world	0
6.アルプスの山々をみわたす to look at all the mountains of the Alps	1
7.キャンベラの町全体をみわたす to look at the entire Canberra city	1
8.周りの景色をみわたす to look at the surrounding around one	1

.

APPENDIX K

The polysemy survey results in detail Section for *nozomu*

Question	Correct responses
1.遠くに富士山をのぞむ to look at Mt. Fuji in the far distance	2 (out of 6)
2.成功をのぞむ to hope for success	5
3.問題の解決をのぞむ to want the problem to be solved	3
4.太平洋をのぞむ to see the Pacific Ocean over there	1
5.平和をのぞむ to hope for peace	6
6.アルプスをのぞむ to look at the Alps	1
7.経済の成長をのぞむ to hope for economic growth	6
8.キャンベラの町全体をのぞむ to see the whole city of Canberra	1

•

BIBLIOGRAPHY

Asano, Y. (1976), 'Ruigigo koo: sono 11', Nihongo Kyooiku Kenkyuu 13

Backhouse, A.E. (1993), The Japanese Language, Oxford University Press (1994), The Lexical Field of Taste: A Semantic Study of Japanese

Taste Terms, Cambridge University Press

Cann, R. (1993), Formal Semantics, Cambridge University Press

Carl, J. (1980), Contrastive Analysis, Longman

Cruse, D.A. (1986), Lexical Semantics, Cambridge University Press

- Crystal, D. (1992), An Encyclopedic Dictionary of Language and Languages, Penguin Books
- Dorothea, L. (1977), 'A confrontation of say, speak, talk, tell, with possible German counterparts', PSiCL6
- Ellis, R. (1986), Understanding Second Language Acquisition, Oxford University Press
- Eugene, A.N. (1975), Componential Analysis of Meaning: An Introduction to Semantic Structures, Mouton
- Higashi, N. (1981), 'Gogi no hikaku', in T. Kunihiro (ed), Nichieigo Hikakukooza vol. 3 Imi To Goi, Taishuukanshoten, pp.101-63
- Hirose, M. and K. Shooji (ed), (1994), Effective Japanese Usage Guide, Koodansha, pp.642-4
- Hudson, W. (1986), 'Semantic theory and L2 lexical development', in M.G. Susan and S. Jacquelyn (ed), *Linguistic Perspectives on Second Language* Acquisition, Cambridge University Press, pp222-38
- Ikegani, Y. (1975), Imiron, Taishuukanshoten
- _____ (1978), Imi No Sekai, NHK books
- Ishiwata, T. and M. Takada (1990), Taishoo Gengogaku, Oohuu
- Iwanami Kokugo Jiten 4th ed., (1986), Iwanamishoten

Kageyama, T. (1990), 'Nihongo to eego no goi no taishoo', in H. Tamamura (ed), Kooza Nihongo To Nihongokyooiku vol.7 Nihongo No Goi Imi, Meejishoin, pp.1-26

Kindaichi, H. (1976), 'Kokugo dooshi no ichibunrui',

Nihongo Dooshi No Asupekuto, in H. Kindaichi (ed), Mugishoboo Kojima, Y. (1988), Nihongo No Imi Eego No Imi, Nanundoo

Kokuritsu Kokugo Kenkyuujo, (1961), Bunrui Goi Hyoo, Shuueeshuppan

_____ (1972), Dooshi No Imi Yoohoo No Kijutsuteki Kenkyuu,

Shuueeshuppan

(1985), Goi No Kenkyuu To Kyooiku Ge, Ookurashoo insatsukyoku Koojien 4th ed., (1991), Iwanamishoten

Kunihiro, T. (1967), Koozooteki Imiron, Sanseedoo

_____ (1970), Imi No Shosoo, Sanseedoo

- _____ (1979), Kotoba No Imi 2, in T. Shibata (ed), Heebonsha
- _____ (1981), 'Goi no koozoo no hikaku', in T. Kunihiro (ed), Nichieego

Hikakukooza vol.3 Imi To Goi, Taishuukanshoten, pp.15-52

_____ (1982), Imiron No Hoohoo, Taishuukanshoten

_____ (1986), 'Gogikenkyuu no mondaiten: tagigo o chuusin to shite',

Nihongogaku vol.5 dai 9 gatsu goo, pp.4-12

_____ (1989), 'Imi to yoohoo', in H. Tamamura (ed), Kooza Nihongo To Nihongokyooiku vol.6 Nihongo No Goi Imi, Meejishoin

Lakoff, G. (1987), Women, Fire, and Dangerous Things: What Categories

Reveal about the mind, The University of Chicago Press, pp. 77-9, pp.316-7

Leech, G. (1974), Semantics, Penguin books

Lyons, J. (1977a), Semantics vol.1, Cambridge University Press

_____ (1977b), Semantics vol.2, Cambridge University Press

Momiyama, Y. (1992), 'Tagigo no bunseki', in H. Quackenbush and others (ed), Nihongokenkyuu To Nihongokyooiku, Nagoyadaigaku shuppankai, pp.185-99

- Momiyama, Y. (1993), 'Tagigobunseki no hoohoo: Tagiteki betsugi no nintee o megutte', Nagoyadaigaku Nihongo Nihonbunka Ronshuu vol.1, Nagoyadaigaku ryuugakusee sentaa, pp.35-57
- Moori, Y. (1987), 'Taigigo ruigigo ruiengo', Nihongogaku vol.6 dai 6 gatsugoo, pp.42-50
- Morita, Y. (1986), 'Dooonruigigo to tagi no kyookai', *Nihongogaku* vol.5 dai 9 gatsugoo, pp.13-21
- _____ (1989a), 'dooongo tagigo', in H. Tamamura (ed), Kooza Nihongo To Nihongokyooiku vol.6 Nihongo No Goi Imi, Meejishoin, pp.262-84
- (1989b), Kiso Nihongo Jiten, Kadokawashoten
- _____ (1996), Imibunseki No Hoohoo: Riron To Jissai, Hitsujishoboo
- Nagashima, Y. (1968), 'Hit, break, cut to sono ruigigo no igiso no koozoo ni tsuite', *Gengokenkyuu* No.52, pp.58-79
- _____ (1982), 'Ruigigo towa nani ka', *Nihongogaku* vol.1 dai 11 gatsugoo, pp.43-6
- _____ (1989), 'Go no imi', in H. Tamamura (ed), Kooza Nihongo To Nihongokyooiku vol.6 Nihongo No Goi Imi, Meejishoin, pp.194-210
- Ogino, T. (1990), 'Imibunya', in H. Tamamura (ed), Kooza Nihongo To Nihongokyooiku vol.7 Nihongo No Goi Imi, Meejishoin, pp.278-97
- Okuda, H. (1985), 'Goitekina imi no arikata', Kotoba No Kenkyuu: Josetsu, Mugishoboo, pp.3-20
- Ooshika, T. (1989), 'Ruigigo hangigo', in H. Tamamura (ed), Kooza Nihongo To Nihongokyooiku vol.7 Nihongo No Goi Imi, Meejishoin, pp.236-61
- Ooshima, M. (1984), 'Nozoku ukagau', in Nihongokenkyuukai (ed), Nihongo Kenkyuu dai 7 goo, Tookyootoritsudaigaku kokugogaku kenkyuushitsu
- Robert, J.D. (1971), Language Structures in Contrast, Newbury house publishers, pp.109-34
- Sakota, S. (1980), 'Mitsumeru nagameru', in Tookyootoritsudaigaku nihongo kenkyuukai (ed), *Nihongo Kenkyuu* dai 3 goo, Tookyootoritsudaigaku kokugogakukenkyuushitsu

- Schreuder, R. and B.G. Flories D'Arcais (1986), 'Psycholinguistic Issues in the Lexical Representation of Meaning' in W. Marslen-Wilson (ed), Lexical Representation and Process, Massachusetts Institute of Technology Press, pp409-36
- Shibata, T. (ed), (1976) Kotoba no imi 1, Heebonsha (1988), Goiron No Hoohoo, Sanseedoo
- Suzuki, T. (1990), Nihongo To Gaikokugo, Iwanamishoten
- Tanaka, S. (1996), 'Dooshi "miru" no tagi koozoo', Gengokenkyuu No.110, pp.120-42
- Tanenhaus, K.M. and N.G. Carlson (1986), 'Lexical structure and language comprehension', in W. Marslen-Wilson (ed), *Lexical representation and* process, Massachusetts Institute of Technology Press, pp529-61
- The Australian Concise Oxford Dictionary 2nd ed., (1992), Oxford University Press
- Tsutahara, I. (1983), 'Shikakudooshi "miru" "mieru" no imi kijitsu', Gobun No.42, pp.39-48
- Viberg, Å. (1983), 'The verbs of perception: a typological study', *Linguistics* vol.21-1, pp.123-62
- Wierzbicka, A. (1996), Semantics: Primes and Universals, Oxford University Press
- Yamada, S. (1992), 'Doogi ni kansuru nisan no mondai', Nihongokenkyuu To Nihongokyooiku, in H. Quackenbush and others (ed), Nagoyadaigaku shuppankai, pp.61-76