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THE LIGHT VERB CONSTRUCTION IN JAPANESE:
THE ROLE OF THE VERBAL NOUN

by

Tadao Miyamoto

B.A., Momoyama Gakuin, 1970
B.A., University of Victoria, 1987
M.A., University of Victoria, 1990

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We accept this dissertation as conforming
to the required standard

Leslie Saxon, Ph.D., Supervisor (Department of Linguistics)

Joseph F. Kess, Ph.D., Departmental Member (Department of Linguistics)

Thomas E. Hukari, Ph.D., Departmental Member (Department of Linguistics)

Hiroko Noro, Ph.D., Outside Member (Department of Pacific and Asian
Studies)

Emmon Bach, Ph.D., External Examiner ((Department of Linguistics,
University of Massachusetts, Amherst and Department of First Nations Studies,
University of Northern British Columbia)

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University of Victoria

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Supervisor: Dr. Leslie Saxon

ABSTRACT

This is a study of the so-called Light Verb Construction (LVC) in Japanese, which consists of the verb *suru* 'do' and the accusative-marked verbal noun, as exemplified in

(1).

(1)

- a. Taroo ga Tokyo ni ryokoo o suru.
 NOM to travel ACC do
 'Taroo travels to Tokyo.'
- b. Taroo ga eigo no benkyoo o suru.
 NOM English GEN study ACC do
 'Taroo studies English.'
- c. Taroo ga murabito ni ookami ga kuru to keikoku o suru
 NOM villagers to wolf NOM come COMP warning ACC do
 'Taroo warns the villagers that the wolf will come.'

Since Grimshaw and Mester's (1988) seminal work, there have been unresolved debates on the role of *suru*, whether *suru* in such forms as in (1) functions as a light verb or not. An observational generalization is that the thematic array of a clause faithfully reflects the argument structure of the VN which heads the accusative phrase. Hence, from the viewpoint of argument structure, *suru* may be 'light' in the sense that it makes no thematic contribution to the *VN-o suru* formation. This *suru* may hence be different from the regular use of *suru* as a two-place ACTIVITY predicate, as shown in (2).

(2)

- a. Taroo ga gorufu o suru.
 NOM golf ACC do
 'Taroo plays golf.'
- b. Taroo ga tenisu o suru.
 NOM tennis ACC do
 'Taroo plays tennis.'

- c. Taroo ga kaimono o suru.
 NOM shopping ACC do
 'Taroo does a shopping.'

The oft-cited differences between the so-called light *suru* construction and the heavy *suru* construction are two-fold. First, in the light *suru* construction, the arguments of the VN may be 'promoted' into a clausal domain. Judging from the verbal case marking, the arguments of the VN are treated as if they are those of *suru*. Second, the light *suru* construction may exhibit the so-called 'frozen phenomena'. The observational generalization is that when there is no overt argument in the accusative phrase domain, this accusative phrase becomes 'frozen' in the sense that it cannot tolerate syntactic processes, such as scrambling and adverbial insertion .

The majority of previous studies examine the 'weight' of *suru* either to support or to refute the idea that *suru* can function as a light verb. In other words, these previous studies attempt to disambiguate the *VN-o suru* formation relying solely on the lexical property of *suru*. The contention of this study is that the above approach is problematic. This study argues that the ambiguity does not stem from the 'weight' of *suru* but from the thematic properties of the VN which heads the accusative phrase, primarily, whether it is headed by a thematic or non-thematic VN. Another contention of this study is that the ambiguity can be resolved under the assumption that there is only one type of *suru*: a two-place predicate which licenses Agent and EVENT. In this sense, this study will argue against the idea that *suru* functions as a light verb and will argue that the characterization of *VN-o suru* formation arises not from the dichotic distinction of *suru* but from the dichotic distinction of its accusative phrase.

Examiners:

Leslie Saxon, Ph.D., Supervisor (Department of Linguistics)

Joseph F. Kess, Ph.D., Departmental Member (Department of Linguistics)

Thomas E. Hukari, Ph.D., Departmental Member (Department of Linguistics)

Hiroko Noro, Ph.D., Outside Member (Department of Pacific and Asian Studies)

Emmon Bach, Ph.D., External Examiner ((Department of Linguistics, University of Massachusetts, Amherst and Department of First Nations Studies, University of Northern British Columbia)

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DEDICATION

With love to my wife

Susie

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LIST OF ABBREVIATIONS

ACC	Accusative
ADJP	Adjectival Phrase
AGR ^o	Object Agreement
AGR ^s	Subject Agreement
ASP	Aspect(ual)
CAUS	Causative
CLS	Classifier
COMP	Complement
COP	Copula
CP	Complement Phrase
DAT	Dative
DIM	Dimension
DIR	Direction
DP	Determiner Phrase
GEN	Genitive
HON	Honorific
I	Inflection
INF	Infinitive
LCS	Lexical Conceptual Structure
LF	Logical Form
LVC	Light Verb Construction
N	Noun
NL	Nominalizer
NOM	Nominative
NP	Noun Phrase
NEG	Negation
NQF	Numeral Quantifier Floating
OBJ	Object

OBL	Oblique (Argument)
PASS	Passive
PAST	Past
PERF	Perfective
PF	Phonological Form
PL	Plural
PERF	Perfective
POSS	Possessive
POT	Potential
PP	Pre(Post)positional Phrase
PRED	Predicate
PRES	Present
PRO	Controlled Null Subject
PROG	Progressive
PUR	Purpose Clause
Q	Question Marker
S	Sentence
SUBJ	Subject
T	Tense
TOP	Topic
V	Verb
VN	Verbal Noun
VP	Verb Phrase

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Chapter 1. Introduction

1.1. Introduction

This is a study of the so-called Light Verb Construction (LVC) in Japanese, which consists of the verb *suru* 'do' and an accusative-marked verbal noun, as exemplified in (1).
(1)

- a. Taroo ga Tokyo ni ryokoo o suru.
NOM to travel ACC do
'Taroo travels to Tokyo.'
- b. Taroo ga eigo no benkyoo o suru.
NOM English GEN study ACC do
'Taroo studies English.'
- c. Taroo ga murabito ni ookami ga kuru to keikoku o suru
NOM villagers to wolf NOM come COMP warning ACC do
'Taroo warns the villagers that the wolf will come.'

Before addressing what the issues are with the LVC, I will describe the LVC and its two basic components in Japanese. In Section 1.5, I will outline this work and in Section 1.6, I will introduce the theoretical framework of this work.

1.2. Light Verb Constructions in General

In presenting an overall picture of the LVC, I will summarize its characteristics in the following subsections. My remarks draw on studies of LVC's in English (Cattell, 1984; Grimshaw and Mester, 1988; Jackendoff, 1972; Kearns, 1988; Wierzbicka, 1982), Malayalam (Jayaseelan, 1988), Korean (Ahn, 1990), and some others (Mohan, 1990, 1995; Pelletier, 1990).

1.2.1. A Type of Periphrastic Construction

The first defining characteristic of the LVC is that it is a type of *periphrastic* construction. This periphrasis can be exemplified by the English sentences in (2) where

each pair of sentences contains a simple predicate sentence and a corresponding sentence which might be said to involve a light verb construction, which are roughly equivalent in meaning.

(2)

- a. John looked at the boy.
 John took a look at the boy.
- b. John swept the floor.
 John gave the floor a sweep.
- c. John drank beer.
 John had a drink of beer.

In these periphrastic expressions, the verbs, such as *take*, *give*, and *make*, are non-significant (Baker 1996; Jackendoff, 1972; Jespersen, 1966; Kearns, 1988) in the sense that they are responsible merely for marking person and tense while the major semantic burden of the expression is carried by the verbal nouns. The verbs in these constructions have been termed 'light verbs'.

1.2.2. The Argument Structure of the LVC

The second defining characteristic of the LVC has to do with argument structure. The argument structure of a lexical verb and that of its corresponding verbal noun are claimed to be identical (Chomsky, 1970; Grimshaw, 1990; Jayaseelan, 1988). This point can be exemplified by the pair of Malayalam sentences in (3) and the representation of their argument structure in (4); the verb *anuwadicc-* 'permit' and verbal noun *anuwaad-* 'permission' are observed to have exactly the same argument structure.

(3) (Jayaseelan, 1988: 92)

- a. raajaa-we mantiRi-ye pookuwaan anuwadicc-u
 king NOM minister ACC go INF permit-PAST
 'The king permitted the minister to leave.'
- b. raajaa-we mantRi-kk pookuwaan anuwaad-am kodutt-u
 king-NOM minister-DAT go INF permission-ACC give-PAST
 'The king gave permission to the minister to leave.'

(4)

- a. *permit* (x (y (z)))
 Agent Goal Theme (=Event)
King Minister To Leave
- b. *permission* (x (y (z)))
 Agent Goal Theme (=Event)
King Minister To Leave

1.2.3. Structural Characteristics of the LVC

From the syntactic point of view, the LVC possesses two characteristics. The first is that the verbal noun is regularly realized as the head of an accusative-marked (object) NP.¹ The Korean sentences in (5) illustrate this point. In both (5a), where the verbal noun *hapsek* 'seat-sharing' realizes no arguments NP-internally, and (5b), where the verbal noun assumes its own Theme NP-internally (i.e., *nuktay-ka nathanassta-ko kyengko* 'the warning that the wolf appeared'), the noun phrases which are headed by these verbal nouns are marked by the accusative case *lul*.

(5) (Ahn, 1990: 226)

- a. John-i Mary-wa hapsek-ul ha-yess-ta.²
 NOM with seat-sharing-ACC do-??-PAST
 'John shared a seat with Mary.'
- b. John-i Mary-eykey [nuktay-ka nathanassta]-ko kyengko-lul
 NOM to wolf NOM appeared-COMP warning-ACC
 ha-yess-ta.
 do-??-PAST
 'John warned Mary that a wolf appeared.'

Another syntactic characteristic of the LVC is that the arguments of a verbal noun are not always realized inside the accusative NP. This characteristic, which is regarded by some to be the most intriguing aspect of the LVC (Grimshaw and Mester, 1988:

¹ Baker (1996) claims that one of the basic characteristics of the LVC is that the nominal predicate always assumes a Theme role: or in his terms, "if the predicate noun is Case marked by the light verb, it appears in the theme slot of the light verb" (Baker, 1996: 354).

² The question marks in the gloss for *yess* are from the original text.

Jayaseelen, 1988), can readily be observed in languages which make clear morphological distinctions between verbal case and nominal case. For instance, given the argument structure of the verbal noun *keikoku* 'warning' in (6), the Japanese sentence in (7) illustrates that only the Theme argument of the verbal noun is realized inside an accusative NP, as is clear from its nominal *no* case-marking; meanwhile, the Agent and Goal arguments of the verbal noun are realized outside the accusative NP, as is clear from their nominative '*ga*' case-marking and postpositional '*ni*' marking.³

(6) *keikoku* 'warning'

(x	(y	(z))
Agent	Goal	Theme
<i>Taroo villagers the wolf was coming</i>		

(7)

Taroo *ga* murabito *ni* [ookami *ga* kuru to no keikoku] *o* shi-ta.
 NOM villagers to wolf NOM come COMP GEN warning ACC do-PAST
 'Taroo warned the villagers that the wolf was coming.'

Even languages which make no such clear morphological distinction between verbal and nominal case can exhibit the structural characteristic that not all arguments of the object NP are realized inside the domain of the verbal noun. For instance, in the English examples in (8), the fact that (8b) is grammatical as the passive form of (8a) while (8c) is not suggests that structurally the Goal argument *to the ballerina* does not stand inside the object NP *a proposal of marriage*, as shown in (9a), but rather outside the object NP, as shown in (9b).⁴

³ The issue of nominal and verbal case marking is discussed in Chapter 6. In short, while the matrix subject and object are structurally case marked by *ga* nominative and *o* accusative, any NP-internal arguments are marked by genitive *no* case by *no*-insertion rules (cf. Murasugi, 1991).

⁴ Another set of examples can be cited from Baker (1996: 354 (33a and b)).

(i) The blame was put on Bill for the accident.

(ii) *The blame on Bill was put for the accident.

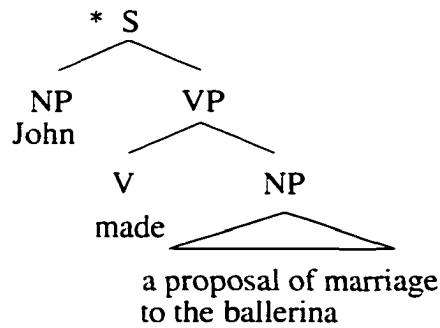
The ungrammaticality of (ii) indicates that the PP *on Bill* is not a part of the constituent headed by the verbal noun *blame*.

(8) (Kageyama, 1991: 172)

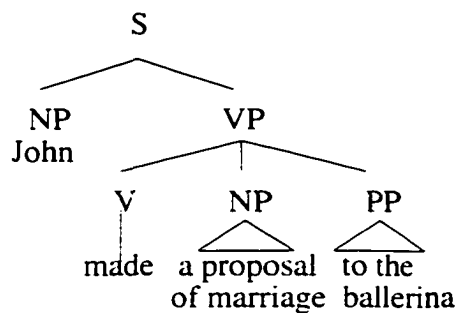
- a. John made a proposal of marriage to the ballerina.
 b. A proposal of marriage was made to the ballerina. (Passive)
 c. *A proposal of marriage to the ballerina was made. (Passive)

(9)

a.



b.



1.2.4. A Morphosyntactic Characteristic of the LVC

The last characteristic of the LVC is morphosyntactic. In some languages, a verbal noun can be incorporated into a light verb. Although this feature of the LVC is not universal, it has been observed in various languages. I cite an example in (10) from Telugu, a Dravidian language.

(10) (Pelletier, 1990: 335)

- a. Sarma prayanamu (nu) cesindi
 travel (ACC) did
 'Sarma traveled.'
- b. Sainikudu sadruwu-nu khuni (*ni) cesadu.
 soldier enemy ACC killing (*ACC) did
 'The soldier killed the enemy.'

In example (10a), incorporation is optional. If the verbal noun *prayanamu* 'travel' is not incorporated into the matrix verb, then it must be marked by the accusative case marker *-nu*, functioning as the head of an accusative NP. In (10b), however, incorporation is obligatory because if incorporation did not take place, the verbal noun would receive accusative case, violating Telugu's Double Accusative Constraint (Pelletier, 1990). As long as there is no such violation, the incorporation of a verbal noun into a verb is fairly common practice.⁵

The above characterization provides a general picture of what the light verb construction is, though the so-called light verb construction in any given language may not have all the characteristics that we have just observed.

1.3. Japanese *Suru* and Verbal Nouns in General

Having presented an overall picture of what the LVC is, I will describe the two basic components of the LVC in Japanese: the verb *suru* and Verbal Nouns (VN's).

1.3.1. *Suru*

Suru functions as a one- and two-place predicate and as a verb which allows incorporation.

1.3.1.1. One-place predicate

In its intransitive use, *suru* takes some kind of perceivable object as its subject, expressing sensation.

⁵ Exactly the same kind of morphological incorporation might be observed in Japanese. While incorporation is optional in (i), incorporation might be regarded as obligatory in (ii) in order to avoid violating the double-*o* constraint (cf. Harada, 1973; Poser, 1989). However, in this thesis, I will treat such *double o VN-o suru* constructions as grammatically acceptable since they violate only the so-called 'surface double-*o* constraint' (cf. Hoshi, 1994; Kageyama, 1991; Saito and Hoshi, 1994; Sells, 1990).

(i) Taroo ga ryokoo (o) shi-ta.
NOM travel ACC do-PAST

'Taroo traveled.'

(ii) Taroo ga eigo o benkyoo (??o) shi-ta.
NOM English ACC study ACC do-PAST

'Taroo studied English.'

As for the degree of grammaticality, i.e., '??', I will follow Saito and Hoshi's (1994) grammaticality judgment. See Section 6.3.4.2 in Chapter 6 for further discussion of the double-*o* constraint.

(11)

- a. Henna nioi ga suru.
 strange smell NOM do
 'There is a strange smell.'
- b. Shika no nakigoe ga suru.
 deer GEN cry NOM do
 'There is the cry of a deer.'

This use of *suru* as a one-place predicate is extremely limited: for instance, it cannot be compatible with such perceivable objects as *kuuki* 'air' and *iro* 'color', as seen in (12).

(12).

- a. *Shinsen-na kuuki ga suru.
 fresh air NOM do
 'There is fresh air.'
- b. *Kireina iro ga suru.
 beautiful color NOM do
 'There is a beautiful color.'

From the aspectual point of view, unlike the prototypical use of *suru* to express an ACTIVITY reading, this type of intransitive *suru* denotes a STATE.

1.3.1.2. Two-place predicate

The transitive use of *suru* can be broken into three classes. The first class assumes an Agent subject, as in (13). Given that the most prototypical meaning of *suru* is 'do', this use of *suru* with an Agent subject is the most typical and productive.

(13)

- a. Taroo ga yakyuu o suru.
 NOM baseball ACC do
 'Taroo plays baseball.'
- b. Taroo ga tenisu o suru.
 NOM tennis ACC do
 'Taroo plays tennis.'

As long as it denotes an ACTIVITY, the verb can accommodate any type of nominal: activity nominals (cf. Martin, 1975), such as *kaimono* 'shopping' in (14a); Sino-Japanese verbal

nouns, such as *ryokoo* 'travel' in (14b); and English borrowings, such as *doraibu* 'drive' in (14c),

(14)

- a. Taroo ga kaimono o suru.
NOM shopping ACC do
'(lit.) Taroo does shopping.'
- b. Taroo ga ryokoo o suru.
NOM travel ACC do
'Taroo makes a trip.'
- c. Taroo ga doraibu o suru
NOM drive ACC do
'Taroo goes for a drive.'

The second class of transitive *suru* assumes an Experiencer subject, as in (15).

(15)

- a. Taroo ga geri o suru.
NOM diarrhea ACC do
'Taroo has(=suffers from) diarrhea.'
- b. Taroo ga kega o suru.
NOM wound ACC do
'Taroo has(=suffers from) a wound.'

This use of *suru*, which expresses mostly physiological phenomena, is non-productive. For instance, both (16a) and (16b) below are ungrammatical despite the fact that there is no real reason why the transitive *suru* should not take such nouns as *korera* 'cholera' or *muneyake* 'heart-burn' as its object.

(16)

- a. *Taroo ga korera o suru.
NOM cholera ACC do
'Taroo has(=suffers from) cholera.'
- b. *Taroo ga muneyake o suru.
NOM heartburn ACC do
'Taroo has(=suffers from) heartburn.'

There are instances of the use of *suru* whose subject can be interpreted in both ways: Agent, as in (17b) and Experiencer, as in (17c).

(17)

- a. Taroo ga shujutsu o suru.
 NOM operation ACC do
- b. '(As a doctor.) Taroo performs an operation.'
- c. '(As a patient.) Taroo undergoes an operation.'

However, such ambiguity in thematic interpretation is very rare:

(18)

- a. Taroo ga shinsatsu o suru.
 NOM examination ACC do
- b. '(As a doctor.) Taroo performs a medical examination.'
- c. '* (As a patient.) Taroo undergoes a medical examination.'

As is clear from (18), transitive *suru* with an Experiencer subject reading appears to be strictly constrained by the range of object nouns.

The third class of transitive *suru* differs from the other two in terms of syntactic configuration in that this type of *suru* takes an object and also a resultative phrase marked by the postposition *ni*. The use of this type of *suru* is again non-productive, being used mostly to express 'choosing something', as in (19a) or 'making somebody something', as in (19b) (cf. Kajihara, 1991a).

(19)

- a. Taroo wa senkoo o *keizaigaku ni* shi-ta.
 TOP major ACC economics to do-PAST
 'Taroo chose economics for (his) major.'
- b. Taroo wa musume o *bengoshi ni* shi-ta.
 TOP daughter ACC lawyer to do-PAST
 'Taroo made (his) daughter a lawyer.'

Aspectually, this class of *suru* expresses ACCOMPLISHMENTS, denoting an activity which brings about the change of *x*, marked by the accusative NP, into the state of *y*, marked by the dative NP.

In sum, among the various uses of *suru*, its use as a two-place predicate, licensing an Agent subject, is the most typical, and will be the primary focus of this work.

1.3.1.3. Incorporated and Non-incorporated *Suru* Constructions

As was noted earlier, light verbs may morphologically incorporate their object. In Japanese, incorporation is possible with the light verb *suru*. In non-incorporated constructions, a verbal noun functions as the head of the accusative-marked noun phrase. In incorporated constructions, a verbal noun is directly incorporated into *suru*, as in (20), and lacks a case-marker.⁶

(20)

- a. Taroo ga taisoo-suru.
 NOM exercise-do
 'Taroo exercises.'
- b. Taroo ga Tokyo ni ryokoo-suru.
 NOM to travel-do
 'Taroo travels to Tokyo.'
- c. Taroo ga eigo o benkyoo-suru.
 NOM English ACC study-do
 'Taroo studies English.'

One general semantic or aspectual constraint imposed on these *suru* forms is that while *do*-type and *happen*-type⁷ verbal nouns are compatible with the incorporated form, the *happen*-type verbal nouns, such as *seichoo* 'growth' and *kakudai* 'enlargement', are incompatible with the non-incorporated form, as seen in (21). (cf. Jacobsen, 1982, 1991; Miyamoto, 1993; Uchida and Nakayama, 1993).

(21)

- a. Kodomo ga ookiku seichoo (*o) shi-ta.
 child NOM big growth ACC do-PAST
 'The child grew up big.'
- b. Saiboo ga kakudai (*o) shi-ta.
 cell NOM enlargement ACC do-PAST
 'The cell enlarged in size.'

⁶ It is somewhat controversial whether the morphologically incorporated *VN-suru* constitutes a lexical unit or not. Linguists such as Kageyama (1991), Poser (MS1), and Dubinsky (1994) argue that the incorporation is not lexical.

⁷ The terms '*do*-type' and '*happen*-type' originate in Jacobsen (1982, 1991).

There seems to be another constraint on incorporated *suru* formation: nominals must be thematic or associated with verbal quality in order to be incorporated. While thematic nominals are productively incorporated into *suru*, as in (22), non-thematic nominals, such as concrete nouns, cannot be incorporated, as in (23).⁸

(22)

- | | |
|-------------------------|-------------|
| a. RYOKOO- <i>suru</i> | 'to travel' |
| b. CHOOSA- <i>suru</i> | 'to survey' |
| c. KEIKOKU- <i>suru</i> | 'to warn' |

(23)

- | | |
|--------------------------|--------------|
| a. * <i>enpitsu-suru</i> | 'pencil-do' |
| b. * <i>eigo-suru</i> | 'English-do' |
| c. * <i>okane-suru</i> | 'money-do' |

The fact that thematic nouns can be incorporated into *suru* while non-thematic nouns cannot indicates that incorporating *suru* itself must be thematically empty, functioning as a light verb (Miyagawa, 1987a).⁹

1.3.2. Japanese Verbal Nouns in General

Although the Japanese lexicon contains a fair number of verbal nouns which originate in Japanese (e.g., TACHIUCHI 'crossing swords') and in such languages as English (e.g., DORAIBU 'driving'), most of the verbal nouns (VN's) which combine periphrastically with *suru* have Chinese origins. In this section, following Jacobsen (1982, 1991), I will briefly describe the characteristics of Sino-Japanese VN's, focusing mainly on transitivity and argument structure.

1.3.2.1. Transitivity

Historically, Japanese has borrowed numerous lexical words from Chinese to the extent that the major portion of the Japanese lexicon is Chinese in origin. When Chinese

⁸ Hereafter, I will represent 'non-thematic nominals' in lower case and 'thematic nominals' in upper case.

⁹ Following Miyagawa (1987a), I assume that *suru* of *VN-suru* is light. This assumption should not interfere with my claim that *suru* of *VN-o suru* cannot be light.

verbs are borrowed, they are borrowed as nouns,¹⁰ which are then transformed into Japanese verbs by way of *suru*-incorporation. The primary task of *suru* is to express inflectional specification: e.g., *suru* (present), *shita* (past), *shinai* (negative), *sareru* (passive), and *saseru* (causative). Since the incorporating *suru* itself is not capable of expressing transitivity, the transitivity of VN-*suru* is morphologically invisible: VN(-*suru*) can be intransitive as in (24) or transitive as in (25).

(24) Intransitive VN's:

- | | |
|-----------------------------|-----------------------|
| a. TOOCHAKU(- <i>suru</i>) | 'arrival (to arrive)' |
| b. TANJOO(- <i>suru</i>) | 'birth (to be born)' |
| c. SHIBOO(- <i>suru</i>) | 'death (to die)' |

(25) Transitive VN's:

- | | |
|----------------------------|----------------------------|
| a. KEIKOKU(- <i>suru</i>) | 'warning (to warn)' |
| b. HAKAI(- <i>suru</i>) | 'destruction (to destroy)' |
| c. KOOGEDI(- <i>suru</i>) | 'attack (to attack)' |

Or, unlike Japanese lexical verbs which totally lack the property of *transitive alternation* (cf. Levin, 1993), some of the VN(-*suru*) forms can function either as transitive or as intransitive, as in (26).

(26) Transitive Alternations:¹¹

- | | |
|------------------------------|---|
| a. IDOO(- <i>suru</i>) | 'move (to move)' |
| b. HASON(- <i>suru</i>) | 'damage (to damage/to be damaged)' |
| c. HUNSHITSU(- <i>suru</i>) | 'loss (to lose)' |
| d. SHUKUSHOO(- <i>suru</i>) | 'shrink (to shrink/to become shrunken)' |
| e. SHUURYOO(- <i>suru</i>) | 'finish (to finish)' |
| f. ZOOKA(- <i>suru</i>) | 'increase (to increase)' |

¹⁰ This is true for borrowings from any other language. For instance, the English adjective *strong* is first borrowed as a noun, which is then converted to an adjective by way of the *na*-suffix or to an adverb by way of the *ni*-suffix.

- | | |
|---------------------------|-------------|
| (i) <i>sutorongu</i> | (Noun) |
| (ii) <i>sutorongu-na</i> | (Adjective) |
| (iii) <i>sutorongu-ni</i> | (Adverb) |

¹¹ As far as I know, there are no syntactic or semantic properties which define this class of transitive alternations. L. Saxon suggests that the transitive alternation may be sensitive to aspect.

The transitivity of these VN's and corresponding *VN-suru* forms can be determined only in sentential environments as the valency and case-marking of these forms inform us as to whether they act as intransitive predicates, as in (27a), or as transitive predicates, as in (27b).

(27)

- a. Kigu ga HASON-shi-ta. (Intransitive)
 utensil NOM damage-do-PAST
 'The utensil has been damaged.'
- b. Kigu o HASON-shi-ta. (Transitive)
 utensil ACC damage-do-PAST
 '(He) damaged the utensil.'

This possibility of entering into transitive alternations may well be one of the unique features of Sino-Japanese verbal nouns in Japanese.

1.3.2.2. Incorporated Arguments

Closely related to the above issue of transitivity is the fact that some of the VN's may have incorporated arguments, due to their etymological origin. As noted by Poser (MS2), there are two types of *VN-suru* forms: one type consists of mono-graphemic (-syllabic) VN's and the other type consists of digraphemic (-syllabic) VN's. In the case of mono-graphemic VN's, Japanese has borrowed single lexical verbs (V) from Chinese.

(28) (from Poser, MS 2 (5))

- a. AI(-suru) 'love (to love)'
 b. AN(-zuru) 'anxiety (to be anxious)'
 c. NES(-suru) 'heat (to heat)'
 d. TAI(-suru) 'opposition (to oppose)'

In the case of digraphemic VN's, Japanese has borrowed the verbal constituents of either V' or V'', which necessarily include such elements as a secondary verb, modifier or argument; hence, the internal structure of these di-graphemic VN's is heterogeneous.

(29) (cf. Jacobsen, 1991: 206 (1))

i.	V-NP	DOKU-SHO	'read-book'	'reading'
ii.	NP-V	RYO-KOO	'travel-go'	'traveling'
iii.	V-V	HA-SON	'break-damage'	'damaging'
iv.	ADV-V	GOO-ATSU	'strong-press'	'suppressing'

Among the above four types of VN's, the V-NP type is the most frequent in occurrence and also the most prototypical in that this type of VN reflects the Chinese VP structure which embeds a direct internal argument: obviously, this type also reflects the Chinese (S)VO word order rather than the Japanese (S)OV word order, as is clear from (30).

(30)

a.	KAN-KIN	'change-money'	'cashing'
b.	SHAK-KIN	'borrow-money'	'loaning'
c.	SAKU-SHI	'make-poem'	'writing a poem'
d.	SAK-KYOKU	'make-song'	'writing a song'
e.	SEP-PUKU	'cut-stomach'	'committing harakiri'

One interesting feature of these VN's is that since the internal argument is an integral part of the noun compound, the VN's function as one-place predicates (although they are by definition two-place predicates). Hence, they take no explicit object argument.

(31)

- a. Taroo ga SAKKYOKU-shi-ta.
 NOM song-writing-do-PAST
 'Taroo wrote a song.'
- b. Taroo ga SAKUSHI-shi-ta.
 NOM poem-writing-do-PAST
 'Taroo wrote a poem.'

In fact, the accompaniment of an object noun phrase may create semantic redundancy, resulting in marginally acceptable constructions, as in (32).

(32) (cf. Jacobsen, 1991: 208 (4))

a. ???Taroo ga kyoku o SAKKYOKU-shi-ta.
 NOM song ACC song-writing-do-PAST

'Taroo wrote a song.'

b. ???Taroo ga shi o SAKUSHI-shi-ta.
 NOM poem ACC poem-writing-do-PAST

'Taroo wrote a poem.'

Interestingly, however, when there is a need to increase the degree of specificity of the incorporated argument, an accusative noun phrase can be added to the otherwise one-place predicate construction (Jacobsen, 1982, 1991).¹²

(33) (cf. Jacobsen, 1991: 208 (5))

a. Taroo ga kono kyoku o SAKKYOKU-shi-ta.
 NOM this song ACC song-writing-do-PAST

'Taroo wrote that song.'

b. Taroo ga sono yuumeina shi o SAKUSHI-shi-ta.
 NOM that famous poem ACC poem-writing-do-PAST

'Taroo wrote that famous poem.'

The possibility that some of the VN's may have incorporated (Theme) arguments should be regarded as another unique feature of VN's.

Having described what the LVC is and the two basic components of the Japanese LVC, I will address the topics of this thesis in the following section.

1.4. The Topic of the Thesis

Since Grimshaw and Mester's (1988) seminal work, there have been unresolved debates on whether or not *suru* functions as a light verb or not in such forms as (34). An observational generalization we can make is that the thematic array of a clause faithfully reflects the argument structure of the VN which heads the accusative phrase.

¹² S. Rosen (1989a: 294) discusses two types of noun incorporation (NI): "In one, when a noun root combines with a verb root, the argument structure of the verb is altered such that the complex verb takes one less argument. In the other form of NI, when a noun root combines with a verb root, the argument structure of the complex verb is unaltered." Such predicates as *SAKKYOKU-suru* 'write a song' can be regarded as involving S. Rosen's (1989a) first type of noun incorporation.

(34)

- a. Taroo ga SAMPO o suru. [Agent]
 NOM stroll ACC do
 'Taroo strolls.'
 a'. SAMPO <Agent>
- b. Taroo ga Tokyo ni RYOKOO o suru. [Agent, Goal]
 NOM to travel ACC do
 'Taroo travels to Tokyo.'
 b'. RYOKOO <Agent, Goal>
- c. Taroo ga murabito ni ookami ga kuru to [Agent, Goal, Theme]
 NOM villagers to wolf NOM come COMP
 KEIKOKU o suru.
 warning ACC do
 'Taroo warns the villagers that the wolf will come.'
 c'. KEIKOKU <Agent, Goal, Theme>

Hence, from the viewpoint of argument structure, *suru* may be 'light' in the sense that it makes no thematic contribution to *VN-o suru* forms. This use of *suru* may be different from the regular use of *suru* as a two-place ACTIVITY predicate, shown in (35).

(35)

- a. Taroo ga gorufu o suru.
 NOM golf ACC do
 'Taroo plays golf.'
- b. Taroo ga tenisu o suru.
 NOM tennis ACC do
 'Taroo plays tennis.'
- c. Taroo ga kaimono o suru.
 NOM shopping ACC do
 '(lit.) Taroo does shopping.'
- d. Taroo ga shukudai o suru.
 NOM homework ACC do
 'Taroo does homework.'

The differences between the so-called light *suru* construction and the heavy *suru* construction are two-fold. First, in the light *suru* construction the arguments of the VN may be 'promoted' into a clausal domain. Judging from the verbal case marking, the arguments of the VN are treated as if they are those of *suru*. Without such 'promotion', for instance, the arguments of KEIKOKU 'warning' would be *trapped* in the nominal domain, as in (36), resulting in total ungrammaticality (due to the fact that the logical subject *Taroo* is embedded in the accusative phrase).

(36)

- *[Taroo no murabito e no ookami ga kuru to no KEIKOKU] o suru.
 GEN villagers to GEN wolf NOM come COMP GEN warning ACC do
 'Taroo warns the villagers that the wolf is coming.'

Second, the light *suru* construction may exhibit the so-called 'frozen phenomena'. The observational generalization is that when there is no overt argument in the accusative phrase domain, this accusative phrase becomes 'frozen' in the sense that it cannot undergo various syntactic processes, such as scrambling (37a) and adverbial insertion (37b).

(37)

- a. *Taroo ga [KEIKOKU]-o murabito ni ookami ga kuru to suru.
 NOM warning ACC villagers to wolf NOM come COMP do
 'Taroo warns the villagers that the wolf will come.'
- b. Taroo ga murabito ni ookami ga kuru to [keikoku]-o (*isoide) suru.
 NOM villagers to wolf NOM come COMP warning ACC quickly do
 'Taroo (quickly) warns the villagers that the wolf will come.'

No such 'frozen phenomena' are observed with the heavy *suru* construction, as is clear from (38).

(38)

- a. **Gorufu wa** Taroo ga suru.
 golf TOP NOM do
 'As for golf, Taroo plays (it).'
- b. Taroo ga gorufu o **isoide** suru.
 NOM golf ACC quickly do
 'Taroo plays golf quickly.'

Since Grimshaw and Mester (1988), there has been a fair number of studies on the Japanese LVC. The majority of them examine the 'weight' of *suru* either to support or to refute the idea that *suru* can function as a light verb. In other words, these studies attempt to disambiguate the *VN-o suru* formation relying solely on the lexical property of *suru*.

The present study approaches this issue from a different angle. The study argues that the ambiguity does not stem from the 'weight' of *suru* but from the 'thematic property' of the VN which heads the accusative phrase. Another contention of the study is that the ambiguity can be resolved under the assumption that there is only one type of *suru*: a two-place predicate which licenses an Agent and an EVENT. In this sense, the study will refute the idea that *suru* functions as a light verb. In support of these claims, the study will deal with a number of issues.

To be brief, the first issue is the fact that VN's are totally isomorphic between their non-thematic readings and thematic readings. Massive ambiguity thus stems from the fact that VN's can function either as referential nominals or as predicational nominals. Hence, differentiating these two types of VN's is a prerequisite to our study.

Given that there are two types of VN's, there ought to be two different types of *VN-o suru* forms (mono-predicational *VN-o suru* and bi-predicational *VN-o suru*), depending on whether their accusative phrases are headed by non-thematic, referential VN's or by thematic, predicational VN's. The second issue is then discrimination of the two types of *VN-o suru* from each other. Are *VN-o suru* forms such as the one in (39) mono- or bi-predicational.

(39)

Taroo ga [Ainugo no kenkyuu/KENKYUU] o suru.
 NOM Ainu GEN study ACC do

'Taroo researches Ainu.'

The third issue, which is tied to the previous one, is the syntactic and semantic characterization of mono- and bi-predicational *VN-o suru* forms. Finally, the fourth issue centres on the syntactic account of the narrowly focused issues of the so-called LVC: accounts of 'argument promotion' and frozen phenomena'. These issues will be dealt with as outlined below.

1.5. Outline of the Thesis

In Chapter 2, I will review previous works on the Japanese LVC, dividing these into two groups: (1) the studies which argue that *suru* can function as a light verb (i.e., light *suru* hypotheses) and (2) the studies which argue that *suru* cannot function as a light verb (i.e., heavy *suru* hypotheses). My review will focus on three issues: (i) reasons to agree or not to agree with the idea that *suru* can be light; (ii) proposals on the actual 'weight' of *suru*; and, (iii) accounts of 'argument promotion'. At the end of Chapter 2, as a prelude to my analysis, I will argue that *suru* is a two-place predicate, licensing an Agent and an EVENT.

In Chapter 3, I will apply Grimshaw's (1990) nominal typology to Japanese Verbal Nouns. I will show that VN's are ambiguous in that they can function either as (non-thematic) simple event nominals or (thematic) complex event nominals. To disambiguate these two types of nominals from each other, I will employ two tests involving the following constructions: the temporal adjunct clause (Iida, 1987; Tsujimura, 1992) and nominal control (Lasnik, 1988; Roeper, 1987; Williams, 1985). After verifying that these constructions are indeed reliable tests, I will demonstrate that any VN can function either as a non-thematic nominal or a thematic nominal. I will show how the presence/absence of specific types of modifying satellites assists us to distinguish these two types of nominals.

Based on the two-way distinction of the VN's, I will show in Chapter 4 that there are basically two types of *VN-o suru*: mono-predicational *VN-o suru* and bi-predicational *VN-o suru*. Further, I will show that from an aspectual viewpoint, each of these can be divided into telic and atelic constructions.

(40)

- (i) Monopredicational *VN-o suru*: Telic and Atelic
- (ii) Bipredicational *VN-o suru*: Telic and Atelic.

I will show that there are two opposing directions of 'information flow' (Filip, 1993, 1996) in determining the telicity of *VN-o suru* constructions: one is from *suru* to the accusative phrase and the other is primarily from the accusative phrase to *suru*. I will show how the interaction of (un)boundedness associated with *suru* and with its accusative phrase primarily conditions the telicity of *VN-o suru* constructions. I will also illustrate how various forms of modifying satellites affect the telicity of *VN-o suru* constructions. In the

above sense, both predicationality and telicity which are closely tied to the presence/absence of satellites and their types are used to disambiguate *VN-o suru* forms.

To further enhance our understating of *VN-o suru* forms, in Chapter 5 I will demonstrate that the bipredicational *VN-o suru* is a control structure.

In Chapter 6, I will conduct syntactic analyses of mono- and bi-predicational *VN-o suru* constructions. My analyses will be based on Chomsky's (1995) Minimalism. Since syntacticosemantic properties of the accusative phrases play important roles for my analyses, I will first characterize these phrases based on my discussion in Chapter 4 as well as on Borer (1994). Assisted by Borer, I will show that *VN-o suru* constructions involve three different types of accusative phrases differing in referentiality, specificity, category, and Case. Taking these type differences as a point of departure, I will provide syntactic characterization of mono- and bi-predicational *VN-o suru*. In doing so, I will illustrate that the peculiarities of the bipredicational *VN-o suru*, such as argument promotion and frozen phenomena, are closely tied to accusative Case marking.

In Chapter 7, employing Jackendoff's (1987a and b, 1990, 1991) Conceptual Semantics, I will provide formal accounts of the thematic and aspectual properties of *VN-o suru* forms. This semantic exercise is meant to provide a clearer picture of the different types of *VN-o suru* forms.

Chapter 8 deals exclusively with the *VN-o suru* construction involving *intransitive* complex event nominals. The goal is to examine what grammatical properties determine whether or not a given intransitive VN can be compatible with a *VN-o suru* form. This issue was originally raised by Miyagawa (1989a) and Tsujimura (1989, 1990) who independently argue that the issue has to do with Burzio's (1986) Generalization. My analysis will capture the observational generalization that the compatibility of intransitive VN's as *VN-o suru* forms is *gradient* and not dichotomous, as Burzio's (1986) generalization suggests. Based on Zaenen's (1993) model and an idea borrowed from Optimality Theory, I will illustrate the fact that the gradient grammaticality stems from the interaction of two constraints: the Unaccusativity constraint and the PROCESS constraint.

1.6. Theoretical Background

1.6.1. Introduction

In this last section of Chapter 1, I will describe the theoretical framework of this study. The study relies *loosely* on Chomsky's Principles and Parameters approach. I use

the term 'loosely' since the study also depends on a few other (sub)theories which may or may not be related to the Principles and Parameters Theory. Also, the Principles and Parameters approach will simply be regarded as a theoretical *tool* used to analyze and understand the grammatical properties of *VN-o suru* forms. In this sense, the study does not strive to make theoretical contributions to the Principles and Parameters Theory.

As for the Principles and Parameter approach, it was originally formulated as the Government and Binding (GB) Theory in the 1980's (Chomsky, 1981, 1986b) and has been reformulated as Minimalism in the 1990's (Chomsky 1995). The majority of works that I rely on in this thesis are within a Government and Binding framework. Hence, I will provide a synopsis of GB in Section 1.6.2. The syntactic analysis I will develop in Chapter 6 depends on Minimalism (Chomsky, 1995). Hence, in Section 1.6.3, I will give a brief discussion outlining the Minimalist Theory. Since my accounts of *VN-o suru* forms depend not only on syntax but also on semantic notions of Aspect (Bach, 1986, Jackendoff, 1991, 1996; Krifka, 1989, 1990, 1992; Smith, 1991; Tenny, 1987, 1992, 1994; Vendler, 1957), in Section 1.6.4 I will briefly outline a basic four-way classification of Aspect. Even though I will provide a Conceptual Semantic account of *VN-o suru* forms in Chapter 7, a synopsis of Conceptual Semantics (Jackendoff, 1987a and b, 1990, 1991) will not be given in this chapter. In addition, the other (sub)theories I will employ, such as Grimshaw's (1990) Nominal Typology, Zaenen's (1993) Unaccusativity Model, Pustejovsky's (1992) Event Theory, and Optimality Theory (cf. McCarthy and Prince, 1993, 1994, 1995), will receive their brief synopses in the relevant sections.

1.6.2. Government and Binding Theory

The following synopsis of the Government and Binding Theory (Chomsky, 1981, 1986a and b) is divided into two sections: Argument Structure and Syntactic Structure.

1.6.2.1. Argument Structure

The very basic theoretical issue of this study may be regarded as the linking between lexical semantics and syntax. For this linking to be successful, predicates must provide at least such lexical information as the valency or the number of arguments and the syntactic structure into which these arguments may be mapped. Concerning such mapping, the Government and Binding Theory has placed a focus on the representation of argument structure with no emerging consensus on what lexical information should be included in

argument structure. One of the earliest and simplest representations of argument structure is Stowell's (1981) thematic grid or ' θ -grid', which is a list of arguments associated with a predicate.

(41)
 PUT: <Agent, Theme, Location>

Dividing lexical information into that which is syntactically relevant and that which is semantically relevant, researchers such as Zubizarreta (1987) and Rappaport and Levin (1988) encode only the syntactically relevant information into argument structure, while placing the other in semantic structure. Hence, their representations of argument structure are highly impoverished and do not contain any thematic role specification, as exemplified in (42).

(42)

put y, x; Loc P z	(Zubizarreta, 1987)
PUT: x <y, Plocz>	(Rappaport and Levin, 1988)

Meanwhile, such researchers as Grimshaw (1990) and Pustejovsky (1992) assume that argument structure containing thematic information is closely tied up with event structure which contains aspectual information. And concerning aspectual information, such researchers as Tenny (1992, 1994) assume with her Aspectual Interface Hypothesis that the only aspectually relevant information is mapped into syntax from the argument structure of a predicate.

Regardless of the differing views on the nature of argument structure, one consistent assumption among these researchers is that there is argument structure which is an independent grammatical component of predicates, interfacing with syntax on the one hand and with semantics on the other. A notable exception to this view is Jackendoff (1987a and b, 1990). Claiming that lexical syntactic representation of a predicate can always be reduced to its lexical semantic representation, Jackendoff treats the syntactic and semantic information of the lexicon as part of so-called Conceptual Structure, regarding arguments as corresponding to ontological categories of Conceptual Structure.

Another notable exception is Hale and Keyser (1992, 1993), who view argument structure as being configurationally defined, and argue that "the proper representation of predicate argument structure is itself a syntax" (Hale and Keyser, 1993: 53). In their view, argument structure is identified with syntactic structure, which is defined in terms of

syntactic relations based on 'head', 'specifier' and 'complement'. Under this assumption, Hale and Keyser make the radical claim that there are no such things as 'thematic roles' (Hale and Keyser, 1993: 68), the reason being that the thematic roles are, according to Hale and Keyser (1993: 69), merely derivative of lexical syntactic relations.¹³

The basic assumption I will make is that argument structure is not an independent component of grammar. Following Jackendoff, I assume that argument structure is part of Conceptual Structure and that thematic roles are defined by ontological categories in the Conceptual Structure. However, I also assume that it is possible to *represent* argument structure and thematic roles in syntactic terms as Hale and Keyser (1992, 1993) suggest. Given the above assumptions, even though I liberally use such terms as 'argument structure' and 'thematic roles', my use is mnemonic.

1.6.2.2. Syntactic Structure

With respect to syntactic structure, I will provide a brief synopsis of the following subtheories since they are relevant to my discussion on *VN-o suru* forms: X-bar Theory, Theta Theory, Case Theory, Binding Theory and Government and Bounding Theory.¹⁴

X-bar Theory defines the phrase structure component. Such lexical categories as N(oun), V(erb), A(jective), and P(reposition) head the categories X' and XP. While X' consists of its head (X) and complement (YP), XP consists of the SPECifier (e.g., subject, determiner, quantifier) and X'.

Theta Theory consists of the Theta Criterion and the Projection Principle, which are defined as in (43).

¹³ Besides these various proposals on argument structure, there have also been a few proposals on its internal structure. For instance, Williams (1981) introduces the notion of an 'external argument' into the structural representation of argument structure. Thus, argument structure comprises an external argument as well as an internal argument(s). Further, Marantz (1984) elaborates on the notion of internal arguments, dividing these into a direct internal argument and an indirect internal argument, which I will call 'oblique argument' in this study.

¹⁴ For the sake of the reader's convenience, I list definitions of major GB terminology as an appendix at the end of this chapter; the definitions are useful to understand the next chapter on the review of previous studies on *VN-o suru* since the majority of these studies rely on GB as their theoretical framework.

(43)

Theta Criterion: (Chomsky, 1981: 36)

Each argument bears one and only one θ -role, and each θ -role is assigned to one and only one argument.

Projection Principle: (Chomsky, 1981: 29)

Representations at each syntactic level (i.e., LF, and D- and S-structure) are projected from the lexicon, in that they observe the subcategorization properties of lexical items.

The essence of the Theta Theory is to assure one-to-one correspondence between argument positions in syntax and arguments in the argument structure of a predicate.

The essence of Case Theory is the Case Filter: Every noun phrase must have (Abstract) Case. At S-structure, Case-assigners (verbs, prepositions, and tensed inflection) assign Case to the noun phrase that they govern. For instance, under Government, a direct object is Case-marked by a verb and a subject is Case-marked by a tensed I(nflection).

The Binding Theory deals with how such NP's as anaphors, pronouns, referential NP's and PRO obtain their reference: the Theory itself is based on the three principles given in (44).

(44) (cf. Chomsky, 1981: 188)

- a. Principle A: An anaphor must be bound in its governing category.
- b. Principle B: A pronoun must be free in its governing category.
- c. Principle C: R(eferential)-expressions must be free.

Lastly, Government and Bounding theory constrain how far a constituent can move in a given step. When an item moves, it leaves a trace behind in accordance with the Projection Principle. The Empty Category Principle (ECP) states that a trace must be properly governed, while government itself is regularly defined in terms of m-command (c-command with a maximal projection dominating a governor and a trace). Under these constraints, the possibility of long-distance movement is highly restricted.

The basic thrust of GB is that these principles and associated parameters should account for the generation of any sentences with no construction-specific ad hoc stipulations.

1.6.3. Minimalism

One major difference between GB and Minimalism (Chomsky, 1995) is that the latter does away with D-structure and S-structure as distinctive levels of structure.¹⁵ Another important difference is that in Minimalism, the grammaticality of a sentence does not depend on the evaluation of a particular derivation but rather on the 'comparison' of derivations: only the most 'optimal' derivation is chosen.

Also, unlike GB in which D-structure functions as a starting point for a derivation by virtue of mapping the grammatical relations and thematic properties of the lexicon into syntax, Minimalism has no such clear notion of the 'starting point of a derivation' as a single-constituent structure tree. Nonetheless, by virtue of the operation Select, lexical items which are fully inflected for Case, agreement, etc., are selected from the lexicon. By virtue of the operation Merge (i.e., generalized transformation) and Move, a sentential representation is derived by continuously stacking one binary tree onto another. In this process of derivation or Computation, at the stage termed Spell-Out, the derivation forks --- the two forks leading independently to the interface levels, P(honological) F(orm) and L(ogical) F(orm), where the derivation is evaluated.

Another salient characteristic of Minimalism is its extensive use of features.¹⁶ These features are assigned to lexical items as well as to relevant functional and lexical nodes, specifying to which nodes these items can be inserted and where they can be licensed. Movement involves feature-checking.¹⁷ To check or erase features, the accompanying syntactic constituent must move to an appropriate position where the features are checked off.¹⁸ Hence, unlike GB, 'movement' in Minimalism is highly

¹⁵ The role of D-structure is taken by a continuous syntactic tree building involving Merge and Move. S-structure is 'replaced' by an operation called 'Spell-Out': in Minimalism, the derivation before Spell-Out involves 'overt syntax', while the derivation after Spell-Out involves 'covert syntax'.

¹⁶ There are three types of features: phonological, syntactic, and semantic features. Of these, only syntactic features are visible or relevant to syntax.

¹⁷ Features are regarded to be either 'strong' or 'weak'. Strong features, which are visible at PF, must be checked off at overt syntax (i.e., before Spell-Out). Weak features, which are invisible at PF, must be checked off at covert syntax (i.e., after Spell-Out). Regardless of the difference in strength, unchecked features will become uninterpretable at the interface levels, causing a derivation to fail to converge.

¹⁸ Unlike GB, the relation of Government has no role in Minimalism: feature checking, such as the checking of Case, is done by Spec(ifier)-head relation.

constrained. Movement is allowed only to satisfy requirements of the moving constituent: the requirements being formulated as the principle of Greed. There is another principle affecting movement, Procrastinate. Due to Procrastinate, those derivations which hold off on movement until after Spell-Out are regarded as more optimal than those which do not; hence, the results of such movement would preferably not affect PF.

Minimalism is still regarded as a *program* in the sense of being under development (cf. Collins, 1997; Kitahara, 1997; Ura, 1996; Watanabe, 1993, 1996). Hence, it is still subject to constant revisions and cannot at this stage be regarded as a full-blown syntactic theory as GB is (cf. Epstein, Thrainsson and Zwart, 1996).

1.6.4. Aspect

One of the main claims of this thesis is that we cannot characterize *VN-o suru* without understanding its aspectual properties. Hence, I will provide a few words on aspect, assuming that "[a]spects are different ways of viewing the internal temporal constituency of a situation" (Comrie, 1976: 3). The earliest literature on aspect dates back to Aristotle: his idea was brought back into the modern literature by such researchers as Kenny (1963), Ryle (1949) and Vendler (1957). Vendler especially is noted for his four-way classification of verbal aspect: STATES, ACTIVITIES, ACCOMPLISHMENTS and ACHIEVEMENTS. Based on Smith (1991), I will provide their definitions.

1.6.4.1. STATES

STATES are static or non-dynamic and durative: STATES include concrete and abstract properties of various kinds, such as possession, location, belief, mental states, disposition, and habits (Smith, 1991: 38). Several diagnostics are available to isolate STATES from other types. STATES are incompatible with subject-oriented manner adverbials (e.g., **Mary deliberately knows Latin*). STATES are odd in imperatives (e.g., **Know Latin*). Also, STATES are incompatible with pseudo-cleft *do* (e.g., **What Mary did was know Latin*) (Smith, 1991: 43).

1.6.4.2. ACTIVITIES

ACTIVITIES are dynamic, durative and atelic. ACTIVITIES, which can be either mental or physical, have successive stages and need energy to keep going and are in principle unlimited. As with 'laugh', 'stroll in the park', and 'push the cart', ACTIVITIES

have no goal or culminative point; thus, their termination means the cessation of the activity (Smith, 1991: 44). ACTIVITIES are compatible with expressions of simple duration but not with forms expressing duration and completion together: ACTIVITIES also cannot be complements of *finish*, as seen in (45).

(45) (Smith, 1991: 47)

- a. Mary pushed a cart for an hour.
- b. ?Mary pushed a cart in an hour.
- c. ?Mary finished pushing a cart.

1.6.4.3. ACCOMPLISHMENTS

ACCOMPLISHMENTS are dynamic, durative and telic, consisting of a process and a result or a change of state. ACCOMPLISHMENTS consist of successive stages leading towards the end-point, as in the case of '*build a house*', '*walk to school*', or '*write a letter*'. The internal stages of ACCOMPLISHMENTS, thus, differ from each other. ACCOMPLISHMENTS are compatible with verbs and adverbials of completion but not with adverbials of simple duration; and also ACCOMPLISHMENTS can be complements of *finish*, as seen in (46).

(46) (Smith, 1991, 54)

- a. Mary walked to school in an hour.
- b. ?Mary walked to school for an hour.
- c. Mary finished building a house.

1.6.4.4. ACHIEVEMENTS

ACHIEVEMENTS are dynamic, non-durative, and telic. Their events are instantaneous, consisting of a single stage which represents a change of state. Furthermore, "[a]lthough they may allow an associated process, many achievements do not require one" (Smith, 1991: 60). ACHIEVEMENTS are odd with agent-oriented adverbials (e.g., **John deliberately found his wallet*). Also, ACHIEVEMENTS are incompatible with simple durative adverbials (e.g., **They reached the top for five minutes*).

1.6.4.5. Compositionality

I assume that aspect is not merely a property of predicates but is compositional. I will assume that such compositionality involves three levels: lexical, subcategorization,

and post-subcategorization levels (cf. Yang, 1995). At the lexical level, each predicate is endowed with its inherent property.

(47)

- | | |
|-----------------|----------------|
| a. <i>walk</i> | ACTIVITY |
| b. <i>love</i> | STATE |
| c. <i>build</i> | ACCOMPLISHMENT |
| d. <i>die</i> | ACHIEVEMENT |

At the subcategorization level, the interaction of a predicate and, for instance, its Theme argument determines telicity (cf. Bach, 1986; Filip, 1993; Jackendoff, 1991; Krifka, 1992; Tenny, 1994).

(48)

- | | |
|---|--------|
| a. John ate an apple in an hour/*for an hour. | Telic |
| b. John ate apples for an hour/*in an hour. | Atelic |

Further, by functioning as a terminus, a goal phrase can change an atelic reading of a clause into a telic reading.

(49)

- | | |
|--|--------|
| a. John walked for/*in an hour | Atelic |
| b. John walked to the store in/*for an hour. | Telic |

At the post-subcategorization level, temporal-aspectual modifiers can also participate in determining the telicity of a clause, as is clear from (50).

(50) (cf. Jackendoff, 1991: 15)

- | | |
|------------------------------------|--------|
| a. The light flashed. | Telic |
| b. The light flashed continuously. | Atelic |
| c. The light flashed until dawn. | Telic |

With all of this as background, in the next chapter we will consider previous studies of the Light Verb Construction in Japanese.

APPENDIX

Definitions of Formal Constructs

Binding Conditions: (cf. Chomsky, 1981: 188)

- a. Principle A: An anaphor must be bound in its governing category.
- b. Principle B: A pronoun must be free in its governing category.
- c. Principle C: R(eferential)-expressions must be free.

Burzio's Generalization: (Burzio, 1986: 178)

Only the verbs that can assign θ -role to the subject can assign (accusative) Case to an object.

C-command: (cf. Chomsky, 1981: 166 (12))¹⁹

A node α c-command a node β iff

- (i) α does not dominate β ;
- (ii) β does not dominate α ;
- (iii) the first branching node dominating α also dominates β .²⁰

Government: (cf. Chomsky, 1981: 165 (11))²¹

α governs β iff

- a. α is X^0 , for some X
- b. α c-command β
- c. For all maximal projection γ , if γ dominates β , the γ dominates α .²²

¹⁹ The actual wording is from Haegeman (1991: 198 (9))

²⁰ Basically, an antecedent must be either in a sister relationship with its anaphor or be higher in the tree than the anaphor.

²¹ The actual wording is from Cowper (1992: 97 (30))

²² Basically, (c) prohibits a lexical NP (β) from being separated from a governor (α) by a maximal projection.

Government Transparency Hypothesis: (Baker, 1988: 64 (65)²³)

The lexical category which has an item incorporated into it governs everything which the incorporated item governed in its original structural position.

Projection Principle: (Chomsky, 1981: 29)

Representations at each syntactic level (i.e., LF, and D- and S-structure) are projected from the lexicon, in that they observe the subcategorization properties of lexical items.

Theta Criterion: (Chomsky, 1981: 36)

Each argument bears one and only one θ -roles, and each θ -role is assigned to one and only one argument.

²³ Figuratively, the maximal projection becomes transparent or invisible, once its head incorporates into the head of the governing category.

Chapter 2. Previous Studies

2.1. Introduction

This chapter mainly reviews previous studies of the *VN-o suru* construction. In Section 2.2, I will introduce Grimshaw and Mester's (1988) seminal work on *VN-o suru* formation. In Sections 2.3 and 2.4, I will extensively review previous studies on *VN-o suru* constructions, dividing these into two groups: those studies which argue that *suru* can function as a light verb (i.e., light *suru* hypotheses) and those studies which argue that *suru* cannot function as a light verb (i.e., heavy *suru* hypotheses). In Section 2.5, I will critically review Grimshaw and Mester (1988), and will demonstrate that the idea of *suru* functioning as a light verb is not plausible. As a prelude to my analysis of *VN-o suru* constructions, I will argue in Section 2.6 that *VN-o suru* forms involve only one type of *suru*: a two-place predicate which licenses an Agent and an EVENT.

Although there had been a few studies of *suru* constructions (Kageyama, 1977; Martin, 1975; Miyagawa, 1987) before Grimshaw and Mester (1988), the whole issue of the Light Verb Construction (LVC) with *suru* was initiated by Grimshaw and Mester. The basis of this work is the proposal of Lexical Transfer according to which the arguments of a VN are transferred to the empty argument structure of *suru* at the level of the lexicon. *Suru* with its empty thematic structure is called a light verb: due to the 'lightness' of *suru*, the argument structure varies depending on the thematic property of the VN with which it associates. According to Grimshaw and Mester, in addition to light *suru*, there is another type of *suru*, i.e., heavy *suru*, which is a regular transitive verb with its own full-fledged argument structure.

Since Grimshaw and Mester (1988), there have been a fair number of studies on the Japanese LVC.¹ All of these studies focus basically on two related issues: (i) whether *suru* functions as a light verb and (ii) how to account for 'argument promotion'.

¹ As far as I am aware, there are three studies of the Japanese LVC (i.e., Dubinsky, 1994; Hoshi, 1994; Saito and Hoshi, 1994) in the Minimalist framework (Chomsky, 1995). Since these studies have a different theoretical framework from the majority of works which are within the Government and Binding

2.1.1. Light *suru* Hypotheses

Concerning these two issues mentioned above, one camp, supporting Grimshaw and Mester's (1988) view, claims that *suru* functions not only as a heavy verb but also as a light verb. The other camp argues that *suru* is a regular heavy verb. Interestingly, even those who opt for the first view do not straightforwardly accept Grimshaw and Mester's (1988) Transfer Hypothesis; and various machinery has so far been proposed to account for the effects of argument transfer. These works can roughly be divided into two approaches: lexical and non-lexical. Instances of the lexical approaches are given in such works as Isoda (1991) and Sells (1990). Among these lexical approaches, Sells (1990) is exceptional in that he is the only person who basically supports Grimshaw and Mester's (1988) Lexical Argument Transfer Hypothesis. Opting for a non-transfer hypothesis, Isoda (1991) argues that light *suru* differs from heavy *suru* in that the former involves so-called Argument Fusion (cf. Alsina, 1990a and b, 1991a and b).

Various non-lexical approaches have also been proposed to account for argument-transfer, or what I call 'argument-promotion': the realization of some or all of the arguments of a lower nominal predicate as those of an upper verbal predicate. Instances are as follows. Noticing some property of word-formation between the accusative noun phrase and *suru*, Kageyama (1991) accounts for light *suru* constructions by applying Baker's (1988) Abstract Incorporation. Based on Late Lexical Insertion (Emonds, 1985), Yamamoto (1992) accounts for the argument-promotion effect by way of inserting the head of an accusative noun phrase at D-structure as a 'thematic head' of the whole *suru* construction, while inserting *suru*, a 'grammatical categorial head', at S-structure. Matsumoto (1992a and b) accounts for the promotion effect of an external argument by Control and that of internal arguments by Scrambling. And Sato (1993) accounts for the argument promotion by way of Variable-binding and A(rgument)-percolation. Hence, on the assumption that *suru* can be light, various mechanisms have been proposed.

Another way of grouping the light *suru* hypotheses is the degree of lightness. One group opts for the view that light *suru* makes no thematic contribution to the LVC. Examples of this 'total' light *suru* hypothesis are Grimshaw and Mester (1988), Sells (1990), and Yamamoto (1992). The other group (Isoda, 1991; Kageyama, 1991;

framework (Chomsky, 1981, 1986b). I will review these studies separately in Chapter 6 as part of my Minimalist analysis of *VN-o suru* constructions.

Matsumoto, 1992a and b; Sato, 1993) opts for the view that light *suru* makes some thematic contribution to the LVC, which mostly concerns an external argument.

2.1.2. Heavy *Suru* hypotheses

Another camp, which was initiated by Terada (1990), claims that *suru* does not function as a light verb: it is just a regular heavy verb. Thus, this camp posits only one type of *suru*. However even among this camp, there are different views on the valency and thematic array of *suru*. One group views *suru* as a two-place predicate, licensing an external Agent argument and an internal direct argument, while another group claims that *suru* is a three-place predicate, licensing an oblique argument, such as Goal, in addition to these two types of arguments. Also, views on how to account for the argument-promotion effect differs depending on whether such matrix phrases as PP's and CP's are regarded as non-arguments (i.e., modifiers or adjuncts) or arguments. Most of the heavy *suru* hypotheses somehow mix their accounts, treating some of these phrases as arguments and the others as non-arguments. Consequently, the difference between some of the light *suru* hypotheses which assume partial argument structure for light *suru* (Isoda, 1991; Kageyama, 1991; Matsumoto, 1992a and b; Sato, 1993) and the heavy *suru* hypotheses (Hasegawa, 1991; Kajihara, 1991a; Terada, 1990; Uchida and Nakayama, 1993) is somewhat blurred.

In the following sections, I will provide extensive reviews of these previous studies: the aim is to familiarize the reader with theoretical issues involved with the LVC. In doing so, I will review the work of Grimshaw and Mester (1988) first since they brought the whole issue of the LVC in Japanese onto the main stage of linguistic debate. I will then contrast the previous studies with each other based on several criteria. Lastly, I will simply list the various empirical and theoretical issues which are raised by these studies and which will be accounted for by this study.

2.2. Grimshaw and Mester's (1988) Argument Transfer

Grimshaw and Mester (1988) argue that there are two types of *suru*: heavy *suru* and light *suru*. Heavy *suru* is characterized as follows: (i) it takes a so-called θ -opaque referential (i.e., non-predicational) object; (ii) it is a θ -marker of a regular kind; (iii) it imposes a thematic (Agent/Actor) restriction on its subject; and (iv) its accusative noun

phrase is a syntactic object which can undergo such syntactic processes as topicalization, as in (1).

(1) (Grimshaw and Mester, 1988: 209 (9))

[Tokyo e no ryokoo] wa John ga shi-ta.
 to GEN trip TOP NOM do-PAST
 'John made the trip to Tokyo.'

The other type is light *suru*. According to Grimshaw and Mester (1988), the most fundamental theoretical issue concerning light *suru* is licensing of arguments and θ -marking, since *VN-o suru* looks like an instance of the θ -marking in (2), in which the head of an accusative noun phrase seems to assign θ -roles outside its domain.

(2) (from Grimshaw and Mester, 1988: 206 (1c))

[NP [N⁰] NP NP]_{VP}

For example, in (3), the verb *suru* 'do' somehow lets the head of its accusative noun phrase θ -mark its clausal arguments: the nominative Agent noun phrase, *Taroo* and the *ni* ('to')-marked Goal noun phrase, *murabito* 'villagers'.

(3)

Taroo ga murabito ni [ookami ga kuru to no KEIKOKU] o shi-ta.
 NOM villagers to wolf NOM come COMP GEN warning ACC do-PAST
 'Taroo warned the villagers that the wolf was coming.'

To account for such a complex predicate formation,² Grimshaw and Mester (1988) posit Argument Transfer. When a VN is taken as the head of an accusative noun phrase of *suru*, the arguments of the VN are transferred into the argument structure of *suru*, as schematized in (4).

² The notion of 'complex predicate formation' does not seem to be well defined in the literature (cf. Baker, 1996; Burzio, 1986; Mohanan, 1990, 1995). It is generally assumed that the syntactic and argument structure of two predicates converge or are fused to a certain extent in that syntactic and argument components of the two predicates cannot be exclusively attributed to either one of them.

- (4) (Grimshaw and Mester, 1988: 212 (16))
- a. KEIKOKU (Agent, Goal, Theme)
 - b. suru () <acc>
 - c. KEIKOKU (Theme) + suru (Agent, Goal) <acc>

The VN, KEIKOKU 'warning' has a thematic array of (Agent, Goal, Theme). *Suru* has an empty argument structure, noted as '()', although it assigns accusative case to an object NP: *suru* () <acc>. The Agent and Goal of KEIKOKU are moved from the argument structure of the VN to the empty argument structure of *suru*.

2.2.1. Argument Transfer

The main features of Argument Transfer can be equated with the following three constraints imposed on Transfer (Grimshaw and Mester, 1989: 215).

- (5)
- (i) At least one argument apart from the subject must be outside the NP.
 - (ii) The subject must always be outside the NP.
 - (iii) For Nouns that take a Theme and a Goal, if the Theme argument is realized outside [the] NP, the Goal must also be realized outside [the] NP.

The constraint (5i) rules out the sentence in (6) below because it has only a subject argument outside an accusative noun phrase.

- (6)
- ??Taroo ga [murabito e no ookami ga kuru to no KEIKOKU] o shi-ta.
 NOM villagers to GEN wolf NOM come COMP GEN warning ACC do-PAST
 'Taroo warned the villagers that the wolf was coming.'

The constraint (5ii) rules out the sentence in (7) because here, the subject *Taroo* is not realized outside the accusative noun phrase.

- (7)
- *[Taroo no murabito e no ookami ga kuru to no KEIKOKU] o shi-ta.³
 NOM villagers to GEN wolf NOM come COMP GEN warning ACC do-PAST
 'Taroo warned the villagers that the wolf was coming.'

³ The postposition *ni* must be *e* when it is realized inside the domain of a nominal.

The constraint (5iii) rules out the sentence in (8) because while the thematically higher Goal argument is still inside the accusative noun phrase, the thematically lower Theme argument is realized outside this noun phrase.

(8)

*Taroo ga ookami ga kuru to [murabito e no KEIKOKU] o shi-ta.
 NOM wolf NOM come COMP villagers to GEN warning ACC do-PAST

'Taroo warned the villagers that the wolf was coming.'

According to Grimshaw and Mester (1988), when arguments are transferred, they must obey the Thematic Role Hierarchy (Bresnan and Kanerva, 1989; Carrier and Duncan, 1985; Givón, 1984; Foley and Van Valin, 1984; Grimshaw, 1990; Kiparsky, 1987; Larson, 1988; among others) and a thematically higher argument must be transferred ahead of a thematically lower argument.

From a theoretical point of view, while constraint (5iii) involves the Thematic Role Hierarchy, constraints (5i) and (5ii) involve the A(rgument)-Adjunct Hypothesis (Grimshaw, 1990).⁴ To explain why these constraints involve it, let me reiterate Grimshaw and Mester's (1988) Argument Transfer Hypothesis, focusing this time on its θ -marking mechanism.

Grimshaw and Mester (1988) assume that for argument transfer to take place, the object NP must be exempted from the Theta Criterion. A stipulation is, then, that for the accusative NP to be exempted from the Theta Criterion at least one 'open position' has to

⁴ This hypothesis claims that at the level of argument structure, the external role of a nominal is lexically *suppressed* or *satisfied*, as noted ' \emptyset ' in (ib'); hence, the external role need not be (obligatorily) mapped into syntax.

- (i) (cf. Grimshaw, 1990: 108 (1))
- a. The enemy destroyed the city.
destroy (x (y))
 Agent Theme
 - b. The enemy's destruction of the city.
 - b'. The destruction of the city.
destruction (R (x- \emptyset (y)))
 Agent Theme

Grimshaw (1990) cites a few pieces of evidence for the suppressed external argument, which is not able to function as an argument phrase but rather as an adjunct phrase:

- (ii) the optionality of a subject in nominal constructions;
- (iii) the impossibility of having expletive possessive NP in nominal constructions; and
- (iv) the inability of the possessive NP to control PRO of an adverbial clause (i.e., Adverbial Equi (cf. McCawley, 1988)).

be transferred to *suru*. This open position requirement has in turn to do with Grimshaw and Mester's (1988) assumption that θ -marking is the assignment of an index from an argument position to the corresponding phrase (cf. Stowell, 1981). Transfer is assumed to strip open positions (i.e., the positions whose indices have not been assigned to phrases) from the argument structure of a VN and to assign them to the argument structure of *suru*. However, under the A(rgument)-Adjunct Hypothesis that the external argument of a VN is lexically suppressed (hence, will not be obligatorily mapped into syntax), the transferring of the external argument does not satisfy the condition set for the exemption from the Theta Criterion. Therefore, the transferring of at least one internal argument is required to satisfy the open position requirement and for Transfer to be successful.

In the above manner, based on the A(rgument)-Adjunct Hypothesis and θ -marking, Grimshaw and Mester (1988) account for why there are such constraints as (5i) and (5ii). Employing such subtheories as Thematic Role Hierarchy, A-adjunct Hypothesis, θ -marking and θ -Criterion, Grimshaw and Mester (1988) set Argument Transfer in a proper theoretical framework: and based on Argument Transfer, they account for the intriguing aspect of the LVC (Jayaseelan, 1988): the promotion of arguments from a lower nominal predicate to an upper verbal predicate.

2.3. Synopses of Light *Suru* Hypotheses

In this section, I will review all the essential points of the previous studies, all of which take Grimshaw and Mester (1988) as a benchmark. To do so, I will divide the previous studies into two groups: those opting for the view that *suru* functions both as a light verb and as a heavy verb (i.e., light *suru* hypotheses) and those opting for the view that *suru* functions exclusively as a heavy verb (i.e., heavy *suru* hypotheses). With respect to the light *suru* hypotheses, I will review the following issues: (i) motivations for postulating light *suru*; (ii) thematic contents of light *suru*, since not all the light *suru* hypotheses agree with Grimshaw and Mester (1988) that its thematic content is completely empty; and (iii) accounts of argument promotion, since not every study adopts the lexical argument transfer. As for the heavy *suru* hypotheses, I will review the following issues: (i) the reasons for these hypotheses not to postulate light *suru*; (ii) the lexical properties (e.g., valency and thematic array) they postulate for heavy *suru*; and (iii) the account for the argument-promotion effect offered under the heavy *suru* hypotheses.

2.3.1. Motivations

Cutting across the all light *suru* hypotheses (Grimshaw and Mester, 1988; Isoda, 1991; Kageyama, 1991; Matsumoto, 1992a and b; Sato, 1993; Yamamoto, 1992) there are three basic motivations for postulating light *suru*: (i) the syntactic behavior of its accusative NP's; (ii) its argument structure; and, (iii) the argument-promotion.

2.3.1.1. Behaviour of Accusative Noun Phrases

The syntactic behavior of accusative NP's associated with *suru* is regarded as motivating a differentiation between a heavy verb *suru* and a light verb *suru*. For instance, Grimshaw and Mester (1988) distinguish light *suru* from heavy *suru*, based on whether an accusative NP of *VN-o suru* can be scrambled or not. If it can, as in (1), repeated here as (9), the *suru* which accompanies it is classified as a heavy verb: if it cannot, as in (10), *suru* is classified as a light verb.

(9) (from Grimshaw and Mester, 1988: 209 (9))

[Tokyo e no ryokoo] wa Taroo ga shi-ta.
to GEN trip TOP NOM do-PAST

'Taroo made the trip to Tokyo.'

(10)

*RYOKOO wa Taroo ga Tokyo ni shi-ta.
travel TOP NOM to do-PAST

'Taroo made the trip to Tokyo.'

The accusative NP's of light *suru* are insensitive not only to scrambling but also to other syntactic processes. For instance, Isoda (1991) points out that while the accusative NP's headed by the non-thematic nominal *nani* 'what' can be scrambled and passivized, as in (11), accusative NP's headed by thematic nominals are unable to undergo such syntactic processes, as seen in (13).

(11) (Isoda, 1991: 8 (20))

a. Nani o John ni Mary wa shimashi-ta-ka?
what ACC DAT TOP do-PAST-Q

'What did Mary do to John?'

b. Nani ga Mary niyotte John ni s-are-mashi-ta-ka.
what NOM by DAT do-PAS-PAST-Q

'What was done to John by Mary?'

(12) (Isoda, 1991: 7 (17))

i. Light *suru*:

John wa murabito ni ookami ga kuru to KEIKOKU o shi-ta.
 TOP villagers to wolf NOM come COMP warning ACC do-PAST
 'John warned the villagers that a wolf would come.'

ii. Scrambling:

*John wa KEIKOKU o murabito ni ookami ga kuru to shi-ta.
 TOP warning ACC villagers to wolf NOM come COMP do-PAST
 'John warned the villagers that a wolf would come.'

iii. Passivization:

*KEIKOKU ga John niyotte murabito ni ookami ga kuru to s-are-ta.
 warning NOM by villagers to wolf NOM come COMP do-PAS-PAST
 'The warning was made by John that the wolf would come.'

iv. Relativization:

*[John ga murabito ni ookami ga kuru to shi-ta] KEIKOKU
 NOM villagers to wolf NOM come COMP do-PAST warning
 '(lit.) warning which John made to villagers that the wolf would come'

"If we thought that *suru* in *VN-o suru* construction [in (12)] were heavy *suru*, we would not be able to explain the ungrammaticality of these sentences" (Isoda, 1991: 7).

However, such peculiar behaviour of accusative NP's in *VN-o suru* had already been noticed by Matsumoto (1988), who is extensively cited in Sells (1990). Matsumoto (1988) summarizes the peculiarity of the accusative NP as follows:

(13) (from Sells, 1990: 29)

When the Theme argument is assigned accusative Case,

- a. modification of the head N of the θ -NP⁵ is not possible
- b. scrambling of the θ -NP is not possible
- c. passivization of the θ -NP is not possible
- d. anaphoric replacement of the θ -NP is not possible

⁵ " θ -NP" refers to the accusative NP of the LVC.

The following are corresponding examples (Sells, 1990: 29):

(14)

i. Modification:

Taroo wa Hanako no ronbun o (*sono) HIHAN o shi-ta.
 TOP GEN paper ACC (*that) criticism ACC do-PAST
 'Taroo criticized Hanako's paper.'

ii. Scrambling:

*Taroo wa HIHAN o Hanako no ronbun o shi-ta.
 TOP criticism ACC GEN paper ACC do-PAST
 'Taroo criticized Hanako's paper.'

iii. Passive:

*HIHAN ga Taroo niyotte Hanako no ronbun o s-are-ta.
 criticism NOM by GEN paper ACC do-PASS-PAST
 'The criticism was done by Taroo of Hanako's paper.'

iv. Anaphoric replacement:

*Taroo wa Hanako o HIHAN o si. Hiro wa Mariko o sore o shi-ta.
 TOP ACC criticism ACC do TOP ACC it ACC do-PAST
 'Taroo criticized Hanako, and Hiro did it to Mariko.'

An empirical generalization seems to be that when the accusative NP of the so-called LVC does not contain a genitive *no*-marked satellite, then the NP becomes syntactically frozen: no syntactic processes can be applied to it. The light *suru* hypotheses cite this phenomenon as one of their motivations for differentiating light *suru* from heavy *suru*.

Even among the light *suru* hypotheses, there are only a couple of works which account for the frozen phenomena: Kageyama (1991) and Sells (1990). Kageyama (1991) attributes the phenomena to (Abstract) Incorporation (Baker, 1988), a kind of morphosyntactic word-formation, which will be illustrated later in Section 2.3.3.2 in the discussion of his account of argument promotion. Sells (1990) attributes the phenomena to the activation of an aspectual feature in the sense of Iida (1987).⁶

⁶ I will extensively review Iida (1987) in Chapter 3.

(15) (Sells, 1990: 34)⁷

Taroo wa 100,000 en o sono toshyokan ni KIHU o shi-ta.
 TOP yen ACC that library DAT donation ACC do-PAST

'Taroo gave 100,000 yen to that library.'

For instance, citing (15), Sells (1990) argues that one reasonable interpretation for the grammaticality of the *double o VN-o suru* is that while the θ -noun KIHU 'donation' is subcategorized for and assigned accusative Case by *suru*, the phase *100,000 en* 'yen', is subcategorized for and case-marked by KIHU. Under the assumptions (i) that a θ -noun can assume verbal properties when it is marked by the feature [+asp] by *suru* and (ii) that this feature assignment is performed under Government, Sells (1990) attributes the frozen phenomena to the rigid locality involving assignment of the feature [+asp].

2.3.1.2. Argument Structure

The second motivation for postulation of light *suru* is argument structure. Such sentences as in (16) are regularly cited as prime evidence for light *suru*.

(16)

a. Taroo ga TAISOO o shi-ta. [Agent]
 NOM exercise ACC do-PAST

'Taroo exercised.'

b. Taroo ga Tokyo ni RYOKOO o shi-ta. [Agent, Goal]
 NOM to traveling ACC do-PAST

'Taroo traveled to Tokyo.'

c. Taroo wa murabito ni ookami ga kuru to [Agent, Goal, Theme]
 TOP villagers to wolf NOM come COMP

[KEIKOKU] o shi-ta.
 warning ACC do-PAST

'Taroo warned the villagers that the wolf would come.'

⁷ Sells (1990) regards the *double-o VN-o suru* form (15) as totally grammatical; Linguists such as Saito and Hoshi (1994) would mark such a construction with '??'. Regardless of differences in the grammaticality judgments, they agree that *double-o VN-o suru* constructions are grammatically acceptable (cf. also Kageyama, 1991; and Dubinsky, 1994 for the same claims: see Chapter 6 (Section 6.3.4.2.1)).

In these examples, the valency and argument types of clauses correspond exactly to those of the VN's, indicating that *suru* makes no thematic contribution to the clauses and its argument structure is thematically empty. This 'defectiveness' of the argument structure associated with *suru* is the second motivation for the view that *suru* can function as a light verb.

2.3.1.3. Locality

The issue of argument promotion summons up the issue of locality (Jayaseelan, 1988). Assuming that the licensing of arguments must respect locality, how can some or all of the satellites of the head of the accusative NP be realized not in the domain of a lower nominal predicate but in the domain of an upper verbal predicate? For instance, given that the VN KEIKOKU 'warning' licenses Agent, Goal and Theme and that locality has to be respected in licensing the arguments, how can all these arguments be realized as matrix phrases, as in (16c) above? This issue of locality involving argument promotion is the third motivation for the view that *suru* can function as a light verb. Under the assumption that *suru* is thematically light (i.e., empty), the arguments of the VN are 'promoted' into the matrix clause, functioning as if they are arguments of *suru*, hence circumventing the violation of locality.

In sum, the light *suru* hypotheses depend on evidence from (i) the syntactic behavior of object NP's in *VN-o suru*, (ii) the defective argument structure of *suru*, and (iii) argument promotion.

2.3.2. Lexical Properties of Light *Suru*

The above section suggested that *suru* has a thematically defective argument structure. However, even among the light *suru* hypotheses, there are three different views on the actual thematic weight of light *suru*. The first view (Grimshaw and Mester, 1988; Sells, 1990; Yamamoto, 1992) is that the argument structure of *suru* is totally empty. The second view (cf. Kageyama, 1991) is that although *suru* may lack internal arguments, it has its own external argument. The third view is that *suru* is associated with an external argument which establishes a kind of binding relation with an external argument of the

VN's (Matsumoto, 1992a and b; Sato, 1993).⁸ I will review these different views and also some lexical properties proposed by these views.

2.3.2.1. Empty Argument Structure Hypothesis

Grimshaw and Mester (1988), Sells (1990) and Yamamoto (1992) opt for the view that *suru* has an argument structure whose content is null. In the case of Grimshaw and Mester (1988), this claim is clear from their lexical representation of light *suru* in (17), where no thematic roles are posited for the argument structure. Besides having such empty argument structure, *suru* is also assumed to be associated with the property of accusative case-assignment.

(17)
suru () <acc>

Agreeing in principle with Grimshaw and Mester (1988) on the weight of *suru*, but using a more elaborate set of lexical properties, Sells (1990) represents *suru* as in (18), employing his notation of 'Lexical Lists' (Sells, 1988).

(18) (cf. Sells 1990: 36 (57))

a. <i>suru</i> .	ARGUMENTS:	<	>
'do'	DEPENDENTS:	<	>
	CASE:	<	>

In (18), ARGUMENTS lists 'obligatory arguments': DEPENDENTS specify 'subcategorization' or those phrases which will be syntactically realized as argument NP's; and CASE specifies the Case assigned to these syntactic phrases; all of these are claimed to be supplied by a θ -noun, which heads the accusative NP of the LVC. With respect to subcategorization, the choice of CP for such VN's as KEIKOKU 'warning' is not encoded in *suru*; such selectional information must be transferred from the VN to *suru*. Also, according to Sells (1990), both direct and indirect objects of *suru* can be passivized. For these NP's to be passivized, they must be associated with Case, which will be absorbed by passivization. The passivizability of the direct and indirect NP's, hence, indicates that Case

⁸ The basic motivation for this view has to do with the fact that the subject of a lower nominal predicate is never phonologically realized, suggesting the possibility of establishing a relationship, such as control or argument binding between the two external arguments.

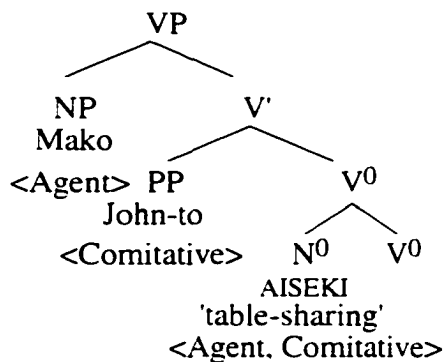
should also be transferred. In sum, according to Sells (1990), what is transferred from VN's to *suru* is not only their arguments but also their subcategorization frames and Case.

Yamamoto (1992) is another study which opts for the view that *suru* is thematically totally empty. Assuming that *suru* is a so-called grammatical verb (Emonds, 1985), Yamamoto (1992) inserts *suru* at S-structure rather than at D-structure. As a result, the thematic array of *VN-o suru* is supplied by a VN, as seen in (20), while the actual categorial specification for the phrasal configuration is supplied by *suru*.

(19)

Mako ga John to AISEKI o suru
 NOM with table-sharing ACC do
 'Mako shares a table with John.'

(20) (from Yamamoto, 1992: 333 (18a))



Hence, although her account is syntactic, Yamamoto (1988) takes the same position as Grimshaw and Mester (1988) and Sells (1990) with respect to the weight of *suru*: thematically, the argument structure of *suru* is totally empty.

2.3.2.2. External Argument Only Hypothesis

Concerning the argument structure of light *suru*, the second view is that while *suru* may lack internal arguments, it is endowed with an external argument. Kageyama (1991) seems to opt for this view. A close look at Kageyama's (1991) tree representation later in (28) leads us to believe that according to him, the external argument of *VN-o suru* is licensed by *suru* rather than a VN, while all the internal arguments are supplied by a VN. Kageyama's (1991) proposal on Abstract Incorporation (Baker, 1988) 'promotes' (direct

and indirect) internal argument(s), but does not 'promote' an external argument: hence, the licenser of the external argument must be *suru*.

Interpreting his structural representation faithfully, I will represent Kageyama's (1991) lexical entry of light *suru* either as (21a) or (21b).

- (21)
- a. *suru*: <Agent, (x.) y > where *x* is an oblique thematic role, which is optional, and *y* is Theme
- b. *suru*: <Agent. >

Regardless of which representation is adopted, Kageyama (1991) apparently opts for the view that the argument structure of light *suru* is not thematically empty as Grimshaw and Mester (1988) and others claim: rather, it is endowed with its own external argument.

2.3.2.3. Argument Binding Hypothesis

The third view (Isoda, 1991; Matsumoto, 1992a and b; Sato, 1993) is similar to the second (Kageyama, 1991) in that it holds that light *suru* has its own external argument, but it differs in that it holds that this external argument of light *suru* establishes a kind of binding relation with an external argument of the VN's.

For instance, based on Alsina (1990a and b), Isoda (1991) proposes that in the LVC, the (external)⁹ argument of *suru* and the thematically highest argument of a θ -NP (i.e., NP headed by a VN) are 'fused', creating a bi-clausal a(rgument)-structure, as in (22b).

(22) (Isoda, 1991, 10 (23))

- a. John wa murabito ni ookami ga kuru to KEIKOKU o shi-ta.
 TOP villagers to wolf NOM come COMP warning ACC do-PAST
 'John warned the villagers that a wolf would come.'

- b. warning-do <agent <agent goal theme>>
 | | |
 SUBJ OBJ COMP

⁹ Since Isoda (1991) is based on LFG, he does not use the term 'external'.

This bi-clausal a-structure is then mapped onto the Grammatical Function's of a mono-clause: the fused Agent is mapped into a SUBJ, while the Goal and Theme of a θ -noun are mapped into an OBJ and a COMP, accordingly.

As for the valency of light *suru*, Isoda (1991) assumes that it is a two-place predicate, licensing an Agent and an Event, with the thematic content of the Event being supplied by a VN, as in (23).¹⁰

(23) (cf. Isoda, 1991:10 (23))

KEIKOKU-o suru: <Agent, [Event Agent, Goal, Theme]>
'warning-do'

Hence, in Isoda's (1991) terms, light *suru* participates in argument fusion or binding for its external role, while the whole thematic content of an internal Event argument, which functions as a place-holder, is supplied by a VN.

The similar idea of using argument binding and a place holder for light *suru* is found in Matsumoto (1992a and b), who postulates (24) as the lexical entry of light *suru*.

(24)

<SUBJ(Agent), XCOMP>

Given (24), the SUBJ of light *suru*, which is an Agent, and the missing subject (PRO) of an XCOMP (i.e., an embedded clause with a missing subject) establishes a control relationship.¹¹ Hence, in Matsumoto's (1992a and b) terms, light *suru* supplies an external Agent argument, controlling the embedded SUBJ, and a VN provides the place-holder XCOMP with its entire thematic content.

Sato's (1993) classification of *suru* differs somewhat from that of others in that he employs an external argument as the main criterion to differentiate light *suru* from heavy *suru*. Unlike heavy *suru*, light *suru* takes a variable *x* as its external argument (Di Sciullo and Rosen, 1990: 110) and Theme as its internal argument, as seen in (25a). The unspecified variable *x* then inherits the external argument of a VN to determine its value.

¹⁰ This representation is not exactly what Isoda (1991) provides. In his presentation, "Event" is omitted. However, assuming Isoda (1991) is being interpreted faithfully, what I provide should be the right form.

¹¹ 'XCOMP' is a type of semantically restricted function which plays a role in Lexical Functional Grammar's control theory (Bresnan, 1982b: 287). In LFG, "[t]he control relation is defined in terms of functions that are subcategorized by the lexical item that induces functional control. Thus, the controlled clause (that is, the function whose subject is controlled) is the XCOMP" (Bresnan, 1982b: 321).

(25) (from Sato, 1993: 96 (5b))

- a. light *suru*: [+V, -N], +Acc. <x, Th>
 b. heavy *suru*: [+V, -N], +Acc. <Ag, Th>

Hence, in Sato's (1993) terms, light *suru* is a two-place predicate, licensing a variable as its external argument and Theme as an internal argument.

2.3.2.4. Summary

In summary, I will list all the essential lexical properties of light *suru* postulated by the light *suru* hypotheses, as Table 2.1.

Table 2.1.
 Lexical Properties of Light *Suru* Proposed by the Light *Suru* Hypotheses

Studies	Argument Structure		Other Properties
	External Argument	Internal Arguments	
Grimshaw & Mester (1988)	∅	∅	Accusative-assigner
Isoda (1991)	Agent	Event (Place-holder)	
Kageyama (1991)	Agent (?)	∅	Inheritance/ Copy of Case & Transitivity
Matsumoto (1992a and b)	SUBJ	XCOMP (Place-holder)	
Sato (1993)	x-variable (Place-holder)	Theme	
Sells (1990)	∅	∅	Transfer of Case & Subcategorization
Yamamoto (1992)	∅	∅	Grammatical Verb

What is clear from the chart is that even among the light *suru* hypotheses, there is no consensus on the lexical properties of light *suru*.

2.3.3. Accounts of Argument-Promotion

Having seen the motivation for postulating light *suru* and various proposals on its lexical properties, in this section, we will examine what kind of machinery are postulated to account for argument promotion, grouping them into lexical accounts (Grimshaw and Mester, 1988; Isoda, 1991; Sells, 1990), morphosyntactic accounts (Kageyama, 1991) and syntactic accounts (Matsumoto, 1992a and b; Yamamoto, 1992).

2.3.3.1. Lexical Approaches

A typical example of the lexical approach is, of course, Grimshaw and Mester's (1988) argument transfer. Given argument transfer and a lexical entry of *suru* as in (26), the arguments of a VN are lexically transferred to the empty argument structure of *suru*. (26)

suru () <acc>

Once the arguments are transferred, *suru* becomes capable of governing and θ -marking these arguments, as schematically represented in (27c), which is syntactically realized as (27d).

(27)

a. KEIKOKU (Agent, Goal, Theme)

b. *suru* () <acc>

c. KEIKOKU () + *suru* (Agent, Goal, Theme) <acc>

d. Taroo ga murabito ni ookami ga kuru to [KEIKOKU] o shi-ta.
NOM villagers to wolf NOM come COMP warning ACC do-PAST

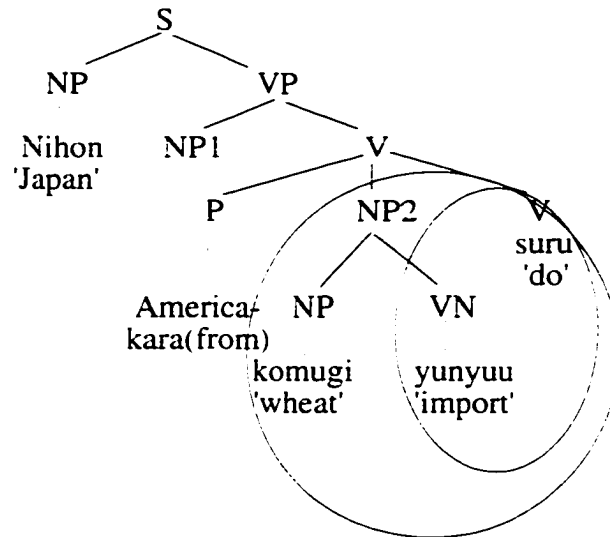
'Taroo warned the villagers that the wolf was coming.'

Hence, Grimshaw and Mester's (1988) argument transfer accounts for argument-promotion, while avoiding the violation of locality.

As for other lexical approaches, Sells (1990) basically endorses Grimshaw and Mester's (1988) argument transfer; hence, I will not further look into his actual mechanism. Also, we have already seen Isoda's (1991) account based on argument fusion. Since Isoda (1991) does not further elaborate his mechanism, I will not discuss his mechanism either.

2.3.3.2. Morphosyntactic Approachs

Kageyama (1991), which I classify as taking a morphosyntactic approach, attributes argument promotion to Baker's (1988) Abstract Incorporation, claiming that the LVC involves one of two types of Abstract Incorporation, as demarcated by circles in (28). (28) (Kageyama, 1991: 197 (64))



If NP₂ is abstractly incorporated into *suru*, then due to the Government Transparency Corollary (Baker, 1988),¹² the "stranded" PP *America-kara* 'from America' is placed under the verb projection rather than the noun projection, resulting in (29), where only the Theme is marked by nominal case *-no*.

(29) (Kageyama, 1991: 197 (63))

Nihon ga Amerika kara komugi no YUNYUU o suru.
 Japan NOM from wheat GEN import ACC do
 'Japan imports wheat from the US.'

If, on the other hand, the VN is abstractly incorporated, both PP and Theme NP are placed under the verb projection, resulting in (30), which Kageyama (1991) regards to be

¹² As for the Government Transparency Corollary (Baker, 1988: 64 (65)), please refer to Appendix in Chapter 1.

grammatically acceptable despite its having two accusative noun phrases (cf. Hoshi, 1994; Saito and Hoshi, 1994; Sells, 1990).¹³

(30) (cf. Kageyama, 1991: 198 (66))

Nihon ga America kara komugi o YUNYUU o suru.
 Japan NOM from wheat ACC import ACC do
 'Japan imports wheat from the US.'

2.3.3.3. Syntactic Approaches

In comparison to the lexical and morphosyntactic approaches, syntactic approaches are more diversified: Control and Scrambling (Matsumoto, 1992a and b), Late Lexical Insertion (Yamamoto, 1992) and Variable Binding and A(-rgument) Percolation (Sato, 1993). Since we have already had a brief look at Yamamoto's (1992) Late Lexical Insertion, the rest of the section examines the proposals made by Matsumoto (1992a and b) and Sato (1993).

Matsumoto (1992a and b) characterizes light *suru* as a control verb whose external argument controls the external argument of a VN, while claiming that the internal arguments of the VN are scrambled away from the nominal domain to the matrix verbal domain. For instance, the representation of the f(unction)-structure (32) for (31) illustrates the control relation which takes place between the SUBJ of light *suru* and that of a VN.

(31)

Seehu wa sono chihoo e busshi no YUSOO o shi-ta.
 gov't TOP the region GOAL goods GEN transportation ACC do-PAST
 'The government transported the goods to the region.'

¹³ Kageyama (1991: 199 (67)) cites the following which he overheard in a TV interview to illustrate the fact that *double o VN-o suru* ought to be acceptable.

(i) ?Sekkaku tsukutta setsubi-o donoyooni-shite katsuyoo-o shiteiku ka.
 with-effort made facilities ACC in-what-way utilize ACC do-going Q
 toyuu koto ga mondai desu.
 COMP thing NOM question is

'The question is, how should we utilize the facilities made with such a big effort?'

(32) (Matsumoto, 1992a: 108 (48b))¹⁴

PRED	'do < SUBJ, XCOMP >'						
SUBJ	[PRED 'government'] _i						
XCOMP	<table style="border-collapse: collapse;"> <tr> <td style="border-left: 1px solid black; padding-left: 10px; vertical-align: top;"> SUBJ_i </td> <td style="padding-left: 10px;">[PRED 'transportation < SUBJ, OBJ, OBL_{GOAL} >']</td> </tr> <tr> <td style="border-left: 1px solid black; padding-left: 10px; vertical-align: top;"> OBJ </td> <td style="padding-left: 10px;">[PRED 'goods']</td> </tr> <tr> <td style="border-left: 1px solid black; padding-left: 10px; vertical-align: top;"> OBL_{GOAL} </td> <td style="padding-left: 10px;">[PRED 'region']</td> </tr> </table>	SUBJ _i	[PRED 'transportation < SUBJ, OBJ, OBL _{GOAL} >']	OBJ	[PRED 'goods']	OBL _{GOAL}	[PRED 'region']
SUBJ _i	[PRED 'transportation < SUBJ, OBJ, OBL _{GOAL} >']						
OBJ	[PRED 'goods']						
OBL _{GOAL}	[PRED 'region']						

Unfortunately, Matsumoto (1992a and b) does not provide any evidence for his control hypothesis, other than mentioning that the external argument of the lower predicate is never phonologically realized, as seen in (33).

(33)

Taroo ga [(*Taroo/*zibun no) RYOKOO] o suru.
 NOM self GEN travel ACC do

'Taroo makes Taroo's/self's trip.'

Matsumoto (1992a and b) employs Scrambling for the promotion of internal arguments, arguing first that in Japanese, the arguments and adjuncts of an XCOMP predicate can appear as sisters to those of a matrix verb because these XCOMP satellites are allowed to scramble freely with those of the matrix verb, as seen in (34).

(34) (Matsumoto, 1992a: 68 (29ab/30ab))

a. Boku wa Mary ni [soko made kite] hoshikat-ta.
 I TOP DAT there as far as come want-PAST

a'. Boku wa soko made Mary ni kite hoshikat-ta.
 I TOP there as far as DAT come want-PAST

'I wanted Mary to come there.'

¹⁴ In the actual matrix, the two SUBJ's are conjoined by a arch line rather than the 'i' indexes.

- b. John wa [Tokyo e ikoo] to shi-ta.
 TOP GOAL go COMP do-PAST
- b'. Tokyo e John wa [ikoo] to shi-ta.
 GOAL TOP go COMP do-PAST
- 'John tried to go to Tokyo.'

Extending this observation to internal arguments of a VN, Matsumoto (1992a and b) claims that the transfer of arguments and adjuncts of a VN is essentially the same as the scrambling of arguments and adjuncts of an XCOMP.

Sato (1993) accounts for argument promotion by means of Variable Binding and A(-rgument) Percolation. Citing the sentence in (35), Sato (1993) claims that it can be an example of the light *suru* construction.¹⁵

(35) (Sato, 1993: 92 (1))

- John ga Mary ni shikin o ENJO sae shi-ta.
 NOM DAT money ACC aid even do-PAST
- 'John even gave Mary monetary aid.'

Sato (1993) represents the lexical entry of light *suru* as in (36a), noting the external argument of *suru* as a variable *x* in the spirit of Di Sciullo and Rosen (1990: 110); he represents the lexical entry of VN's, such as ENJO 'help', as in (36b), whose external argument is suppressed in the sense of Grimshaw (1990).

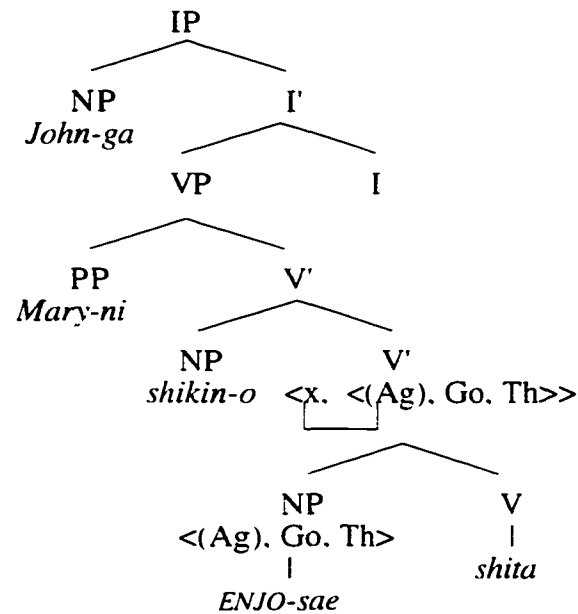
(36)

- a. *suru*: [+V, -N], <*x*, Th>
- b. *enjo*: [-V, +N], <(Ag), Go, Th>

Based then on these lexical entries, (35) is represented as (37) structurally.

¹⁵ Sato (1993) argues that the sentence can also be a heavy *suru* construction.

(37) VN + light *suru*: (Sato, 1993: 98 (6a))



"Light *suru* in [(36a)] takes the NP headed by the VN (call it the VN phrase) as its Theme and forms a complex predicate at the node immediately above it. The VN's a-structure percolates up to its maximal projection (Lieber 1983, Sproat 1985) and is incorporated into the Theme position of light *suru*. As a result *x* reactivates the VN's suppressed Agent and inherits it, which is graphically represented by a line connecting them. The complex predicate with the a-structure <*x*, <(Ag), Go, Th>> assigns the Theme role to *sikin-o* 'money-ACC', the Goal role to *Mary-ni* 'Mary-DAT', and the Agent role to the subject *John-ga* 'John-NOM' (Sato, 1993: 97-98).

In the above manner, in Sato (1993) variable binding accounts for the promotion of the external argument and a(rgument)-percolation accounts for that of the internal arguments.

2.3.3.4. Summary

In summary, Table 2.2 lists all the mechanisms proposed by the light *suru* hypotheses to account for argument promotion, showing what mechanisms are responsible for the promotion effect associated with which types of arguments.

Table 2.2.
Argument Promotion Mechanisms Proposed by the Light *Suru* Hypotheses

Approaches	Studies	Mechanisms	Arguments of VN
Lexical	Grimshaw & Mester (1988)	Argument Transfer	External/Internal Arguments
Lexical	Isoda (1991)	Argument Fusion	External Argument
Lexical	Sells (1990)	Argument Transfer	External/Internal Arguments
Morpho-Syntactic	Kageyama (1991)	Abstract Incorporation	Internal Arguments
Syntactic	Matsumoto (1992a and b)	Control Scrambling	External Argument Internal Arguments
Syntactic	Sato (1993)	Variable-binding A-Percolation	External Argument Internal Arguments
Syntactic	Yamamoto (1992)	Late Lexical Insertion	External/Internal Arguments

2.4. Synopses of Heavy *Suru* Hypotheses

Having examined the essential features of the light *suru* hypotheses, this section reviews heavy *suru* hypotheses (Hasegawa, 1991; Kajihara, 1991; Terada, 1990; Uchida and Nakayama, 1993), focusing on the following issues: (i) why the heavy *suru* hypotheses opt for the view that *suru* cannot function as a light verb; (ii) what kind of lexical properties the heavy *suru* hypotheses list for heavy *suru*; and (iii) how the heavy *suru* hypotheses account for the argument-promotion effect.

2.4.1. Reasons to Reject Light *Suru*

Among the heavy *suru* hypotheses, the most common reason given for rejecting the view that *suru* can function as a light verb is its thematic content: *suru* has its own thematic array, as regular heavy verbs do. Terada (1990) is the forerunner of proponents of this claim and also the strongest opponent of Grimshaw and Mester's (1988) transfer hypothesis.

2.4.1.1. Agent Requirement

Among Terada's (1990) arguments against Grimshaw and Mester's (1988) transfer hypothesis, the most convincing argument is that *suru* imposes a thematic restriction that the subject of *VN-o suru* must be Agent. Hence, for instance, the subject of *VN-o suru* cannot be inanimate as in (38b).

(38) (Terada, 1990: 108 (12 and 13))

- a. Takashi ga atarashii mondai no SHISA o shi-ta.
 NOM new problem GEN suggestion ACC do-PAST
 'Takashi suggested a new problem.'
- b. *Kono deetaa ga atarashii mondai no SHISA o shite iru.
 this data NOM new problem GEN suggestion ACC do STAT
 'This data suggests a new problem.'

Also, citing the sentences in (39), Terada (1990) claims that if a subject is Experiencer, a *VN-o suru* form will be ill-formed.

(39) (Terada, 1990: 109 (18b and 19b))

- a. *Takashi wa [[Noboru no kooi e] no KANDOO] o shi-ta.
 TOP GEN act to GEN impression ACC do-PAST
 'Takashi was moved by Noboru's behavior.'
- b. *Takashi wa [Mafia to no KANKEI] o shite iru.
 TOP with GEN relation ACC do STAT
 'Takashi has a relationship with the Mafia.'

Also, if a subject is Goal, a *VN-o suru* form is not allowed.

(40) (Terada, 1990: 109-110 (19b and 21b))

- a. *Kanseitoo wa SOS no JUSHIN o shi-ta.
 control tower TOP GEN reception ACC do-PAST
 'The control tower received an SOS.'
- b. *Hironaka-hakase wa Nobel-shoo no JUSHOO o shi-ta.
 doctor TOP -Prize GEN reception ACC do-PAST
 'Dr. Hironaka received a Nobel Prize.'

Given that Terada's (1990) grammaticality judgment is correct, these examples in (38-40) indicate that *suru* has at least its own external Agent argument: hence, *suru* cannot

be a light verb in the sense of Grimshaw and Mester (1988), Sells (1990) and Yamamoto (1992), who all take the view that the argument structure of *suru* is totally empty.

The claim that *suru* is associated with an Agent subject is also supported by Kajihara (1991). Agreeing with Terada (1990) that *suru* imposes an Agent requirement on its subject, Kajihara (1991) argues that since *suru* licenses Agent, if there is a lexical transfer of arguments from a VN as proposed by Grimshaw and Mester (1988), there would be a violation of the Theta Criterion (Chomsky, 1981: 36) because the subject of *VN-o suru* would end up having two theta roles. Furthermore, Kajihara (1991) argues, *suru* licenses an internal Theme argument. Topicalization in (41) and pseudo-clefting in (42) are given as evidence: the movement of these accusative NP's assures their argumental status.

(41) (Kajihara, 1991: 49 (63))¹⁶

a. Sono chuumon wa Taroo ga kinoo shi-ta.
 that order TOP NOM yesterday do-PAST
 'That order, Taroo made yesterday.'

b. Sono shitsumon wa Taroo ga sensei ni shi-ta.
 that question TOP NOM teacher to do-PAST
 '(lit.) That question, Taroo asked to the teacher.'

(42) (Kajihara, 1991: 49 (64))

a. [Taroo ga shi-ta no] wa ryokoo da.
 NOM do-PAST COMP TOP trip be
 '(lit.) What Taroo did was a trip.'

b. [Takashi ga sensei ni shi-ta no] wa kantanna shitsumon da-tta.
 NOM teacher to do-PAST COMP TOP easy question be-PAST
 'What Takashi asked the teacher was an easy question.'

According to Kajihara (1991), since *suru* licenses an external Agent argument and an internal Theme argument, it cannot be light in the sense of Grimshaw and Mester (1988).

¹⁶ As it becomes clear in Chapter 3 and 4, the modified VN's Kajihara (1991) employs are all 'simple event nominals' which lack any thematic properties. Hence, her claim cannot be extended to the *VN-o suru* constructions which involve so-called complex event nominals associated with thematic properties.

2.4.1.2. Aspectual Constraint

Uchida and Nakayama (1993) cite another reason to reject the view that *suru* can function as a light verb. With respect to the weight of *suru* which occurs with VN's. Uchida and Nakayama (1993) argue that *suru* cannot be light since it does not occur with certain types of VN's: to be specific, with those VN's whose aspectual specification is either ACCOMPLISHMENT, as in (43), or STATE, as in (44).

(43) (Uchida and Nakayama, 1993: 649 (74))

TOOCHAKU (*o) suru	'arrive'
SEIKOO (*o) suru	'success'
TAIHO (*o) suru	'arrest'

(44) (Uchida and Nakayama, 1993: 649 (75))

RIKAI (*o) suru	'understand'
AIYOO (*o) suru	'patronize'
ENRYO (*o) suru	'be modest'

If *suru* were totally light, it should be compatible with any kind of VN. The data in (43) and (44), however, suggest otherwise. Hence, the sensitivity of *suru* to the aspectual properties of VN's indicates that *suru* could not be as light as Grimshaw and Mester (1988) and others argue.

2.4.1.3. Non-thematic Nominals

Hasegawa (1991) seems to provide another reason to refute the hypothesis of light *suru*, claiming that the VN of *VN-o suru* may be just a regular nominal with no thematic property. To defend this option, Hasegawa (1991) cites such pieces of evidence as (i) ambiguity involving thematic readings of VN's; (ii) the presence of result readings in certain VN's; and (iii) incompatibility of *VN-o suru* with resultatives. If the above evidence is valid, *suru* cannot be light, the reason being that since the head of an accusative NP is a non-thematic referential nominal, it has no thematic content to pass on to the so-called light *suru*.

With respect to (ii) above (the presence of result readings in certain VN's), citing what I call Kageyama's (1991) Data, Hasegawa (1991) argues that this contrast in grammaticality between (45) and (46) can be attributed to the presence or absence of a result reading.

(45) (Hasegawa, 1991 (25b and c): from Kageyama (1991))

- a. [tsuki no tanken] o suru.
moon GEN exploration ACC make
'to make explorations of the moon.'
- b. [i no kensa] o suru
stomach GEN examination ACC do
'to make an examination of the stomach.'

(46) (Hasegawa, 1991 (25a and b): from Kageyama (1991))

- a. *[naikaku no datoo] o suru
cabinet GEN overthrow ACC do
'to overthrow a cabinet'
- b. *[bookun no tsuihoo] o suru
tyrant GEN expulsion ACC do
'to expel a tyrant'

According to Hasegawa (1991), the phrases in (45) are grammatical because of the presence of result readings with their VN's. In contrast, the phrases in (46) are ungrammatical because, despite being preceded by a genitive phrase, these VN's lack result readings. Hence, the possible presence of result readings in grammatical (45) suggests that *suru* is a regular heavy verb.

As for (iii) above (the incompatibility of *VN-o suru* with resultatives), Hasegawa (1991) first cites Abney (1987), who contrasts VP-gerunds (47) with NP-gerunds (48) in their being able to form a resultative phrase.

(47) (from Hasegawa, 1991 (35))

- a. our painting the house **red**.
- b. John's hammering the metal **flat**.
- c. Mary's shooting John **dead**.

(48) (from Hasegawa, 1991 (36))

- a. *our painting of the house **red**.
- b. *John's hammering of the metal **flat**.
- c. *Mary's shooting of John **dead**.

Hasegawa (1991) then claims that the above fact can account for the grammaticality of the *VN-suru* forms (49a) and the ungrammaticality of the *VN-o suru* forms (49b and c).

(49) (from Hasegawa, 1991 (27))

- a. Tekigun ga **konagonani** hashi o hakai-shi-ta.
 enemy NOM into-pieces(ADV) bridge ACC destruction-do-PAST
 'The enemy destroyed the bridge [breaking] into pieces.'
- b. *Tekigun ga [**konagonana** hashi no hakai] o shi-ta.
 enemy NOM into-pieces(ADJ) bridge GEN destruction ACC do-PAST
 'The enemy destroyed the bridge [breaking] into pieces.'
- c. *Tekigun ga **konagonani** [hashi no hakai] o shi-ta.
 enemy NOM into-pieces(ADV) bridge GEN destruction ACC do-PAST
 'The enemy destroyed the bridge [breaking] into pieces.'

Under Hasegawa's (1991) assumption that any VN preceded by a genitive phrase (i.e., *hashi* 'bridge' in (49b and c)) is a pure noun, the incompatibility of (49b and c) with resultative phrases indicates that the corresponding accusative phrases lack any verbal (gerundive) quality, which in turn indicates that the corresponding *suru* in the *VN-o suru* form could not be a light verb.

In sum, both Terada (1990) and Kajihara (1991) reject a light *suru* hypothesis, based on their views that the argument structure of *suru* cannot be thematically null. Citing an aspectual constraint, Uchida and Nakayama (1993) reject a light *suru* hypothesis, arguing that if *suru* were light, it would not pose such a constraint. Hasegawa (1991) also rejects a light *suru* hypothesis, based on the view that the head of accusative NP's is nothing but a non-thematic, referential nominal, which is incapable of transferring any thematic roles to the so-called light *suru*.

2.4.2. The Thematic Array of Heavy *Suru*

Although the above cited researchers all opt for heavy *suru* hypotheses, their views on the valency and thematic array of heavy *suru* are not homogeneous. As for the valency of *suru*, basically, there are two views: *suru* is seen either as a two-place predicate or a three-place predicate. Kajihara (1991) and Uchida and Nakayama (1993) opt for the former view while Terada (1990) and Hasegawa (1991) opt for the latter view.

As already seen, Kajihara (1991) views *suru* as licensing Agent and Theme. With respect to the external Agent argument, Kajihara simply adopts Terada's (1990) claim and data; as for the internal Theme argument, Kajihara (1991) cites as evidence the fact that

topicalization and pseudo-clefting apply to the accusative NP's of *VN-o suru*, indicating their Theme-hood.

Uchida and Nakayama (1993) do not explicitly define the valency and thematic array of heavy *suru*. However, I presume (50) to represent their assumptions about the thematic array of heavy *suru*, given their claim that *suru* is incompatible with a VN whose aspectual type is either ACHIEVEMENT or STATE and given the following passage of theirs: "the heavy *suru* has a thematic restriction on its subjects (agentivity). In addition, it takes a certain type of verbal noun as its direct object, a nominal denoting a lasting activity or event" (Uchida and Nakayama, 1993: 650).

(50)

suru: <Agent, Event>, where Event is *ACHIEVEMENT or *STATE

Terada (1990) also does not provide a clear definition of the valency and argument structure of heavy *suru*. However, it appears that she regards *suru* to be a three-place predicate. In her account, one thing which is very clear is that *suru* licenses an external Agent argument. Judging from her claim that with *VN-o suru*, a Theme argument can be scrambled (Terada, 1990: 132-133), we can assume that *suru* also licenses an internal Theme argument. Furthermore, it looks as if internal PP arguments are also licensed by *suru*, according to the following passage from Terada (1990): "the prima facie NP-external PP's are really not the arguments of N realized outside of the NP, but the arguments of the verb *suru*. They are matrix PP's from the beginning" (Terada, 1990: 116). Consequently, in Terada's (1990) view, (51) should be the thematic array of heavy *suru*.

(51)

suru: <Agent, x, Theme>, x being an oblique role, such as Goal.

Citing such examples as (52), Hasegawa (1991) also opts for the view that heavy *suru* is basically a three-place predicate taking an Agent subject, an Action/Event object and an optional indirect object, the same as such heavy verbs as *tsuzukeru* 'continue'.

(52) (Hasegawa, 1991 (17a and 18a))

a. Taroo ga (Hanako-ni) sore o shita/tsuzuketa/okonatta.
 NOM DAT that ACC did/continued/executed

'(lit.) Taroo did/continued/executed that to Hanako'

b. Taroo ga Hanako ni kookana okurimono o shita/?tsuzuketa.
 NOM DAT expensive present ACC did/continued

'(lit.) Taroo made an expensive gift to Hanako.'

Hence, in Hasegawa's (1991) view, (53) ought be the thematic array of heavy *suru*.

(53)

suru: <Agent, (Goal.) Theme>

In the above manner, interpreting the proposals advanced by the heavy *suru* hypotheses liberally in certain cases, I summarize their views on the valency and thematic array of heavy *suru* as Table 2.3.

Table 2.3.
 Lexical Properties of *Suru* Proposed by the Heavy *Suru* Hypotheses

Studies	Heavy <i>Suru</i>	
	Valency	Thematic Array
Hasegawa (1991)	Three-place Predicate	Agent, (Goal.) Theme
Kajihara (1991)	Two-place Predicate	Agent, Theme
Terada (1990)	Three-place Predicate	Agent, x, Theme
Uchida & Nakayama (1993)	Two-place Predicate	Agent, Event

2.4.3. Accounts of the Argument-Promotion Effect

The most interesting issue with respect to the heavy *suru* hypotheses is how to account for the argument-promotion effect. In the case of the light *suru* hypotheses, it is not really controversial to postulate various mechanisms to account for argument promotion, given the view that *suru* is somehow thematically defective. In this case, some or all of its arguments have to be supplied by thematic VN's: once its arguments are supplied to *suru*, it becomes capable of realizing these arguments as its own matrix constituents. The heavy *suru* hypotheses are not allowed to adopt such a solution, given

their view that *suru* is thematically complete. The basic strategy adopted by the heavy *suru* hypotheses is to regard the so-called promoted satellites either as non-arguments (i.e., adjuncts or modifiers) or arguments licensed by *suru* from the beginning. The rest of the section will review their accounts of the argument-promotion effect.

2.4.3.1. Terada (1990)

Terada (1990) accounts for the argument-promotion effect based on a few different mechanisms: Control for an external argument, Adjunction for CP's, and θ -marking for PP's.

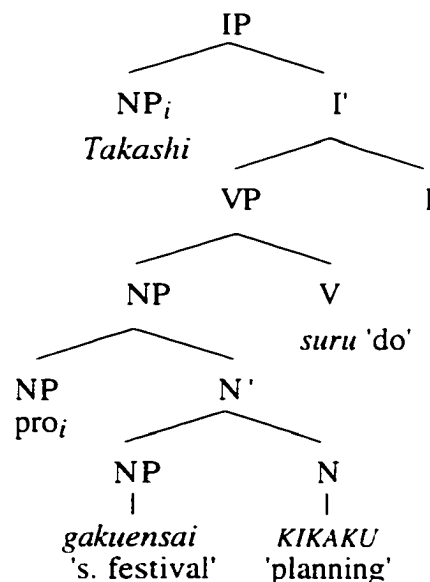
With respect to the promotion effect of the external argument in *VN-o suru*, Terada (1990) proposes Control, citing the fact that the subject of a lower nominal predicate has to be a null-subject and an upper *suru* predicate licenses the external Agent argument. The indexation in (54) specifies the control relationship between the two external arguments, and (55) represents it structurally.

(54) (Terada, 1990, 115 (28))

Takashi_i ga [e_i gakuensai no KIKAKU] o shi-ta.
 NOM s.festival GEN planning ACC do-PAST

'Takashi planned the school festival.'

(55) (Terada, 1990: 115 (28b))



With respect to the promotion effect for CP's, Terada (1990) regards them as adjuncts, based on the fact that NP-external CP's can be observed not only with *suru* but also with regular heavy verbs. Heavy verbs, such as *yomiageru* 'read aloud' in (56b) or *okuritsukeru* 'send' in (56c) can subcategorize for a CP in the context of 'indirect quotes'; and so can *suru* in (56a), which has exactly the same clausal configuration.

(56) (Terada, 1990: 136 (52, 53 and 54))

a. Noah wa [_{CP} daikoozui ga kuru to] minna ni KEIKOKU o shi-ta.
 TOP flood NOM come that everybody DAT warning ACC do-PAST

'Noah warned everybody that a flood would come.'

b. Noah wa [_{CP} daikoozui ga kuru to] keikoku o minna ni yomi-age-ta.
 TOP flood NOM come that warning ACC everybody DAT read-aloud-PAST

'Noah read the warning aloud (saying) that a flood will come.'

c. Shooko wa [_{CP} zoo o korosu koto wa hiningenteki da to]
 TOP elephant ACC kill fact TOP inhumane is that

koogi o seihu ni okuritsuke-ta.
 protest ACC government to send-PAST

'Shooko sent a protest to the government (saying) that killing elephants is inhumane.'

Inevitably, the CP's, such as *daikoozui-ga kuru to* 'that a flood is coming' in (56a), are licensed rather by *suru* as its adjuncts.

with respect to the argument-promotion effect of PP's, Terada (1990) claims that "the prima facie NP-external PP's are really not the arguments of N realized outside of the NP, but the arguments of the verb *suru*. They are matrix PP's from the beginning" (Terada, 1990: 116). To defend her claim, Terada (1990) argues as follows. First, two thematically identical PP's cannot coexist as matrix PP's in the single domain of a VP, as in (57).

(57) (from Terada, 1990, 121 (34))

*Takashi wa Taoka Kiyoshi to Yamaguchi-gumi to [mayaku no BAIBAI]
 TOP with group with drugs GEN buying-selling
 o shi-ta.
 ACC do-PAST

'(lit.) Takashi did business in drugs with the Yamaguchi Group with Taoka Kiyoshi.'

Also, it is not possible to have two thematically identical PP's in the single domain of an NP, as in (58).

(58) (from Terada, 1990, 121 (33))

*Takashi no Taoka Kiyoshi to no Yamaguchi-gumi to no mayaku no
 GEN with GEN group with GEN drugs GEN
 BAIBAI.
 buying-selling

'(lit.) The business in drugs with Taoka Kiyoshi with the Yamaguchi-group.'

However, two thematically identical PP's can appear if one of them is realized NP-externally while the other is realized NP-internally, as in (59).

(59) (Terada, 1990, 121 (32))

Takashi wa Taoka Kiyoshi to [Yamaguchi-gumi to no mayaku no
 TOP with group with GEN drugs GEN
 BAIBAI] o shi-ta.
 buying-selling ACC do-PAST

'Takashi did business in drugs with Yamaguchi Group with Taoka Kiyoshi.'

"[T]he fact that two PP's with the same postposition can appear inside an NP and in the matrix at the same time as in [(59)] shows that the PP's outside of the NP are matrix PP's".

In sum, Terada (1990) accounts for the argument-promotion effect by way of θ -marking and control for an external argument, θ -marking for PP arguments, and adjunction for CP satellites.

2.4.3.2. Hasegawa (1991)

Hasegawa (1991) does not posit any specific mechanism for explaining the argument-promotion effect since she regards the VN of *VN-o suru* as basically a non-predicational nominal. Hence, while NP-internal satellites are licensed as modifiers, NP-external satellites are licensed by the three-place predicate *suru* itself. To defend this idea, Hasegawa (1991) cites a few pieces of evidence. The most convincing piece of evidence is the following. In (60a), which is a *VN-suru* form, the accusative-marked NP must be a patient and cannot be interpreted as an operation or treatment; this point is also supported by the ungrammaticality of (60b), which takes *kanzoo-ishoku* 'liver-transplant' as its object.

(60) (from Hasegawa, 1991 (21))

a. Taroo ga Hanako o chiryoo/shujutsu-shi-ta.
 NOM ACC treat/operation-do-PAST

'Taroo treated/operated on Hanako.'

b. *Taroo ga kanzoo-ishoku o chiryoo/shujutsu-shi-ta.
 NOM liver-transplant ACC treat/operation-do-PAST

'(lit.) Taroo did the treatment/operation of the liver transplantation.'

c. Taroo ga [Hanako no chiryoo/shujutsu] o shi-ta.
 NOM GEN treat/operation ACC do-PAST

'Taroo did the treatment/operation of Hanako.'

d. Taroo ga [kanzoo-ishoku no chiryoo/shujutsu] o shi-ta.
 NOM liver-transplant GEN treat/operation ACC do-PAST

'Taroo did the treatment/operation of the liver.'

However, when these VN's, *chiryoo* 'treatment' and *shujutsu* 'operation', are marked by accusative case *o*, the genitive phrases preceding them can be interpreted as a patient as in (60c) or as an operation/treatment, as in (60d). Since these genitive phrases do not obey strict thematic restriction, they cannot be interpreted as the arguments of these VN's but only as modifiers. Since VN's themselves cannot be interpreted as thematic nominals, matrix satellites in *VN-o suru* cannot be interpreted as being licensed by the VN's: they can only be arguments of a three-place *suru*, which licenses an Agent subject, Action/Event object and an optional indirect object.

2.4.3.3. Uchida and Nakayama (1993)

Uchida and Nakayama (1993) account for the argument-promotion effect by claiming that matrix PP's are licensed by Predication Formation which consists of VN's and *suru*, while matrix CP's are promoted to the matrix clause by way of VP-adjunction.

As for the promotion effect of PP's, Uchida and Nakayama (1993) argue as follows. The sentences in (61) exemplify action nouns.

(61) (Uchida and Nakayama, 1993: 651 (83))

a. John ga ootoo ni itazura o shita.
 NOM brother DAT trick ACC did

'John played a trick on his brother.'

- b. Mary wa toshokan de shukudai o shita
 TOP library at homework ACC did
 'Mary did her homework in the library.'
- c. *Mary wa ootoo ni toshokan de shukudai o shita.
 TOP brother DAT library at homework ACC did
 '(lit.) Mary did her homework for her brother in the library.'

Notice that in (61a), there is a Goal phrase: this Goal phrase *otooto ni* 'to brother' is obviously not licensed by the action noun *itazura* 'trick' since the action noun itself lacks thematic content (Martin, 1975). An assumption which can be made is that the Goal phrase is licensed by the whole string of *AN(Action Nominal)-o suru*: this assumption is also compatible with the non-presence of a Goal phrase in (61b) and the ungrammaticality of (61c) where the string of *AN-o suru* is semantically incongruent for licensing a Goal phrase. In other words, "the heavy *suru* is capable of assigning the goal theta role depending on the direct object, even though the direct object does not have an argument structure." (Uchida and Nakayama, 1993: 653). Extending this line of argumentation to VN's, Uchida and Nakayama (1993) claim that the Goal PP in (62) can be regarded as being theta marked by the whole string of *KEIKOKU-o suru*.¹⁷

(62) (Uchida and Nakayama, 1993: 651 (80))

- John wa murabito ni [_{CP} ookami ga kuru to] [_{NP} KEIKOKU] o shita.
 TOP villager DAT wolf NOM come COMP warning ACC did
 'John warned the villagers that the wolf was coming.'

Hence, in Uchida and Nakayama's (1993) view, the matrix PP's of *VN-o suru* are licensed and θ -marked by the predicate formation consisting of a VN and *suru*.

To account for the promotion effect involving matrix CP's, Uchida and Nakayama (1993) depends on CP-movement, which is claimed to be allowed with any heavy verb. Uchida and Nakayama (1993) attribute this CP-movement to the adjunction of the CP into the matrix VP node, saying that "[u]nlike other elements in the sentence, the CP is not marked with any case-maker when it is outside the NP. This phenomenon yields the

¹⁷ This claim is identical with Baker's (1996: 8.2.2) claim that one of the characteristics of the LVC is that the nominal predicate and the light verb can θ -mark their satellites conjointly.

possibility that the CP may undergo adjunction to the VP, leaving a trace behind, as illustrated schematically in [(63)]." (Uchida and Nakayama, 658: 94).

(63)
 [VP CP_i [VP (Goal) [V' [NP t_i [N KEIKOKU V]]]]

Hence, Uchida and Nakayama (1993) account for the promotion effect of PP's by predicate formation involving VN's and *suru* and that of CP's by VP-adjunction.

2.4.3.4. Kajihara (1991)

Kajihara, who claims that *suru* is associated with the thematic array <Agent, Theme>, proposes that Raising account for argument-promotion involving a PP. After examining the argument-hood of PP's associated with VN's, Kajihara (1991a) claims that only a Goal PP should be considered an argument while such PP's as Comitatives are adjuncts. Given this claim, the problem Kajihara (1991a) faces is: "[i]f *suru* is not a light verb and has a complete theta grid, how can a Sino-Japanese nominal in an *N-o suru* sentence assign theta roles outside its maximal projection?" (Kajihara, 1991a: 51-52). Kajihara's solution is a syntactic transfer, to be specific, 'Raising'¹⁸, by which a Goal argument phrase of a lower nominal predicate is raised out of NP to become a dependent of V', as in (65).¹⁹

(64) (Kajihara, 1991a: 52 (67))

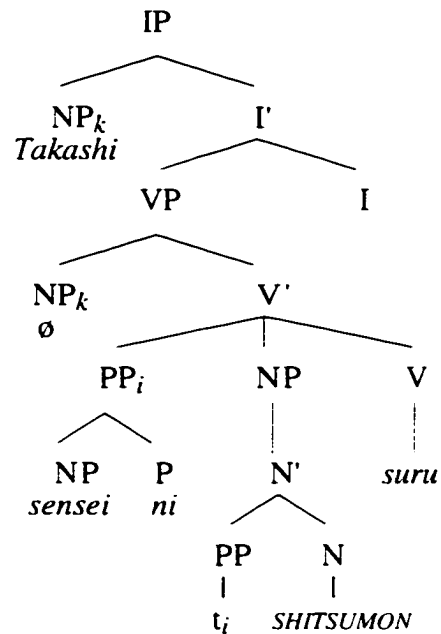
Takashi ga sensei ni shitsumon o *suru*.
 NOM to question ACC do
 'Takashi asks the teacher a question.'

¹⁸ Kajihara (1991a) does not provide any motivation for this solution.

¹⁹ Apparently, Kajihara (1991) adopts the VP-Internal Subject Hypothesis (Kitagawa, 1986; Kuroda 1986) where a subject of a clause is base-generated inside the VP.

(65) (from Kajihara, 1991a: 52 (67c))

S-structure:



Consequently, Kajihara's (1991) accounts for the argument-promotion effect as follows: an Agent subject and a Theme object by θ -marking; a Goal PP by syntactic raising; and the other PP's, possibly, by adjunction.²⁰

2.4.4. Summary and Issues To Be Accounted For

Reviewing the accounts of the argument-promotion effect proposed by the heavy *suru* hypotheses, I summarize their proposals in Table 2.4, which illustrates which mechanisms are responsible for the promotion effect of which types of satellites.

²⁰ Kajihara (1991) does not discuss the argument promotion effect as it relates to CP's.

Table 2.4.
Accounts of Argument Promotion Effects by the Heavy *Suru* Hypotheses

Studies	Mechanisms	Satellite Types
Hasegawa (1991)	θ -marking	Subject
	θ -marking	Object
	θ -marking	PP
	θ -marking	CP
Kajihara (1991)	θ -marking	Subject
	θ -marking	Object
	Raising	Goal PP
	Adjunction	Non-Goal PP
	Adjunction (?)	CP
Terada (1990)	Control/ θ -marking	Subject
	θ -marking	Object
	θ -marking	PP
	Adjunction	CP
Uchida and Nakayama (1993)	θ -marking	Subject
	θ -marking	Object
	Predicate Formation & θ -marking	PP
	VP-Adjunction	CP

This section reviewed previous studies of *VN-o suru*, grouping these into light *suru* hypotheses on the one hand and heavy *suru* hypotheses on the other. With respect to the light *suru* hypotheses, we reviewed the reason why their proponents opted for the view that *suru* is able to function as a light verb: (i) the syntactic behavior of the accusative NP; (ii) the argument structure of *suru*; and (iii) the argument-promotion effect. As for the issue (i), when the head of an accusative NP in *VN-o suru* is not preceded by a *no*-marked satellite, this NP becomes unavailable to any syntactic process. This frozen phenomenon was taken by the light *suru* hypotheses as a piece of evidence for light *suru*; and every light *suru* hypothesis regards this as prime evidence. As for the issue (ii), there is no consensus

concerning the thematic array of light *suru*. This is also the case with the accounts of argument promotion (iii).

Significantly, the main reason why the heavy *suru* hypotheses reject the view that *suru* can function as a light verb is the thematic content of *suru*: the heavy *suru* hypotheses claim that the argument structure of *suru* is not as light as the light *suru* hypotheses argue for. To defend their heavy *suru* hypotheses, they focus their attention accounting for argument promotion. Interestingly, however, none of these heavy *suru* hypothesis pay much attention to the 'frozen phenomena'. Regardless of whichever hypothesis one chooses, one ought to provide decent accounts of at least the following issues.

(66) Issues To Be Accounted For:

- (i) the Agent requirement observed with the matrix subject of *VN-o suru*;
- (ii) the thematic array of *suru*;
- (iii) the aspectual requirement observed with VN's heading the accusative NP;
- (iv) the argument promotion; and,
- (v) the frozen phenomena of the accusative NP.

My stance on these issues has already been declared in Chapter 1. Throughout this study, I will develop my arguments to account for all these issues.

2.5. Criticism of the Transfer Hypothesis

2.5.1. Introduction

In this section, to argue against the idea that two different types of *suru* are responsible for creating different types of *VN-o suru*, I will specifically select Grimshaw and Mester's (1988) Transfer Hypothesis as a target of criticism. By way of exposing various problems associated with their Transfer Hypothesis, I will show that the idea that *suru* can function as a light verb cannot be maintained.

The basic problem posed by the Transfer Hypothesis stems from the three generalizations or constraints imposed on Argument Transfer in (5), which is repeated as (67).

(67) (Grimshaw and Mester, 1988: 215)

- (i) At least one argument apart from the subject must be outside the NP
- (ii) The subject must always be outside the NP
- (iii) For Nouns that take a Theme and a Goal, if the Theme argument is realized outside [the] NP, the Goal must also be realized outside [the] NP

That is, apart from the external argument of a VN, at least one internal argument must be realized outside the accusative NP, as suggested by the ungrammaticality of (68).

(68)

- a. *Taroo ga [murabito e no ookami ga kuru to no KEIKOKU] o shi-ta.
 NOM villagers to GEN wolf NOM come COMP GEN warning ACC do-PAST
 'Taroo warned the villagers that the wolf would come.'
- b. *KEIKOKU (Goal, Theme) + *suru* (Agent) <acc>

The external argument of a VN must always be realized NP-externally, as suggested by the ungrammaticality of (69).

(69)

- a. *[Taroo no murabito e no ookami ga kuru to no KEIKOKU] o shi-ta.
 GEN villagers to GEN wolf NOM come COMP GEN warning ACC do-PAST
 'Taroo warned the villagers that the wolf would come.'
- b. *KEIKOKU (Agent, Goal, Theme) + *suru* () <acc>

Further, the transfer of arguments must obey the so-called Thematic Role Hierarchy. Hence, for instance, the thematically lower Theme cannot be realized NP-externally if the thematically higher Goal still stays inside the NP, as seen in (70).

(70)

- a. *Taroo ga ookami ga kuru to [murabito e no KEIKOKU] o shi-ta.
 NOM wolf NOM come COMP villagers to GEN warning ACC do-PAST
 'Taro warned the villagers that the wolf would come.'
- b. *KEIKOKU (Goal) + *suru* (Agent, Theme) <acc>

2.5.2. Empirical Problems

Grimshaw and Mester's (1988) postulation of these generalizations based on their assumption that *suru* is entirely lacking in thematic structure encounters various empirical problems, which I will enumerate one by one.

2.5.2.1. Agent Requirement

The first problem is that, as pointed out by Terada (1990), the Transfer Hypothesis cannot account for why the instances of *VN-o suru* in (71), all of which involve a non-Agent subject, are ungrammatical.

(71) (Terada, 1990: 108-111)

(i) Experiencer Subject:

*Takashi wa Noboru no kooi ni [KANDOO] o shi-ta.
 TOP GEN kindness to delight ACC do-PAST

'Takashi was delighted with Noboru's kindness.'

(ii) Goal Subject :

*Hironaka hakase wa [nooberu shoo no JUSHOO] o shi-ta.
 doctor TOP Nobel prize GEN receiving ACC do-PAST

'Dr. Hironaka received a Nobel prize.'

(iii) Instrumental Subject:

*Dainamaito ga [gunjikichi no BAKUHA] o shi-ta.
 dynamite NOM base GEN blasting ACC do-PAST

'Dynamite blasted the military base.'

(iv) Source Subject:

*Sono jikken wa sono riron ga tadashii to yuu [SHOOMEI] o shi-ta.
 that experiment TOP that theory NOM correct COMP proof ACC do-PAST

'That experiment proved that the theory was right.'

If the Transfer Hypothesis based on the three generalizations is correct, both (71i) and (71iv), which satisfy all three of the generalizations, should not be ungrammatical.²¹ The data, however, show otherwise. Hence, in particular, Grimshaw and Mester's (1988) assumption that *suru* is thematically totally empty and their claim that the external argument of a VN must always be transferred to *suru* due to generalization (67ii) would not be able to rule out these ungrammatical instances of *VN-o suru*. In other words, their Transfer Hypothesis fails to impose an Agent requirement on the matrix subject of *VN-o suru*.

²¹ The generalization (67i) may rule out (71ii) and (71iii).

2.5.2.2. Erroneous Distinction between Light and Heavy *Suru*

The second problem with the Transfer Hypothesis has to do with Grimshaw and Mester's (1988) underlying assumption that light *suru* can be differentiated from heavy *suru* based on the syntactic behavior of their accusative NP's: i.e., while the accusative NP of heavy *suru* is sensitive to movement and substitution, that of light *suru* is not. This assumption and generalization (67i) do not get along well, as demonstrated in (72).

(72)

- a. Taroo ga Tokyo ni [RYOKOO] o suru.
 NOM to travel ACC do
 'Taroo makes a trip to Tokyo.'
- b. Taroo ga [Ainu-go no KENKYUU] o suru.
 NOM -language GEN research ACC do
 'Taroo researches the Ainu language.'
- c. Taroo ga murabito ni [ookami ga kuru to no KEIKOKU] o suru.
 NOM villagers to wolf NOM come COMP GEN warning ACC do
 'Taroo warns the villagers that the wolf would come.'

Following Grimshaw and Mester's (1988) arguments, the following would be predicted. In (72a), not only the external argument *Taroo* but also the internal argument *Tokyo-ni* 'Tokyo-to' are realized outside the accusative NP. Since (72a) satisfies generalizations (67i) and (67ii), its *suru* must be light. In (72b), only the external argument *Taroo* is realized NP-externally; thus, failing to satisfy generalization (67i), *suru* must be heavy. In (72c), two arguments, i.e., the external argument *Taroo* and oblique argument *murabito-ni* 'villagers-to' are realized NP-externally; thus, *suru* must be light.

An interesting fact is, however, that the accusative NP of (72a) differs from the accusative NP of (72c) in that, for instance, the former cannot be topicalized and passivized while the latter can, as seen by comparing (73a/a') with (73c/c'). Further, the accusative NP in (72c) exhibits the same object-like property as the accusative NP in (72b), as seen by comparing (73b/b') with (73c/c').

(73)

- a. *[RYOKOO] wa Taroo ga Tokyo ni shi-ta.
 travel TOP NOM to do-PAST
 'Taroo made a trip to Tokyo.'
- a'. *[RYOKOO] ga Taroo niyotte Tokyo ni s-are-ta.
 travel NOM by to do-PASS-PAST
 '(lit.) 'A trip to Tokyo was made by Taroo.'
- b. [Ainu-go no KENKYUU] wa Taroo ga shi-ta.
 -language GEN research TOP NOM do-PAST
 'Taroo studies the Ainu-language.'
- b'. [Ainu-go no KENKYUU] ga Taroo niyotte s-are-ta.
 -language GEN research NOM by do-PASS-PAST
 'The Ainu-language was studied by Taroo.'
- c. [Ookami ga kuru to no KEIKOKU] wa Taroo ga murabito ni shi-ta.
 wolf NOM come COMP GEN warning TOP NOM villagers to do-PAST
 'As for the warning that the wolf was coming, Taroo made (it) to the villagers.'
- c'. [Ookami ga kuru to no KEIKOKU] ga Taroo niyotte murabito ni s-are-ta.
 wolf NOM come COMP GEN warning NOM by villagers to do-PASS-PAST
 'The warning that the wolf was coming was made by Taroo to the villagers.'

Hence, there is a clash between Grimshaw and Mester's (1988) generalizations (67i/ii) and their assumption that while the accusative NP of heavy *suru* is accessible to such syntactic processes as topicalization, the accusative NP of light *suru* is not. That is, if we respect the generalizations (67i/ii), *KENKYUU-o suru* would be an instance of heavy *suru* while both *RYOKOO-o suru* and *KEIKOKU-o suru* would be instances of light *suru*. However, if we respect their distinction of *suru* based on the syntactic behavior of the accusative NP's, *RYOKOO-o suru* would be an instance of light *suru* while *KENKYUU-o suru* and *KEIKOKU-o suru* would be instances of heavy *suru*. The above clash or erroneous distinction between the so-called light *suru* and heavy *suru* is a second problem associated with the Transfer Hypothesis.

2.5.2.3. Limited Scope

The third problem associated with the Transfer Hypothesis is its limited scope. That is, it can be applied only to very few types of *VN-o suru* forms. Also, it makes wrong predictions on the grammaticality of *VN-o suru* in that it rules out some grammatical instances of *VN-o suru* while allowing some ungrammatical instances of *VN-o suru*. To prove my point, I will start with unergative nominals.

2.5.2.3.1. Unergative VN's

Given generalizations (67i/ii), which require at least two arguments for transfer to take place, unergative VN's, such as SAMPO 'walk', must be irrelevant to Argument Transfer.

(74)

a. Kodomo ga SUIEI o suru
child NOM swim ACC do

'The child swims.'

b. Taroo ga SAMPO o suru
NOM walk ACC do

'Taro goes for a walk.'

How then do Grimshaw and Mester (1988) account for such sentences as (74) or the instances of *VN-o suru* in (75) which have an unergative nominal as the head of an accusative NP?

(75) (Grimshaw and Mester, 1988: 220)

a. SEPPUKU-o suru 'commit *harakiri*'

b. UNDOO-o suru 'exercise'

c. SEIKATSU-o suru 'make a living'

d. SHIGOTO-o suru 'work'

e. JISATSU-o suru 'commit suicide'

Grimshaw and Mester's (1988) claim is that *suru* which takes an unergative VN as the head of its accusative NP is not *light suru* but *heavy suru*, its properties being defined as (i) imposing the thematic requirement of Agent and (ii) taking as an object a θ -opaque NP which does not lend its arguments to *suru*. Thus, the Transfer Hypothesis cannot account for, or at least is irrelevant to, the *VN-o suru* forms with unergative nominals.

2.5.2.3.2. Unaccusative VN's

With respect to unaccusative VN's, Grimshaw and Mester (1988) suggest that Transfer takes place for this type of nominals as in (76).²²

(76)

- a. DARAKU (Theme) 'corruption'
- b. suru () <acc>
- c. DARAKU () + suru (Theme) <acc>

However, this suggestion is not compatible with the three generalizations imposed on Argument Transfer, for which to take place, *suru* requires a VN with at least two arguments.

A more serious problem involving unaccusative VN's is pointed out by Miyagawa (1989a) and Tsujimura (1989, 1990). That is, unaccusative VN's are generally incompatible with *VN-o suru* formation, and the allowable formation for the unaccusative VN's is *VN-suru* with no accusative marker, as seen in (77).

(77)

- a. Ya ga (mato ni) MEICHUU (*o) suru.
arrow NOM target to hit ACC do
'An arrow hits the target.'
- b. Kodomo ga TANJOO (*o) suru.
child NOM birth ACC do
'The child is born.'
- c. Kopii ga KAKUDAI (*o) suru.
copy NOM enlargement ACC do
'A copy gets enlarged.'
- d. Kuuki ga KANSOO (*o) suru.
air NOM drying ACC do
'The air gets dry.'

²² We will extensively discuss the issue of Unaccusativity in Chapter 8. Unergative predicates are associated with external arguments, which assume an Agentive quality, whereas unaccusative predicates are associated with internal arguments, which assume a Theme- or Patient-like quality (cf. Perlmutter, 1978).

Miyagawa (1989a) and Tsujimura (1989, 1990) claim that the lack of accusative case assignment seen above has to do with Burzio's (1986) generalization: accusative Case is assigned iff a verb assigns an external role.²³ While this is disputable, the claim that unaccusative VN's cannot head the accusative NP of *VN-o suru* seems to stand. Consequently, the Transfer Hypothesis cannot account for, or at least is irrelevant to, the *VN-o suru* forms with unaccusative nominals.

2.5.2.3.3. Two-place Telic VN's

Two-place VN's are also problematic for the Transfer Hypothesis. As seen in (78), two-place telic VN's are incompatible with *VN-o suru* formation. These instances of VN's in (78) cannot be treated as involving Transfer since they do not conform to generalization (67i).

(78)

- a. *?Terorisuto ga [daijin no SATSUGAI] o shi-ta.
terrorist NOM minister GEN murder ACC do-PAST
'Terrorists murdered a minister'
- b. *?Tekigun ga [machi no HAKAI] o shi-ta.
enemy NOM city GEN destruction ACC do-PAST
'The enemy destroyed the city.'
- c. *Taroo ga [kioku no SOOSHITSU] o shi-ta.
NOM memory GEN loss ACC do-PAST
'Taroo has lost (his) memory.'

²³ Under the assumption that unaccusative VN's do not assign an external role, marking of accusative Case becomes impossible, this impossibility being responsible for the ungrammaticality associated with the *VN-o suru* forms.

What Grimshaw and Mester (1988) might propose is that these sentences in (78) are instances of *heavy suru*.²⁴ This claim will however run into a problem in that their heavy *suru* hypothesis cannot account for why those in (78) are ungrammatical despite the fact that their *suru* should have exactly the same argument structure of <Agent, Event> as those in (79), which are grammatical.

(79)

- a. Taroo ga kaimono o suru.
 NOM shopping ACC do
 'Taroo does shopping.'
- b. Taroo ga gorufu o suru.
 NOM golf ACC do
 'Taroo plays golf.'
- c. Taroo ga shoogi o suru.
 NOM chess ACC do
 'Taroo plays chess.'

Hence, regardless of whether we adopt Grimshaw and Mester's (1988) Transfer Hypothesis or their heavy *suru* hypothesis, we cannot account for the grammatical contrast between (78) and (79) adequately.

2.5.2.3.4. Psych VN's

Psych VN's are also problematic for the Transfer Hypothesis. In the case of psych VN's, it is unclear whether the Experiencer is an internal or external argument. The argument-hood of the NP which denotes a mental state is not clear either. It is clear, however, is that none of the two-place psych VN's can head the accusative NP of *VN-o suru*, as seen in (80).

²⁴ Under the assumption that *suru* in these examples is 'light', Grimshaw and Mester (1988) might be able to rule out these *VN-o suru* constructions by Generalization (66i). If they do so, they would not be able to account for how the following examples are grammatical.

- (i) Taroo ga [eigo no BENKYOO] o shi-ta.
 NOM English GEN study ACC do-PAST
 'Taroo studied English.'
- (ii) Taroo ga [Ainugo no KENKYUU] o shi-ta.
 NOM Ainu GEN research ACC shi-ta.
 'Taroo researched Ainu.'

(80)

- a. *Taroo ga [Goroo no KEN'O] o suru.
 NOM GEN hate ACC do
 'Taroo hates Goroo.'
- b. * Taroo ga Hanako no kooi ni [KANGEKI] o suru.
 NOM GEN kindness DAT delight ACC do
 'Taroo is delighted with Hanako's kindness.'
- c. *Taroo ga Jiroo ni [SHITSUBOO] o suru.
 NOM DAT disappointment ACC do
 'Taroo is disappointed with Jiroo.'

Hence, neither Grimshaw and Mester's (1988) Transfer Hypothesis nor their heavy *suru* hypothesis can provide any reason why psych VN's are incompatible with *VN-o suru*.

2.5.2.3.5. Ditransitive VN's

Lastly, even with ditransitive VN's the Transfer Hypothesis does not fare well in that it does not rule out such ungrammatical instances of *VN-o suru* as those in (81).

(81) (Terada, 1990: 117)

- a. ?*Jinushi wa Takashi kara [tochi no BAISHUU] o shi-ta.
 landlord TOP from land GEN acquisition ACC do-PAST
 'The landlord bought land from Takashi.'
- b. ?*Nisoo wa ryooseitachi kara [sono zasshi no BOSSHUU] o shi-ta.
 nun TOP dorm-students from that magazine GEN confiscation ACC do-PAST
 'The nun confiscated the magazine from the students in the dormitory.'
- c. ?*Yakuza ga shuhutachi ni [nise daiya no HANBAI] o shi-ta.
 NOM housewives to fake diamond GEN sale ACC do-PAST
 'Yakuzas sold fake diamonds to housewives.'

All the above instances of *VN-o suru* with ditransitive VN's satisfy all three of Grimshaw and Mester's (1988) generalizations. That is, conforming to generalization (62i), the oblique arguments (Source in (81a) and (81b) and Goal in (81c)) are realized NP-externally; and conforming to generalization (67ii), the external arguments of the VN's are all realized as a matrix subject. Further, since the thematically lowest Theme is realized NP-internally, there is no violation of generalization (67iii). Despite the fact that all the

instances of *VN-o suru* in (81) satisfy all the generalizations, they are ungrammatical, and the Transfer Hypothesis has no recourse to account for their ungrammaticality.²⁵

To be fair to Grimshaw and Mester (1988), I shall make clear what kinds of *VN-o suru* the Transfer Hypothesis can account for. The fact is that they are very few. To be specific, only two types of *VN-o suru* can be accounted for by the Transfer Hypothesis. One type involves two-place VN's whose external argument is Agent and whose internal argument is non-Theme, such as those in (82).

(82)

a. Taroo ga Tokyo ni [RYOKOO] o suru.
 NOM to travel ACC do

'Taroo travels to Tokyo.'

b. Taroo ga Hokkaido ni [SHUCCHOO] o suru.
 NOM to travel ACC do

'Taroo makes a business trip to Hokkaido.'

Another type involves a certain (i.e., ACTIVITY) type of ditransitive VN's, as exemplified in (83).

(83)

a. Seifu ga chihoo ni [busshi no HAISSOO] o suru.
 government NOM r.-communities to goods GEN delivery ACC do

'The government delivers the goods to rural communities.'

b. Taroo ga murabito ni ookami ga kuru to [KEIKOKU] o suru.
 NOM villagers to wolf NOM come COMP warning ACC do

'Taroo warned the villagers that the wolf would come.'

Only in these instances of *VN-o suru* does the Argument Transfer based on the three generalizations seem to work.

Consequently, the Transfer Hypothesis has a very limited applicability, and it cannot tell us (i) why the subject of *VN-o suru* must be an Agent; (ii) why unaccusative,

²⁵ My discussion in this section (2.5.2.3) also casts a doubt on Grimshaw and Mester's generalization (iii) that argument promotion is regulated by the Thematic Role Hierarchy. If *suru* is not as light as they hope for, there is no ground for the claim that arguments are promoted obeying the Thematic Role Hierarchy.

telic and psych VN's cannot head the accusative phrase; or (iii) why the accusative phrase is frozen when there is no visible satellite in its domain.

2.6. Prelude to My Analysis

2.6.1. Introduction

In this last section of the chapter, as a prelude to my analysis of *VN-o suru* constructions to which the rest of this thesis is devoted, I will argue that *suru* which involves *VN-o suru* constructions is a heavy *suru* which licenses Agent and EVENT.

2.6.2. Valency of *Suru*

2.6.2.1. Introduction

As we have seen, as far as the weight of *suru* is concerned, there are two main views, one holding that *suru* functions as either a heavy verb or a light verb and the other holding that *suru* functions only as a heavy verb. Basically, I opt for the idea that there is only one type of *suru*, which is a two-place predicate, licensing Agent and EVENT. I do not, however, commit myself to the strong version of the Heavy *Suru* Hypothesis. In my version, the actual content of the 'EVENT' varies, depending on whether it functions as a referential event, headed by a non-thematic simple event nominal, or as a predicational event, headed by a thematic complex event nominal.

2.6.2.2. *Suru* as a Two-place Predicate

To substantiate my claim that *suru* is a two place predicate licensing Agent and EVENT, I will rely on Ohkado (1991).

2.6.2.2.1. Review of Ohkado (1991)

Ohkado (1991) claims that there are two types of *suru*: 'Action *suru*' and 'Theme *suru*', which are defined as follows.

(84) (from Ohkado, 1991: 151 (4))

- | | |
|-------------------------|----------------|
| a. Action <i>suru</i> : | (Agent, Theme) |
| b. Theme <i>suru</i> : | (Theme) |

Ohkado (1991) cites the following as some of the evidence for the existence of the two types of *suru*. *Suru* sentences can be constructed not only from agentive verbs (e.g.,

taberu 'eat') but also from stative verbs (e.g., *hanaseru* 'be-able-to speak'), as in (85a), or from unaccusative verbs (e.g., *tsuku* 'arrive'), as in (85b).

(85) (Ohkado, 1991: 152 (7))

- a. Taroo ga eigo o hanase sae shi-ta.
 TOP English NOM be-able-to-speak even do-PAST
 'Taroo could even speak English.'
- b. Taroo ga tsuki sae shi-ta.
 NOM arrive even do-PAST
 'Even Taroo arrived.'

Interestingly, however, for instance, only agentive sentences can undergo VP-preposing, as seen in (86).

(86) VP-preposing (Ohkado, 1991: 152 (8)):

- a. Okashi o tabe sae, Taroo ga shi-ta.
 sweets ACC eat even NOM do-PAST
 'Taroo even ate sweets.'
- b. *Eigo ga hanase sae, Taroo ga shi-ta.
 NOM be-able-to-speak even NOM do-PAST
 'Taroo could even speak English.'
- c. *Tsuki sae, Taroo ga shi-ta.
 arrive even NOM do-PAST
 'Even Taroo arrived.'

Also, the subject honorific *nasaru*, which is a suppletive form of *suru*, can only be used with the agentive sentences, as in (87).

(87) Honorification (Ohkado, 1991: 153 (10)):

- a. Yamada sensei ga okashi o tabe sae nasat-ta.
 Mr. NOM sweet ACC eat even do-PAST
 'Mr. Yamada even ate sweets.'
- b. *Yamada sensei wa eigo ga hanase sae nasat-ta.
 Mr. TOP English NOM be-able-to-speak even do-PAST
 'Mr. Yamada could even speak English.'

- c. *Yamada sensei ga tsuki sae nasat-ta.
Mr. NOM arrive even do-PAST
'Even Mr. Yamada arrived.'

Further, the reduplicative use of *suru* is possible only with agentive sentences, as in (88).

(88) Reduplication (Ohkado, 1991: 153 (11a/c)):

- a. ??Taroo ga okashi o tabe sae shi sae shi-ta.
NOM sweet ACC eat even do even do-PAST
'Taroo even ate sweets.'
- b. *Taroo wa eigo ga hanase sae shi sae shi-ta.
TOP English NOM be-able-to-speak even do even do-PAST
'Taroo could even speak English.'
- c. *Taroo ga tsuki sae shi sae shi-ta.
NOM arrive even do even do-PAST
'Even Taroo arrived.'

The above differences between the agentive sentences and non-agentive sentences are taken as evidence in that:

(89)

The above differences can easily be explained by the assumption that there are two types of the *suru* 'do' constructions, and that while agentive sentences can take either of these two types, nonagentive sentences can take only one of them, together with the assumption that for a sentence to be a theme complement of 'action *suru*', it must satisfy the following requirement (Ohkado, 1991: 154).

(90)

The subject of the complement clause of 'action *suru*' must be agentive (Ohkado, 1991: 154 (12)).

Ohkado (1991) further extends his proposal concerning the two types of *suru* to such *suru* constructions with NP complements as in (91) where (91a) is an example of Action *suru* and (89b) is an example of Theme *suru*.

(91) (Ohkado, 1991: 151 (3))

- a. Taroo ga tenisu o suru.
NOM tennis ACC do
'Taroo plays tennis.'

- b. Hen-na oto ga suru.
 strange sound NOM do
 'I hear a strange sound.'

Given the above extension, since such *suru* forms as (91b) are outside the scope of our inquiry in that we will deal exclusively with *VN-o suru* constructions, 'Theme *suru*' seems not to be the type of *suru* we are interested in.²⁶ As for the 'Action *suru*', given that it can take a Goal argument as in (92), Ohkado (1991) reformulates the argument structure as (93), accommodating Goal as an optional argument.

(92) (Ohkado, 1991: 151 (5))

- Taroo ga Hanako ni itazura o suru
 NOM DAT trick ACC do
 'Taroo plays trick on Hanako.'

(93) (Ohkado, 1991: 151 (6))

(Agent. (Goal.) Theme)

2.6.2.2.2. My proposal Concerning (Action) *Suru*

Given Ohkado's (1991) claim that *suru* can function as Action *suru*, I will equate it to the *suru* verb of our *VN-o suru* constructions. However, as for the argument structure of *suru*, I will make two changes in his proposal: the optionality of Goal and the labeling of Theme. First, the presence of Goal does not originate in its optionality as part of the argument structure of *suru*, but it depends on what type of theme is selected by *suru*, as seen in (94).

(94)

- a. *Taroo ga Hanako ni shukudai o suru.
 NOM to homework ACC do
 '(lit.) Taroo does homework to Hanako.'

²⁶ The intransitive *suru* discussed in Chapter 1 (Section 1.3.1.1) corresponds to Theme *suru*, whose usage is highly idiosyncratic. Another idiosyncratic use of *suru* discussed in Section 1.3.1.2 can be called 'Experiencer *suru*' given the fact that its subject is Experiencer. The last type of *suru* discussed in the section can be called as 'Causer *suru*', given the fact that its subject causes somebody to become something. Among these different types of *suru*, only 'Action *suru*' is productive.

b. *Taroo ga Hanako ni shigoto o suru.
 NOM to work ACC do

'(lit.) Taroo does work to Hanako.'

c. Taroo ga Hanako ni dengon o suru.
 NOM to message ACC do

'(lit.) Taroo does that message to Hanako.'

d. Taroo ga Hanako ni hanashi o suru
 NOM to talk ACC do

'(lit.) Taroo does that talk to Hanako.'

In other words, we cannot simply regard Goal as part of the argument structure of *suru*. Second, according to Gruber (1965) and Jackendoff (1972, 1987a, 1990), 'Theme' is regarded as something which moves or is located. The content of the nominal and sentential complements which correspond to the internal thematic position of 'Action *suru*' is not consistent with the notion of 'Theme'. To better characterize the internal argument, I will label it as 'EVENT'. Hence, I regard the *suru* verb in *VN-o suru* as a two place-predicate which licenses Agent and EVENT.

In my analysis of *VN-o suru* constructions, the EVENT position will be linked either to non-thematic, simple event nominals or to thematic, complex event nominals. The differences among VN's which head the accusative EVENT phrase play a crucial role in my analysis of *VN-o suru* constructions in general and with respect to the narrowly focused issue of the so-called Light Verb Construction.

In the following chapter, I will discuss the other component of *VN-o suru* formation, i.e., VN's. I will demonstrate that any VN is isomorphous between its thematic reading and its non-thematic reading.

Chapter 3. Types of Nominals

3.1. Introduction

As is clear from my proposal in chapter 1, it is my contention that in order to characterize *VN-o suru* formations properly, it is of utmost importance to characterize VN's into proper types. Unfortunately, previous studies on *VN-o suru* forms fail to pay due attention to the properties of VN's.¹ Since the basic characteristics of *VN-o suru* formations are to a large extent determined by those of the VN's themselves, we would never arrive at the proper characterization of these forms if we failed to examine and classify these nominals into their proper types.

What I would like to demonstrate in this chapter is that VN's act either as nominals with no verbal/thematic property or as nominals associated with some verbal/thematic properties. There is some difficulty in differentiating these two types of nominals from each other. This difficulty lies in the perpetual ambiguity involved with these two types of nominals: from the sole presence of argument-like satellite phrases, we cannot differentiate one type from the other.

To distinguish these two types of VN's, I will basically rely on Grimshaw's (1990) classification of nominals into three types: result nominals, simple event nominals, and complex event nominals. In Section 3.2, I will introduce Grimshaw's (1990) three way classification of nominals and her definition of nominal types. I will then briefly summarize Grimshaw's (1990) motivation for her proposal that nominals should be classified into three different types rather than the traditional two. In Section 3.3, I will apply some of Grimshaw's (1990) tests to Japanese VN's. The main goal is to demonstrate that any VN can function either as a non-thematic simple event nominal, or as a thematic complex event nominal. If my endeavor is successful, I will obtain tools to disambiguate nominal types and this disambiguation will eventually shed more light on the characterization of *VN-o suru* forms.

¹ The exceptions are Hasegawa (1991), Kageyama (1991), and Uchida and Nakayama (1993).

3.2. Nominal Types

3.2.1. Introduction

3.2.1.1. Nominals vs. Verbs

Since Chomsky (1970), there have been numerous works in generative grammar which investigate the syntactic similarities and differences between verbs and nouns (cf. Giorgi and Longobardi, 1991 and references cited therein; Longobardi, 1994). The general view is that verbs and (derived) nouns are similar in being able to assume argument structure, but differ in case-marking. For instance in (1), the verb *destroy* and the noun *destruction* take the same arguments, but these argument NP's are case-marked differently.

(1)

- a. The enemy destroyed the city.
- b. The enemy's destruction of the city.

3.2.1.2. Two-Way Classification of Nominals

Derived nouns traditionally are divided into two groups: result nouns and process nouns, and concrete nouns and abstract nouns (e.g., Anderson, 1983-1984; Lebeaux, 1986; Zubizarreta, 1987). Concrete nouns refer to referential objects, while abstract nouns refer to stative/eventive entities. For instance in (2), the noun *examination* refers either to an object, as in (2a), or an event, as in (2b), despite their being identical in their morphological form.

(2)

- a. The examination was on the table.
- b. The examination of the patients took a long time/*was on the table.

3.2.2. Three-way Classification of Nominals

3.2.2.1. Introduction

Grimshaw (1990) challenges this traditional two-way classification of nominals, arguing that process (event) nominals can further be divided into two types: simple event nominal and complex event nominals, hence suggesting a three-way classification, as in (3).

(3)

- | | |
|--------------------------------|---|
| a. Result/Individual nominals: | their <i>dog</i> ; an <i>exam</i> |
| b. Simple event nominals: | the <i>occasion</i> ; an <i>event</i> |
| c. Complex event nominals: | the <i>examination</i> of the patient; the
<i>construction</i> of an example |

3.2.2.1.1. Concise Definition

Grimshaw (1990) defines the difference between these three types of nominals as follows. Since all three types of nominals have meanings, they are associated with a Lexical Conceptual Structure (LCS). This association is typically observed as selectional restrictions. For instance, the result nominal *father* imposes a selectional restriction on its modifier.² Hence, '*father* of a daughter' is a semantically well-formed phrase, meanwhile '*father* of a chair' and '*father* of air' are not. In the same manner, we can also see that due to their association with a LCS, simple event nominals can impose such selectional restrictions, which are typically manifested in their choice of prepositions. For instance, in '*gift* to the hospital', *to* cannot be replaced by such prepositions as *at*, *on*, or *towards*, while retaining the same meaning.³ Complex event nominals differ from these two types of nominals in that complex event nominals are associated with an event structure (cf. Pustejovsky, 1992) and a predicate argument structure. Hence, complex event nominals are endowed with both aspectual and thematic properties, being able to license arguments and to assume aspectual modifiers.

3.2.2.1.2. Satellite Phrases

One way of differentiating these three types of nominals from each other is to examine what kind of satellite phrases these nominals are associated with. According to Grimshaw (1990), there are three different types of satellite phrases or participants: modifiers, complements, and arguments.

² Result nominals such as *father* are the so-called 'relational nominals', for which the selection of modifiers is restricted. Not every result nominal seems to have such a restricted selection of modifiers.

³ According to Grimshaw (1990), argument structure is impoverished in information and such selectional information on prepositions is not encoded in the argument structure.

A modifier is an expression predicated of the head noun, and is a satellite phrase of a result nominal. Since a modifier is associated only with nouns with no argument structure, it cannot be a satellite of a complex event nominal (Grimshaw, 1990: 57).⁴ The modifier is licensed by predication: hence, it can be separated from its head by the copula, as in (4).

(4) (Grimshaw, 1990: 97 (118))

- | | |
|---------------------------------|-----------------------------------|
| a. John's dog | The dog is John's. |
| b. the book by/about/on Chomsky | The book was by/about/on Chomsky. |

A complement, an expression which corresponds directly to a position in the LCS of its head, is found only with simple event nominals (Grimshaw, 1990: 92). Since it is related to an LCS position, a complement is licensed directly by the LCS of its head. An argument is the satellite phrase of a complex event nominal, and licensing of the argument is mediated by θ -marking, just as in the case of verbs. In sum, Table 3.1 lists the three types of satellite phrases and their licensing mechanism.

Table 3.1.
Three Types of Nominals and Licensing Mechanism of Their Satellites

Satellite Phrases	Nominals	Licensing
Modifiers	Result Nominals	Predication
Complements	Simple Event Nominals	LCS
Arguments	Complex Event Nominals	θ -marking

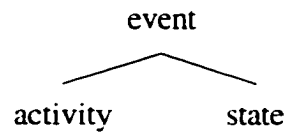
3.2.2.1.3. Event Structure

Another criterion which Grimshaw (1990) employs in nominal classification is event structure. This criterion is used primarily to isolate complex event nominals from the other two types of nominals. As a theoretical construct, Grimshaw (1990) adopts Pustejovsky's (1992) unary/binary templates to account for the aspectual (event) structure

⁴ Grimshaw (1990) regards temporal or aspectual modifiers which occur with complex event nominals as adjuncts, contrasting with modifiers, which are licensed by predication (Grimshaw, 1990: 57).

of predicates.⁵ For instance, (5) specifies the event structure of an ACCOMPLISHMENT, which consists of two aspectual subparts, an activity and a resulting state.

(5) (Grimshaw, 1990: 26 (44))



Grimshaw (1990) crucially assumes that the argument structure of a predicate comprises not only thematic matter but also aspectual matter.⁶ Thus, to be associated with argument structure, a predicate should not lack either aspectual or thematic properties. From this perspective, result nominals clearly lack event structure since they do not denote an event. Simple event nominals also lack event structure because they are not endowed with the internal complexity of event structure, such as that represented in (5). Hence, as far as event structure is concerned, result nominals and simple event nominals are the same: neither of them is associated with event structure. These two types of nominals are thus not capable of taking aspectual modifiers, as seen in (6i), or controlling into rationale clauses, as in (7i).

(6)

- i. Simple Event Nominals: (Grimshaw, 1990: 59 (33))
 - a. *Jack's trip *in five hours/for five hours* was interesting.
 - b. *The process *in five hours/for five hours*.
- ii. Complex Event Nominals: (Grimshaw, 1990: 58 (28a/29a))
 - a. The total destruction of the city *in only two days* appalled everyone.
 - b. Only observation of the patient *for several weeks* can determine the most likely...

⁵ See Pustejovsky (1992) for a simple, insightful treatment of aspect. Also, see Miyamoto (1993) for its application to *VN-o suru* forms.

⁶ It is not clear to me how argument structure and event structure are correlated with each other in Grimshaw's (1990) terms. This issue is not as well articulated, for instance, as Tenny (1992, 1994), who regards event structure as an intermediary between argument structure and syntax in the sense that those thematic roles which are sensitive to aspect are mapped onto syntax (i.e., the Aspectual Interface Hypothesis).

(7)

- i. Simple Event Nominals: (Grimshaw, 1990: 59 (27))
 - a. *The exam in order to determine whether . . .
 - b. *The solution (to the problem) in order to simplify the assignment.
- ii. Complex Event Nominals: (Grimshaw, 1990: 58 (26b/c))
 - a. The translation of the book (in order) to make it available to a wider readership.
 - b. (The) examination of the patient in order to determine whether . . .

3.2.2.2. Grimshaw's (1990) Criteria for Distinguishing Nominal Types

Grimshaw (1990) enlists several syntactic and semantic criteria which are intended to differentiate simple event nominals from complex event nominals. I enumerate these criteria below: I will later use some of these to categorize Japanese VN's into the proper types.

3.2.2.2.1. Interpretation of possessive

Interpretation of possessive is ambiguous in the case of simple event nominals. For instance, *John* in (8a) can be interpreted as a possessor, agent, or undergoer.

(8) Grimshaw (1990: 48 (4))

- a. John's examination was long.
- b. John's examination of the patients took a long time.

In contrast, there is no ambiguity in the interpretation of complex event nominals, such as in (8b) where *John* can only be an agent.

3.2.2.2.2. Obligatoriness of Arguments

Related to the above is the obligatoriness of arguments. Complex event nominals differ from simple event nominals in that the former are associated with obligatory arguments while the latter are not. According to Grimshaw (1990), if a possessive is interpreted as the subject of a nominal, this reading forces the presence of an object. For instance in (9), when the simple event nominal in (9a) takes a possessive modifier, as in (9b), it can be grammatical or ungrammatical depending on how the possessive *the instructor's* is interpreted.

(9) (from Grimshaw, 1990: 51 (10))

- a. The examination took a long time.
- b. (*) The instructor's examination took a long time.
- c. The instructor's examination of the papers took a long time.

If the possessive is interpreted as a modifier, (9b) is grammatical. However, if the possessive is interpreted as a subject, (9b) becomes ungrammatical, since the presence of the subject-like phrase requires an obligatory object. Hence, as a complex event nominal, only (9c) is allowed. In sum, unlike non-thematic nominals, complex event nominals must be obligatorily associated with arguments, which will be realized as syntactic constituents, such as a subject and object.⁷

Throughout this thesis, I will assume that complex event nominals are associated with syntactic arguments whereas simple event nominals are associated with C(onceptual) S(tructure) arguments which lack syntactic argument-hood.

3.2.2.2.3. *By*-phrase

Related also to the obligatoriness of arguments is the presence of a *by*-phrase. As seen in (10), the presence of a *by*-phrase, which entails an agentive reading, requires an obligatory object. Because the agentive reading forces the complex event nominal interpretation, the nominals in (10) must express their arguments overtly.

(10) Grimshaw (1990: 52 (14))

- a. The expression *(of aggressive feelings) by patients.
- b. The assignment *(of unsolvable problems) by the instructor.
- c. The examination *(of the papers) by the instructor.
- d. The destruction *(of the city) by the enemy.

3.2.2.2.4. Predication

Unlike simple event nominals, such as in (11a), complex event nominals do not occur predicatively, as is clear from (11b).

⁷ Or to put it other way around, arguments must be expressed, if predicates are complex event nominals, in the same sense as arguments must be obligatory if predicates are verbs.

- (11)
- a. There was an assignment.
 - b. *There was an assignment of the problem.

Because predicative NP's require (weak) indefinite determiners (cf. Milsark, 1974) and complex event nominals can never be indefinite (Grimshaw, 1990: 55), complex event nominals cannot occur predicatively.⁸

3.2.2.2.5. Plurality

Unlike simple event nominals (12a), complex event nominals (12b) cannot be pluralized.

- (12) (Grimshaw, 1990: 54 (18))
- a. The assignments were long.
 - b. *The assignments of the problems took a long time.
 - c. Assignment of difficult problems always causes problems.

Furthermore, complex event nominals need not take a determiner at all, as in (12c): this is not the case with simple event nominals. What is indicated by these facts is that complex event nominals act like non-count nouns, while simple event nominals may act like count nouns (Grimshaw, 1990: 55).

3.2.2.2.6. Indefinite Subjects

Related to the above two criteria is the fact that complex event NPs cannot have an indefinite subject, as in (13).⁹

- (13) (Grimshaw, 1990: 55 (19))
- a. ??A teacher's assignment of the problem.
 - b. The assignment of the problem by a teacher.

⁸ Since the following examples cited by Grimshaw do not correspond to her claim that predicative NP's require indefinite determiners, I will use the examples with '*there*'.
Grimshaw (1990: 55 (21))

- (i) That was the/an assignment.
- (ii) *That was the/an assignment of the problem.

I am not entirely sure if it is simply a typographical error between *there* and *that*, or if something else is going on.

⁹ This phenomenon was originally pointed out by Bach (Grimshaw, 1990: 55).

Given that the NP headed by a complex event nominal cannot be indefinite, the presence of an indefinite possessive is not permitted, since the presence of the possessive makes the entire NP indefinite (Grimshaw, 1990: 55).

3.2.2.2.7. Compatibility with *frequent* or *constant* modifiers

Simple event nominals are not compatible with such aspectual modifiers as *frequent* or *constant* as in (14b) and (15b), the reason being that these nominals are not associated with event structure. In contrast, complex event nominals have no problem in assuming these aspectual modifiers, as in (14c) and (15c).

(14) Grimshaw (1990: 50 (7))

- a. The expression is desirable.
- b. *The frequent expression is desirable.
- c. The frequent expression of one's feelings is desirable

(15) Grimshaw (1990: 50 (8))

- a. The assignment is to be avoided.
- b. *The constant assignment is to be avoided.
- c. The constant assignment of unsolvable problems is to be avoided.

3.2.2.2.8. Aspectual Modifiers

Related to the above criterion is that complex event nominals take the same aspectual modifiers as their verbal counterparts. For instance, the derived ACCOMPLISHMENT nominal *destruction* is compatible with a temporal *in*-phrase but not with a durational *for*-phrase, as is clear from (16).

(16) (Grimshaw, 1990: 58 (28))

- a. The total destruction of the city in only two days appalled everyone.
- b. *The total destruction of the city for two days appalled everyone.
- c. The bombing destroyed the city in only two days/*for two days.

3.2.2.2.9. Control into an Infinitival

Finally, control into a rationale clause is possible with complex event nominals, as in (17). Such control is, however, not allowed for result nominals or simple event nominals, as in (18).

(17) Grimshaw (1990: 57-58 (26))

- a. The book was translated (in order) to make it available to a wider readership.
- b. The translation of the book (in order) to make it available to a wider readership.
- c. (The) examination of the patient in order to determine whether ...

(18) Grimshaw (1990: 58 (27))

- a. *The translations of the book (in order) to make it available to a wider readership.
- b. *The exam in order to determine whether ...
- c. *The murder in order to preserve peace.
- d. *The solution (to the problem) in order to simplify the assignment.

According to Grimshaw (1990: 68), it is because event structure itself functions as a controller of PRO that only the nominal associated with event structure, i.e., the complex event nominal, can control into an infinitival.

3.2.3. Summary

Grimshaw's (1990) nine criteria can be tied to the three basic properties of nominals: argument structure, the determiner system, and event structure. That is, argument structure is responsible for the interpretation of possessives, the obligatoriness of arguments, and the *by*-phrase. The determiner system is responsible for predication, plurality, and indefinite subjects. Event structure is responsible for compatibility with *frequent* or *constant* modifiers, aspectual modifiers, and control.

Since simple event nominals (and also result nominals), which act like count nouns in plurality and choice of determiners, are not associated with argument structure, their satellites are never obligatory. Further, since they are not associated with event structure, these nominals are incapable of assuming aspectual modifiers or participating in nominal (event) control. In contrast, complex event nominals, which act like non-count nouns in plurality and the choice of determiners, are associated with argument structure; hence, their possessive is always interpreted as a subject; the presence of the subject then forces the presence of an object. Since complex event nominals are further associated with event structure, they can assume aspectual modifiers and can participate in nominal (event) control.

3.3. Japanese Nominals

The remainder of the chapter is organized as follows. First, I will demonstrate that some Japanese verbal nouns can function as result nominals. This point is not of primary interest here since result nominals are not compatible with *suru* forms. However, by showing that there are VN's which can function as result nominals, I provide support for Grimshaw's (1990) three way classification of nominals. Based on the temporal adjunct clause construction (Iida, 1987 and Tsujimura, 1992) and nominal control, I will then demonstrate that any VN can function as a complex event nominal and that there is no exception to this generalization. Using such tests as numeral classifiers and modification, I will then show that any VN can function not only as a complex event nominal but also as a simple event nominal. In sum, VN's can function either as complex event nominals or simple event nominals, and some of them may even function as result nominals.

3.3.1. VN's as Result Nominals

It is my contention that any VN can be a simple event nominal or a complex event nominal. There is no exception to this generalization. However, there are some VN's which can even act as result nominals. So, there are two types of VN's: those which have all three nominal readings and those which have only two readings. (19) provides examples of VN's which can assume result readings, while examples of VN's which lack such result nominal readings are given in (20).

(19) VN's associated with result nominal readings:

- | | |
|------------|-----------------------|
| a. denwa | 'telephone' |
| b. honyaku | 'translation' |
| c. chosaku | 'book (lit. writing)' |
| d. hookoku | 'report' |
| e. dengon | 'message' |

(20) VN's which lack result nominal readings:

- | | |
|-------------|-----------------|
| a. bakuha | 'bombing' |
| b. aiseki | 'table-sharing' |
| c. ryokoo | 'travel' |
| d. shucchoo | 'business-trip' |
| e. menkai | 'meeting' |

3.3.1.1. Predication Test

Since 'predication' is one way to isolate result nominals (Grimshaw, 1990: 92), I will devise a simple predication test to illustrate that some VN's can assume result nominal readings: the *ga-aru* 'there-be' phrase. I will first apply the test to *bona fide* result nominals, such as *raketto* 'racket' in (21), and to the so-called action nominals, such as *tenisu* 'tennis' in (22), which are simple event nominals in the sense that they are non-thematic (Martin, 1975; also, Uchida and Nakayama, 1993).

(21) Result Nominals:

- | | |
|------------------------|--------------|
| a. <i>raketto</i> | 'racket' |
| b. <i>booru</i> | 'ball' |
| c. <i>supootsu kaa</i> | 'sports-car' |

(22) Simple Event Nominals:

- | | |
|--------------------------|---------------|
| a. <i>tenisu</i> | 'tennis' |
| b. <i>yakyuu</i> | 'baseball' |
| c. <i>ooto-reishingu</i> | 'auto-racing' |

These two different types of nominals behave differently with respect to the *ga-aru* test. Result nominals are compatible with predicational phrases, as seen in (23).¹⁰

(23) Result Nominals:

- | | |
|--|--------------------------------------|
| a. <i>Taroo no raketto ga soko ni aru.</i>
GEN racket NOM there at exist | 'There is Taroo's racket there.' |
| b. <i>Taroo no booru ga soko ni aru.</i>
GEN ball NOM there at exist | 'There is Taroo's ball there.' |
| c. <i>Taroo no supootsu-kaa ga soko ni aru.</i>
GEN sports-car NOM there at exist | 'There is Taroo's sports-car there.' |

¹⁰ A possessive is added to each example to maintain parallel sequencing among the noun phrases cited in this section, which are headed either by result nominals, simple event nominals, or complex event nominals.

In contrast, the action nominals (i.e., simple event nominals) are not compatible with the *ga-aru* phrase, as in (24).

(24) Simple Event Nominals:

- a. *Taroo no tennisu ga soko ni aru.
 GEN tennis NOM there at exist
 '(lit.) There is Taroo's tennis there.'
- b. *Taroo no yakyuu ga soko ni aru.
 GEN baseball NOM there at exist
 '(lit.) There is Taroo's base-ball (game) there.'
- c. *Taroo no ooto-reishingu ga soko ni aru.
 GEN auto-racing NOM there at exist
 '(lit.) There is Taroo's auto-racing there.'

The above contrast clearly indicates that the tests based on the *ga-aru* phrase can differentiate result nominals from simple event nominals.

We can now apply this test to the VN's in (19), which I claim can assume result nominal readings, and to the VN's in (20), which I claim are unable to assume result nominal readings. As shown in (25), the VN's in (19) are all compatible with a *ga-aru* phrase, indicating that these VN's function as result nominals in these instances.

(25) Result Nominals:

- a. LGB no *honyaku* ga soko ni aru.
 GEN translation NOM there at exist
 'There is a translation of LGB there.'
- b. Jimusho no *denwa* ga soko ni aru.
 office GEN telephone NOM there at exist
 'There is an office-phone there.'
- c. Shachoo kara no *dengon* ga soko ni aru.
 president from GEN message NOM there at exist
 'There is a message from the president there.'

In contrast, the VN's in (20) are incompatible with a *ga-aru* phrase, as in (26), indicating that these VN's are incapable of assuming result nominal readings.

(26) Simple Event Nominals:

- a. *Taroo no *bakuha* ga soko ni aru.
 GEN bombing NOM there at exist
 '(lit.) There is Taroo's bombing there.'
- b.* Taroo no *aiseki* ga soko ni aru.
 GEN table-sharing NOM there at exist
 '(lit.) There is Taroo's table-sharing there.'
- c. *Taroo no *shucchoo* ga soko ni aru.
 GEN business-trip NOM there at exist
 '(lit.) There is Taroo's business-trip there.'

3.3.1.2. Classifier Test

Another way to isolate result nominal readings is through the use of classifiers. The marking of number is not obligatory in Japanese, and when it is necessary, often the number specification is done by the use of numeral classifiers. According to Grimshaw (1990), both result nominals and simple event nominals can be pluralized. Hence, 'number' itself cannot differentiate result nominals from simple event nominals. These numeral classifiers can, however, denote not only singularity vs. plurality but also the types of objects involved. Hence, the use of such classifiers as *dai* 'CLAS(machine)' and *satsu* 'CLAS(volume)' can specify that the VN's in (19) are used to denote concrete objects rather than events.

(27)

- a. jimusho no denwa ichi-dai
 office GEN telephone one-CLAS(machine)
 'one office-telephone'
- b. LGB no honjaku is-satsu
 GEN translation one-CLAS(volume)
 'one volume of the translation of LGB'
- c. Taroo no chosaku is-satsu
 GEN writing (book) one-CLAS(volume)
 'one volume of the book (written) by Taroo'

- d. honsha kara no hookoku it-tsuu
 main-office from GEN report one-CLAS(copy)
 'a copy of the report from the main office'
- e. Shachoo kara no dengon it-tsuu
 president from GEN message one-CLAS(copy)
 'a copy of the message from the president'

In contrast, the VN's in (20) can take such classifiers as *-kai*, which denotes only the number of occasion, but they cannot take such classifiers as *-ko* and *-tsu*, which denote concrete objects. Hence, the choice of classifiers indicates that the VN's are associated with event nominal readings but not with result nominal readings.

(28)

- a. hashi no bakuha ik-kai
 bridge GEN bombing one-CLAS(time)
- a'. *hashi no bakuha ik-ko
 bridge GEN bombing one-CLAS(object)
 '(lit.) a bombing of the bridge.
- b. Hanako to no aiseki ik-kai
 with GEN table-sharing one-CLAS(time)
- b'. *Hanako to no aiseki ik-ko
 with GEN table-sharing one-CLAS(object)
 '(lit.) a table-sharing with Hanako'
- c. Tokyo e no ryokoo ik-kai
 to GEN travel one-CLAS(time)
- c'. *Tokyo e no ryokoo ik-ko
 to GEN travel one-CLAS(object)
 '(lit.) a trip to Tokyo'
- e. Goroo to no menkai ik-kai
 with GEN meeting one-CLAS(time)
- e'. *Goroo to no menkai ik-ko
 with GEN meeting one-CLAS(object)
 '(lit.) a meeting with Goroo'

In summary, the predication and classifier tests exhibit the fact that some VN's are capable of assuming result nominal readings, while others are not.

3.3.2. Two Test Constructions

This section will demonstrate that any VN can function as a complex event nominal. The most convincing evidence for this generalization comes from the temporal adjunct clause construction (Iida, 1987; Tsujimura, 1992) and nominal control (Grimshaw, 1990; Lasnik, 1988; Roeper, 1987; Williams, 1985). What I will first do in this section is review Iida (1987) and Tsujimura (1992), and also Grimshaw (1990) to show that both the temporal clause construction and nominal control can be reliable tools to isolate complex nominal readings of VN's. I will then apply these tests to those VN's in (19), which can function as result nominals, and to those in (20), which cannot function as result nominals, to demonstrate that regardless of whether VN's assume additional result nominal readings or not, they can all function as complex event nominals.

3.3.2.1. The Temporal Adjunct Clause Construction

3.3.2.1.1. Review of Iida (1987)

Iida (1987), in a paper on Japanese Case marking, demonstrates that in temporal adjunct clauses and *ni*-purpose adjunct clauses VN's can assign nominal case, as in (29a) and (30a), as well as verbal case, as in (29b) and (30b).¹¹

(29)

- a. Taroo no Ainu-go no KENKYUU-chuu
 GEN -language GEN research-while
- b. Taroo ga Ainu-go o KENKYUU-chuu
 NOM -language ACC research-while

'While Taroo was researching the Ainu language. . . .'

¹¹ There are two types of temporal affixes: one type involves Chinese borrowings, such as *-chuu* 'while', *-go* 'after', and *-izen* 'prior to' and the other types involves morphemes of Japanese origin, such as *-no sai* 'on the occasion of', *-no setsu* 'at the time when'. The former tends to be concatenated with Sino-Japanese VN's, appearing in formal speech or writing; in contrast, the latter tends to be concatenated with deverbal nouns, being used in somewhat more informal situations.

(30)

a. Taroo ga Ainu-go no KENKYUU ni dekaketa.
 NOM -language GEN research PUR went-out

b. Taroo ga Ainu-go o KENKYUU ni dekaketa.
 NOM -language ACC research PUR went-out

'Taroo went to do research on the Ainu language.'

In order to determine the syntactic conditions on verbal case-marking by nominals, Iida (1987) classifies deverbal nominals into the following three groups:

(31)

i. Simple Deverbal Nominal:

tsuri 'fishing'

ii. VV (Compound) Nominal:

uke-tori 'receipt' (from uker 'receive' and tor 'take')

iii. Sino-Japanese Verbal Nouns:

KENKYUU 'research'

Iida (1987) then poses two questions. First, why do simple deverbal nominals, such as *tsuri*, not appear in temporal clauses, as seen in (32a), while they can appear in *ni*-purpose clauses, such as in (32b)?

(32)

a. *Taroo ga unagi o tsuri -chuu
 NOM eels ACC fishing -while

'While Taroo was fishing for eels, . . .'

b. Taroo ga unagi o tsuri ni dekaketa.
 NOM eels ACC fishing PUR went-out

'Taroo went out to fish for eels.'

Second, unlike the simple deverbal nominals which have the defective distribution just discussed, why do the VN's in (29) and (30) and the VV nominals in (33) occur in both temporal and *ni*-purpose clauses?

(33)

a. Taroo ga genkin o uke-tori -chuu
 NOM cash ACC receipt -while

'While Taroo was receiving cash, . . .'

- b. Taroo ga genkin o uke-tori ni dekaketa.
 NOM cash ACC receipt PUR went-out
 'Taroo went out to receive the money.'

Iida's (1987) account is as follows. First, for the *ni*-purpose clause, she proposes that there is no categorial constraint on this construction: both nominals and verbals can occupy the head position. The only constraint the *ni*-purpose clause imposes on its clausal head is that these nominals and verbals must be associated with argument structure. Citing then the fact that both Sino-Japanese VN's and VV nominals license possessive-marked NP arguments, as in (34), Iida (1987) claims that these two types of nominals have argument structure.

- (34)
- a. Taroo no Ainu-go no KENKYUU
 GEN -language GEN research
 'Taroo's research of the Ainu language'
- b. Taroo no genkin no uketori
 GEN cash GEN receipt
 'Taroo's receipt of cash'

In contrast, judging from its inability to license *no*-marked argument NP's, as in (35), simple deverbal nouns have no argument structure.

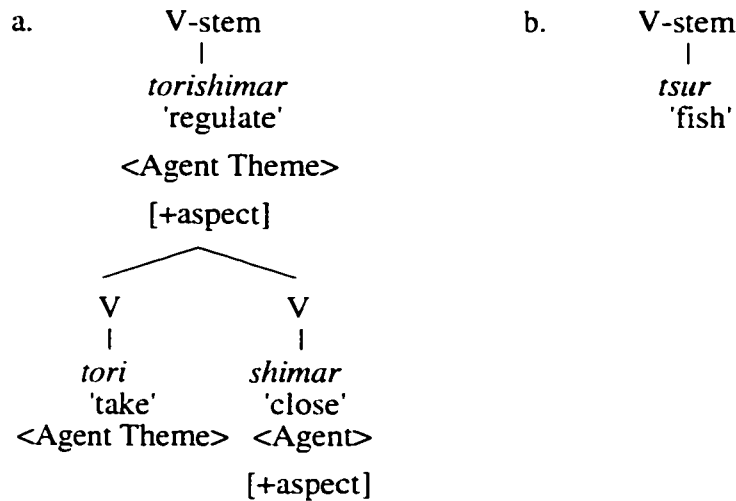
- (35)
- *Taroo no unagi no tsuri
 GEN eel GEN fishing
 'Taroo's fishing for eels'

Based on the above claims, Iida (1987) concludes that *tsuri*, which occurs in the *ni*-purpose clause, is not a *nominal* but a *verbal*: i.e., *tsuri* is not a simple deverbal nominal but is its isomorphic *renyookei*-infinitive verb. Hence, (32b) is well-formed as long as the head of the *ni*-purpose clause is interpreted as verbal.

Second, as for the temporal clause, Iida (1987) argues that the head of the temporal clause is a nominal position. In addition, the nominals which occupy the head position must be associated with argument structure. However, *tsuri* as a nominal does not have argument structure because it lacks aspectual properties, which Iida (1987) represents as the feature [+aspect]. The reason *tsuri* does not assume [+aspect] is that this feature is

assigned only to those nominals which have morphologically complex (binary) structures, as in (36a).

(36) (Iida, 1987: 132; 135)



Unlike Sino-Japanese VN's and VV nominals, both of which have internal morphological structures consisting of two lexical items, the morphological structure of *tsuri* is simple: thus, it lacks the feature [+aspect], and hence, it cannot have argument structure. Because *tsuri* as a simple deverbal nominal cannot have argument structure, it cannot occur as the head of temporal clauses, as we have seen in (32a).

In the above manner, Iida (1987) accounts for which of the three types of deverbal nominals can and cannot occur in the temporal and *ni*-purpose clauses. That is, due to their lack of thematic properties, simple deverbal nominals are incompatible with both the *ni*-purpose clause and temporal adjunct clause constructions. In contrast, both Sino-Japanese VN's and VV compounds are capable of heading these two types of constructions because of their thematic properties.

3.3.2.1.2. Problems with Iida (1987)

One difficulty I find with Iida (1987) is the following claim that while the nominal in (37) is non-thematic, the nominals in (38) are thematic, given that they can assume genitive *no*-marked phrases.

(37)

*Taroo no unagi no tsuru
 GEN eel GEN fishing

'Taroo's fishing for eels'

(38)

a. Taroo no Ainu-go no KENKYUU
 GEN -language GEN research

'Taroo's research of the Ainu language'

b. Taroo no genkin no uketori
 GEN cash GEN receipt

'Taroo's receipt of cash'

As will be shown later, the mere presence of argument-like phrases, such as in (38), does not by any means guarantee the thematic status of the nominals.

Also, with respect to (36) and the aspectual structure attributed to VV nominals, (Iida, 1987: 132-135), it is an arguable point whether or not the feature [+aspect] has anything to do with the morphological structure of nominals. Further, one reservation I have with Iida (1987) concerns the grammaticality of *ni*-purpose clauses with verbal case-marking. According to Iida (1987), the sentence in (30b) is perfectly acceptable. However, it sounds somewhat more natural for me if the VN's, such as KENKYUU 'research', are replaced by the infinitival form of *VN-suru* (e.g., *KENKYUU-shi* 'research-do'), as in (39).

(39)

a. ?Taroo ga Ainu-go o KENKYUU ni dekaketa.
 NOM -language ACC research PUR went-out

a'. Taroo ga Ainu-go o KENKYUU-shi ni dekaketa.
 NOM -language ACC research-do PUR went-out

'Taroo went out to do research on the Ainu language.'

b. ?Taroo ga hashi o HAKAI ni dekaketa.
 NOM bridge ACC destruction PUR went-out

b'. Taroo ga hashi o HAKAI-shi ni dekaketa.
 NOM bridge ACC destruction-do PUR went-out

'Taroo went out to do some destruction on the bridge.'

c. ?Taroo ga heya o SOOJI ni dekaketa.
 NOM room ACC cleaning PUR went-out

c'. Taroo ga heya o SOOJI-shi ni dekaketa.
 NOM room ACC cleaning-do PUR went-out

'Taroo went out to do some cleaning of the room.'

Consequently, due to the above uncertainty in the grammaticality of the *ni*-purpose clause, I will depend on the temporal clause construction. The temporal clause construction has also been proven to be a reliable tool by Tsujimura (1992). I will review her argument below.

3.3.2.1.3. Review of Tsujimura (1992)

Since Tsujimura (1992) has a different opinion on why the sentence in (35), which is repeated as (40), is ungrammatical, I discuss her argument in this section.

(40)

*Taroo no unagi no tsuri
 GEN eel GEN fishing

'(lit.) Taroo's fishing for eels.'

Focusing specifically on simple deverbal nouns, Tsujimura (1992) makes two noteworthy claims. First, refuting Iida's (1987) claim, Tsujimura (1992) argues that not only Sino-Japanese verbal nouns and VV nominals but also simple deverbal nouns are associated with argument structure. The second interesting claim is that simple deverbal nouns which head temporal clauses obey a phonological constraint that nominals must be at least four morae long to be a clausal head.

To argue for the initial claim that even simple deverbal nouns are associated with argument structure, Tsujimura (1992) adopts Grimshaw's (1990) three way classification of nominals and claims that simple verbal nominals, such as *tsuri* 'fishing', can assume event control, as in (41), indicating that even simple verbal nominals are associated with event structure, which, in turn, presupposes their association with argument structure.

(41) (Tsujimura, 1992: 505 (67b))

[Sono tsurizao ga mada shikkarishiteiru koto o shoomei-suru
 that fishing-rod NOM still sturdy comp ACC proof-do

tame no] John no kinoo no kawa de no tsuri.
 in order to GEN GEN yesterday GEN river at GEN fishing

'John's fishing yesterday at a river to prove that the fishing rod is still sturdy'

Another piece of evidence for the association of argument structure with simple deverbal nominals is that simple deverbal nouns exercise the same selectional restriction on aspectual modifiers as their corresponding verbs do. For example, according to Tsujimura (1992), *tsuru* 'to fish', is an ACCOMPLISHMENT verb.¹² Thus, it can have *ichizikan-de* 'in one hour' as an aspectual modifier, while it cannot have *ichizikan no aida* 'for one hour', as in (42).

(42) (Tsujimura, 1992: 507 (70a))

John wa kawa de masu o ippiki ichi-jikan-inai-de/*ichizikan no aida tsutta.
 TOP river at trout ACC one in an hour/*for an hour fished
 '(lit.) John fished one trout at a river in an hour/*for an hour.'

The same selectional restriction is observed even with the corresponding deverbal noun, *tsuri* 'fishing', thus showing that even simple deverbal nominals are associated with event structure and, further, with argument structure.

(43) (Tsujimura, 1992: 507 (70b and c))

- a. *John no ippiki no masu no ni-jikan no tsuri
 GEN one GEN trout GEN two-hours GEN fishing
 '(lit.) John's fishing of one trout for two hours'
- b. John no ippiki no masu no ni-jikan-inai-de no tsuri
 GEN one GEN trout GEN two-hour-within GEN fishing
 '(lit.) John's fishing of one trout in two hours'

The second noteworthy claim Tsujimura (1992) makes is that in order to head the temporal adjunct clause, simple deverbal nominals must obey the phonological constraint of being at least four-morae long. Thus, as seen in Table 3.2, two-mora nominals and three-mora nominals cannot be concatenated with temporal affixes, such as *-chuu* 'while', while four-mora nominals can.

¹² The telic reading of *tsur-* 'fish' may depend on the singularity of the object noun since the following atelic reading is possible.

(i) John wa kawa de masu o ichi-ji-kan tsutta.
 TOP river at trout ACC one-hour-for fished
 '(lit.) John fished trout at a river for an hour.'

In other words, the telic reading of *tsur-* does not stem from the aspectual property of the predicate itself, but the aspectual interaction of the predicate and its object noun (cf. Jackendoff, 1991, 1996; Krifka, 1989, 1990, 1992; Tenny, 1994).

Table 3.2.
Tsujimura's (1992) Phonological Constraint

Two Morae	Three Morae	Four Morae
*kachi -chuu 'winning- during'	*oyogi -chuu 'swimming-'	arasoi -chuu 'fighting-'
*tsuri -chuu 'fishing-'	*inori -chuu 'praying-'	atsukai -chuu 'handling-'
*tame -chuu 'saving-'	*shirase -chuu 'informing-'	korashime -chuu 'punishing-'

A piece of evidence to support the above claim is that when the honorific affix, *o-* is added to the three-mora nominals, their compatibility with the temporal suffix is improved while such improvement is not observed with two-mora counterparts.

Table 3.3.
Affixation Effect on Tsujimura's Phonological Constraint

Two Morae		Three Morae	
*o-kachi-chuu	'HON-winning-during'	?o-oyogi-chuu	'HON-swimming-during'
*o-tsuri-chuu	'HON-fishing-during'	o-inori-chuu	'HON-praying-during'
*o-tame-chuu	'HON-saving-during'	o-shirase-chuu	'HON-notifying-during'

Consequently, adding this phonological constraint to the observations made by Iida (1987), Tsujimura (1992) summarizes as follows the grammatical constraints which simple deverbal nouns have to observe to head the temporal adjunct clause.

(44) (Tsujimura, 1992: 30 (79))

Given a Nominal Clause of the form, NP-Case . . . X-ASP [aspectual morpheme], where X is a deverbal noun, and ASP is an aspectual morpheme.

- a. X must be a full-fledged noun.
- b. X must have argument structure.
- c. X must denote an event, and ASP must be able to add its aspectual specification to X to the extent that it is consistent with the inherent aspectual property of X itself.¹³
- d. X must be at least four-mora long.

These constraints are the reasons why example (40), repeated below as (45), is ungrammatical.

(45)

*Taroo no unagi no tsuru
 GEN eel GEN fishing

'(lit.) Taroo's fishing for eels.'

Since Tsujimura (1992) deals exclusively with Japanese deverbal *renyookei* nouns, her argument does not directly apply to the Sino-Japanese VN's which are our concern. Obviously, her phonological constraint is not applicable to VN's; we would not want to say that three mora VN's such as RYOKOO 'travel', HAKAI 'destruction', and DENWA 'phone' in (46) are void of this thematic property.

(46)

a. Taroo ga Tokyo ni RYOKOO-chuu (Agent. Goal)
 NOM to travel-while

'While Taroo was traveling to Tokyo. . . .'

b. Teki ga machi o HAKAI-chuu (Agent. Theme)
 enemy NOM town ACC destruction-while

'While the enemy was destroying the town. . . .'

¹³ The constraint (c) simply means that the aspectual specification of deverbal nouns and that of temporal affixes cannot be in conflict. Thus, for example, the following sentence (Tsujimura, 1992: 500 (53)) is ruled out because *ikken* 'glance', an ACHIEVEMENT nominal, is incompatible with *chuu* which specifies temporal duration.

(i) *Shorui o ikken chuu ni Tom wa koohii o koboshite shimat -ta.
 paper ACC glance while at TOP coffee ACC spill end-up-PAST
 'While glancing at the paper, Tom ended up spilling coffee.'

c. Taroo ga Hanako ni DENWA-chuu (Agent, Cocomitant)
 NOM to phone-while

'While Taroo was phoning Hanako, . . .'

However, her conclusion, which is basically the same as Iida's (1987), remains as follows: the temporal adjunct clause must have as its head a nominal which is endowed with thematic property. Hence, the temporal adjunct clause construction should be able to assist us in isolating complex event nominal readings of VN's.

3.3.2.2. Control Construction

Another tool which assists us in isolating complex event nominal readings of VN's is nominal control. Grimshaw (1990) claims that control into infinitivals is possible with complex event nominals, as in (7), repeated here as (47), but not with simple event nominals or result nominals, as in (19), repeated here as (48).

(47) Grimshaw (1990: 57-58 (26))

- a. The book was translated (in order) to make it available to a wider readership.
- b. The translation of the book (in order) to make it available to a wider readership
- c. (The) examination of the patient in order to determine whether . . .

(48) Grimshaw (1990: 58 (27))

- a. *The translations of the book (in order) to make it available to a wider readership
- b. *The exam in order to determine whether ...
- c. *The murder in order to preserve peace
- d. *The solution (to the problem) in order to simplify the assignment

Concerning nominal control, there are two opposing views on what the controller ought to be. One view argues that the controller is a thematic argument (Roeper, 1987), and the other view argues that the controller is the 'event' which a nominal denotes (Williams, 1985; Lasnik, 1988). The former view presupposes, of course, that the nominal which licenses control into an adjunct infinitival is nothing but a complex event nominal. So does the latter view, which assumes that complex event nominals license Davidsonian *Ev*(ent) as their (non-thematic) external argument, as represented in (49) (cf. Higginbotham, 1985; Kratzer, 1989).

(49)

Complex Event Nominals: destruction ($Ev(x-\emptyset(y))$)¹⁴

Since event control can be construed as a control relationship between the external argument (Ev) of nominals and PRO in infinitivals, the complex event nominals can control into infinitivals. Regardless of which view is correct,¹⁵ the event control hypothesis also presupposes that the nominal which participates in control must be a complex event nominal, and can be neither a result nominal nor a simple event nominal.¹⁶

This fact can be clearly demonstrated, for instance in Japanese, by the ill-formed (50), where the noun phrases are headed by *bona fide* result nominals, and the ill-formed (51), where the noun phrases are headed by action nominals (Martin, 1975), which are in our terms simple event nominals (cf. Uchida and Nakayama, 1993).

(50)

- a. *[[Okane o mookeru tame] no [NP Taroo no pizza]]
 money ACC earn sake GEN GEN pizza
 '(lit.) Taroo's pizza to earn money'
- b. *[[Okane o mookeru tame] no [NP Taroo no shoosetsu]]
 money ACC earn sake GEN GEN novel
 '(lit.) Taroo's novel to earn money'
- c. *[[Okane o mookeru tame] no [NP Taroo no ie]]
 money ACC earn sake GEN GEN house
 '(lit.) Taroo's house to earn money'

¹⁴(49) indicates the presence of (i) a *non-thematic* external argument (Ev), (ii) a lexically suppressed (\emptyset) *thematic* external argument), and (iii) a *thematic* internal argument which could be absent.

¹⁵ Discussing bipredicational *VN-o suru* as a control structure in Chapter 5, I will show that verbal nouns are associated with a lexically unsuppressed thematic external argument which can be represented as PRO, hence, supporting Roeper's (1987) view on nominal control.

¹⁶ Result and simple event nominals license *R(eferent)* as their (non-thematic) external argument (cf. Di Sciullo and Williams, 1987; Williams, 1982).

(i) Result Nominals: book (R); exam (R)

(ii) Simple Event Nominals: trip (R); attempt (R)

Since *R* is the external argument of result nominals and simple event nominals, they cannot participate in event control.

(51)

- a. *[[Okane o mookeru tame] no [NP Taroo no tennis]]
 money ACC earn sake GEN GEN tennis
 '(lit.) Taroo's tennis to earn money'
- b. *[[Okane o mookeru tame] no [NP Taroo no shoogi]]
 money ACC earn sake GEN GEN chess
 '(lit.) Taroo's chess to earn money'
- c. *[[Okane o mookeru tame] no [NP Taroo no ooto-reishingu]]
 money ACC earn sake GEN GEN auto-racing
 '(lit.) Taroo's auto-racing to earn money'

In sum, nominal control is as reliable a tool as the temporal clause construction to isolate the result nominal and simple event nominal readings of VN's from their complex event readings.

3.3.3. Tests Based on the Constructions

3.3.3.1. Temporal Clause Test

In this section, I will first set the VN's in (19) and (20) in the temporal clause construction. If these VN's occur in this construction, they function as complex event nominals. This prediction is borne out, as seen in (52) and (53). Regardless of whether they can additionally assume result nominal readings or not, these VN's are all capable of heading the temporal adjunct clauses.

(52)

- a. Taroo ga Hanako ni DENWA-chuu (Agent, Goal)
 NOM to phone-while
 'While Taroo was phoning Hanako, . . .'
- b. Taroo ga LGB o HONYAKU-chuu (Agent, Theme)
 NOM ACC translation-while
 'While Taroo was translating LGB, . . .'
- c. Taroo ga shoosetsu o CHOSAKU-chuu (Agent, Theme)
 NOM novel ACC writing-while
 'While Taroo was writing a novel, . . .'

- d. Taroo ga uwayaku ni dekgoto o HOOKOKU-chuu (Agent, Goal, Theme)
 NOM boss to incident ACC report-while
 'While Taroo was reporting the incident to (his) boss'
- e. Taroo ga buka ni yooken o DENGON-chuu (Agent, Goal, Theme)
 NOM subord. to business ACC message-while
 'While Taroo was sending a message about the business to (his) subordinate. . .'
- (53)
- a. Tekigun ga kichi o BAKUHA-chuu (Agent, Theme)
 enemy NOM base ACC bombing-while
 'While the enemy was bombing the military-base. . . .'
- b. Taroo ga Hanako to AISEKI-chuu (Agent, Comitative)
 NOM with table-sharing-while
 'While Taroo was sharing a table with Hanako. . . .'
- c. Taroo ga Hanako to MENKAI-chuu (Agent, Comitative)
 NOM with meeting-while
 'While Taroo was meeting with Hanako. . . .'
- d. Taroo ga Tokyo ni RYOKOO-chuu (Agent, Goal)
 NOM to travel-while
 'While Taroo was traveling to Tokyo. . . .'
- e. Taroo ga Hokkaido ni SHUCCHOO-chuu (Agent, Goal)
 NOM to business-trip-while
 'While Taroo was making a business-trip to Hokkaido. . . .'

The compatibility of these VN's with the temporal clause construction hence demonstrates that they function as complex event nominals.

3.3.3.2. Control Test

Employing the nominal control test, let us further examine whether the VN's in (19) and (20) can function as complex event nominals. If the NP's headed by these VN's are capable of controlling into infinitivals, they are complex event nominals. This prediction holds, as seen in (54) and (55). Regardless of whether VN's assume additional result nominal readings or not, these VN's are all capable of controlling into infinitivals, demonstrating that in these instances, they function without a doubt as complex event nominals.

(54)

- a. [[Deeto o toru tame] no [NP Taroo no Hanako e no DENWA]]
 date ACC get sake GEN GEN to GEN telephone
 'Taroo's phoning Hanako to have a date'
- b. [[Okane o mookeru tame] no [NP Taroo no LGB no HONYAKU]]
 money ACC earn sake GEN GEN GEN
 'Taroo's translation of LGB to earn money'
- c. [[Na o ageru tame] no [NP Taroo no shoosetsu no CHOSAKU]]
 name ACC raise sake GEN GEN novel GEN writing
 'Taroo's writing a novel to become famous'
- d. [[Kaisha o sukuu tame] no [NP Taroo no uwayaku e no dekgoto no HOOKOKU]]
 company ACC rescue sake GEN GEN boss to GEN incident GEN report
 'Taroo's reporting the incident to the supervisor to rescue the company'
- e. [[Kaigi o hiraku tame] no [NP Taroo no buka e no yooken no DENGON]]
 meeting ACC open sake GEN GEN subord. to GEN business GEN message
 'Taroo's (sending a) message to (his) subordinate to open the meeting'

(55)

- a. [[Sento ni katsu tame] no [NP tekigun no hashi no BAKUHA]]
 battle DAT win sake GEN enemy GEN bridge GEN bombing
 'The enemy's bombing of the bridge to win the battle'
- b. [[Ki o hiku tame] no [NP Taroo no Hanako to no AISEKI]]
 mind NOM pull sake GEN GEN with GEN table-sharing
 'Taroo's table-sharing with Hanako to get (her) attention'
- c. [[Dekigoto o tsugeru tame] no [NP Taroo no Hanako to no MENKAI]]
 incident ACC inform sake GEN GEN with GEN meeting
 'Taroo's meeting with Hanako to inform (her) of the incident'
- d. [[Tomodachi ni au tame] no [NP Taroo no Tokyo e no RYOKOO]]
 friend DAT see sake GEN GEN to GEN travel
 'Taroo's traveling to Tokyo to see (his) friend'
- e. [[Shoodan o matomeru tame] no [NP Taroo no Hokkaido e no SHUCCHOO]]
 bus.-deal ACC close sake GEN GEN to GEN business
 'Taroo's making a business-trip to Hokkaido to close a business-deal'

Given that both the temporal adjunct clause construction and the nominal control construction involve only nominals associated with thematic properties, and given that both the VN's in (19) and those in (20) are compatible with these two types of constructions, we can draw the conclusion that regardless of whether VN's can or cannot assume result nominal readings, these VN's are all capable of functioning as complex event nominals.

3.3.3.3. VN's as Simple Event Nominals or Complex Event Nominals

As pointed out by Hasegawa (1991), and reviewed in chapter 2, the presence of argument-like satellites does not necessarily guarantee that a given VN is a complex event nominal. For instance, KENKYUU 'research' in *Taroo no Ainugo no KENKYUU* 'Taroo's research of the Ainu-language' can be a simple event nominal, whose satellites are LCS-arguments, or a complex event nominal, whose satellites are (syntactic) arguments. This section will demonstrate that the two possibilities indeed exist and that such ambiguity can be resolved by using a few nominal tests. In the ensuing sections, I will combine such nominal tests as modification and numeral classification with the temporal adjunct clause construction and the nominal control to disambiguate simple event readings of VN's from their complex event readings and show that every VN is endowed with these two types of nominal readings.

3.3.3.3.1. Modification Test

The first test for differentiating simple event nominals from complex event nominals is modification. As already seen, according to Grimshaw (1990) only complex event nominals are allowed to take such aspectual modifiers as *frequent* and *constant* due to their association with event structure. Further, given that *R(eferent)* is the (non-thematic) external argument of simple event nominals, we expect that their modifiers are referential and not temporal/aspectual.

This prediction is indeed borne out. As seen in (56a, 57a and 58a), action nominals which lack thematic properties (Martin, 1975; Uchida & Nakayama, 1993) are compatible with referential modifiers but not with temporal-aspectual modifiers, as in (56b, 57b and 58b).

(56)¹⁷

- a. Taroo no joozuna tenisu
 GEN skillful tennis
 'Taroo's skillful tennis'
- b. *?Taroo no chuuya no tenisu
 GEN day-night GEN tennis
 '(lit.) Taroo's day-and-night tennis'

(57)

- a. Taroo no sugureta patto
 GEN excellent putting
 'Taroo's excellent putting'
- b. *?Taroo no asa-hiru-yoru no patto
 GEN morning-day-night GEN putting
 '(lit.) Taroo's putting all day long'

(58)

- a. Taroo no migotona suijoo-sukii
 GEN skillful water-skiing
 'Taroo's excellent water-skiing'
- b. *?Taroo no ichi-nen-juu no suijoo sukii
 GEN one-year-for GEN water-skiing
 '(lit.) Taroo's water-skiing for a year'

¹⁷ All the (b) examples may be acceptable if they are interpreted as being implicitly associated with an appropriate VN, as follows.

- (i) Taroo no chuuya no tenisu (no SHIAI)
 GEN day-night GEN tennis GEN match
 '(lit.) Taroo's tennis-matching day and night'
- (ii) Taroo no asa-hiru-yoru no patto (no RENSHUU)
 GEN morning-day-night GEN putting GEN practice
 '(lit.) Taroo's practice of putting all day long'
- (iii) Taroo no ichi-nen-juu no suijoo sukii (no KYOOGI)
 GEN one-year-for GEN water-skiing GEN competition
 '(lit.) Taroo's competition of water-skiing all year long'

Apparently, in these instances the temporal-aspectual modifiers are associated with the VN's rather than with the action nominals. However, when such interpretations are excluded, the (b) examples in the text ought to be regarded as ungrammatical.

Given the above observation, we can predict that when VN's assume referential modifiers, they function as simple event nominals, while when they assume temporal-aspectual modifiers, they function as complex event nominals. I will test this prediction by first presenting pairs of nominal clauses (59) which differ only in the types of modifiers the VN's takes.

(59)

- a. Taroo no Ainu-go no *sugureta* kenkyuu
 GEN -language GEN excellent research
 'Taroo's excellent research of the Ainu language'
- a'. Taroo no Ainu-go no *chuuya* no KENKYUU
 GEN -language GEN day-night GEN research
 'Taroo's research of the Ainu language day and night'
- b. Taroo no sakka to no *omoide ni nokoru* taidan
 GEN novelist with GEN memory DAT remain interview
 'Taroo's memorable interview with the novelist'
- b'. Taroo no sakka to no *san-jikan ni wataru* TAIDAN
 GEN novelist with GEN three-hour DAT spread interview
 'Taroo's interview with the novelist for three hours'

In (59a and b), the VN's take the referential modifiers *sugureta* 'excellent' and *omoide ni nokoru* 'memorable', and in (59a' and b') the same VN's take the aspectual modifier *chuuya* 'day and night' and *sanjikan ni wataru* 'extending for three hours'. My claim is that the VN's in (59a and b) are simple event nominals because their modifiers are referential, while the VN's in (59a' and b') are complex event nominals because their modifiers are aspectual. I will substantiate this claim by setting the above difference in modification into the two test constructions: the temporal adjunct clause construction and control construction.

3.3.3.3.2. Modification Test Set into Temporal Clauses

As was discussed in my review of Iida (1987) and, especially, Tsujimura (1992), the temporal adjunct clause construction can be headed by complex event nominals but not by simple event nominals. Concerning modification, a prediction which we can make is that while VN's with referential modifiers cannot head temporal adjunct clauses, those with

aspectual modifiers can. The reasons are as follows. Referential modification involves neither θ -marking nor licensing by event structure. Hence, VN's which assume referential modifiers cannot be thematic. Being non-thematic (i.e., simple event nominals), the VN's with referential modifiers cannot head temporal adjunct clauses. In contrast, aspectual modification is involved with event structure which, in turn, is associated with argument structure. Hence, if VN's can assume aspectual modifiers, they have to be thematic. Being thematic (i.e., complex event nominals), the VN's with aspectual modifiers should be able to head the temporal adjunct clauses.

(60) and (61) clearly contrast the difference in compatibility between the VN's with a referential modifier and the VN's with an aspectual modifier in the temporal adjunct clause construction.

(60)

- a. *Taroo no Ainu-go no *sugureta* kenkyuu-chuu
 GEN -language GEN excellent research-while
 '(lit.) While Taroo's excellent research of the Ainu language. . . .'
- a'. *Taroo ga Ainu-go o *sugureta* kenkyuu-chuu
 NOM -language ACC excellent research-while
 '(lit.) While Taroo was excellent-studying the Ainu-language. . . .'
- b. *Taroo no sakka to no *omoide ni nokoru* taidan-chuu
 GEN novelist with GEN memory DAT remain interview-while
 'While Taroo's memorable interview with the novelist. . . .'
- b'. *Taroo ga sakka to *omoide ni nokoru* taidan-chuu
 NOM novelist with memory DAT remain interview-while
 '(lit.) While Taroo was memorable-interviewing the novelist. . . .'

(61)

- a. Taroo no Ainu-go no *chuuya* no KENKYUU-chuu
 GEN -language GEN day-night GEN research-while
 '(lit.) While Taroo's day and night research of the Ainu language. . . .'
- a'. Taroo ga Ainu-go o *chuuya* KENKYUU-chuu
 NOM -language ACC day-night research-while
 'While Taroo was studying the Ainu-language day and night. . . .'

- b. Taroo no sakka to no *san-jikan ni wataru* TAIDAN-chuu
 GEN novelist with GEN three-hour DAT spread interview-while
 '(lit.) While Taroo's interview with the novelist for three hours. . . .'
- b'. Taroo ga sakka to *san-jikan ni wataru* TAIDAN-chuu
 NOM novelist with three-hour DAT spread interview-while
 'While Taroo was interviewing the novelist for three hours. . . .'

Regardless of the difference in verbal vs. nominal case-marking, the VN's modified by the referential modifiers in (60) cannot head the temporal clause, while the VN's modified by the aspectual modifier *chuuya* 'day and night' in (61) can.

Consequently, when set in the temporal clause construction, the contrast in grammaticality stemming from the difference in modification can disambiguate complex nominal readings from simple event nominal readings: VN's with referential modifiers are simple event nominals while VN's with aspectual modifiers are complex event nominals.

3.3.3.3.3. Modification Set into Control Structure

To further prove my point, I will also set the modification test into the context of nominal control, which is possible, as we saw earlier, with complex event nominals but not with simple event nominals. A prediction is then made that the VN's with referential modifiers cannot control into infinitivals, while those with aspectual modifiers can. As shown in the examples below, NP's headed by VN's with referential modifiers cannot control into the infinitival, as in (62), while NP's headed by VN's with aspectual modifiers can, as in (63).

(62)

- a. *[[Hakushigoo o toru tame] no [NP Taroo no Ainu-go no
 Ph.D. ACC earn sake GEN GEN -language GEN
sugureta kenkyuu]
 excellent research
 'Taroo's excellent research of the Ainu language to obtain a Ph.D.'
- b. *[[Okane o mookeru tame] no [NP Taroo no LGB no
 money ACC earn sake GEN GEN GEN
migotona honyaku]
 excellent translation
 'Taroo's excellent translation of LGB to earn money'

- c. *[[Okane o mookeru tame] no [NP Taroo no sakka to no
 money ACC earn sake GEN GEN novelist with GEN
 omoide ni nokoru taidan]]
 memory DAT remain interview

'Taroo's memorable interview with the novelist to earn money'

(63)

- a. [[Hakushigoo o toru tame] no [NP Taroo no Ainu-go no
 Ph.D. ACC earn sake GEN GEN -language GEN
 chuuya no KENKYUU]]
 day and night GEN research

'Taroo's day and night research of the Ainu language to obtain a Ph.D.'

- b. [[Okane o mookeru tame] no [NP Taroo no LGB no
 money ACC earn sake GEN GEN GEN
 asa-hiru-yoru no HONYAKU]]
 morning-day-night GEN translation

'Taroo's day and night translation of LGB to earn money.'

- c. [[Okane o mookeru tame] no [NP Taroo no sakka to no
 money ACC earn sake GEN GEN novelist with GEN
 san-jikan ni wataru TAIDAN
 three-hour DAT spread interview

'Taroo's interview with the novelist for three hours to earn money'

Consequently, regardless of which hypothesis concerning control we adopt, we come up with the same conclusion that if VN's assume referential modifiers, they cannot participate in nominal control as they are (non-thematic) simple event nominals. If, however, VN's assume aspectual modifiers, they can participate in nominal control as they are (thematic) complex event nominals.¹⁸

¹⁸ This conclusion is also partially supported by the fact that complex event nominals obey the same aspectual constraints as their corresponding verbs. For instance, KENKYUU 'research', whose aspectual type is ACTIVITY, is compatible with the durational modifier, *ichi-nen-kan* 'for one year', but not with the telic temporal modifier, *ichi-nen-(kan)-de* 'in one year', as seen in (i). Or, HAKAI 'destruction', which is an ACHIEVEMENT, can take a telic modifier, *go-fun-(kan)-de* 'in five minutes' but not an atelic durational modifier, *go-fun-kan* 'for five minutes', as seen in (ii).

3.3.3.3.4. Demonstrative pronouns

Another test for differentiating simple event nominal readings of VN's from their complex event nominal readings is modification by demonstrative pronouns. Grimshaw (1990: 92) claims that complex event nominals have *Ev*(ent) as their (non-thematic) external argument and simple event nominals have *R*(eferent) as their non-thematic external argument. The function of the *R* is to establish a modification relation between a modifier and its head. Through the identification of the *R* with the external argument of the modifier (Di Sciullo and Williams, 1987; Williams 1982), simple event nominals are, for instance, able to assume demonstrative modifiers (e.g., *kore* 'this', *sore* 'that-near', and *are* 'that-far').¹⁹

The above prediction is indeed borne out. As is clear from (64a, b and c), bare VN's, such as HAKAI 'destruction', KENKYUU 'research', and HONYAKU 'translation', can head a temporal clause construction. However, once these VN's are modified by demonstratives, they all fail to head the temporal clause construction, as in (64a', b' and c'), indicating that the VN's with the demonstratives cease to function as complex event nominals, functioning only as simple event nominals.

(64)

- a. Tekigun no hashi no HAKAI-chuu
 enemy GEN bridge GEN destruction-while
 'While the enemy was destroying the bridge. . . .'
- a'. *Tekigun no hashi no kono HAKAI-chuu
 enemy GEN bridge GEN this destruction-while
 '(lit.) During the enemy's this destruction of the bridge. . . .'

-
- (i) Taroo no ichi-nen-kan/*ichi-nen-(kan)-de no Ainu-go no KENKYUU
 GEN one-year-for/one-year-in GEN -language GEN research
 '(lit.) Taroo's research of Ainu-language for a year'
- (ii) Tekigun no go-fun (-kan) -de / *go -fun -kan no hashi no HAKAI
 enemy GEN five-minute(-for)-in/five-minute-for GEN bridge GEN destruction
 'the enemy's destruction of the bridge in five minutes'

¹⁹ Or to put the above argument in Borer's (1994) terms (cf. also Noguchi, 1995), simple event nominals are categorically DP's which can establish their referentiality through D's. In contrast, complex event nominals are categorically NP's; due to their lack of D's, they cannot accommodate demonstratives, thus, failing to establish referentiality. The issue is discussed in Chapter 6 (Section 6.3.4.1.2).

- b. Taroo no Ainugo no KENKYUU-chuu
 GEN Ainu-language GEN research-while
 'While Taroo was studying the Ainu-language. . . . '
- b'. *Taroo no Ainugo no sono KENKYUU-chuu
 GEN Ainu-language GEN that research-while
 '(lit.) During Taroo's that research of the Ainu language. . . . '
- c. Taroo no LGB no HONYAKU-chuu
 GEN GEN translation-while
 'While Taroo was translating LGB. . . . '
- c'. *Taroo no LGB no ano HONYAKU-chuu
 GEN GEN that translation-while
 '(lit.) During Taroo's that translation of LGB. . . . '

The grammaticality of (65) reinforces the above claim by showing that the VN's themselves can be modified by demonstratives, as long as they assume simple event nominal readings.

(65)

- a. Tekigun no hashi no kono hakai
 enemy GEN bridge GEN this destruction
 '(lit.) the enemy's this destruction of the bridge'
- b. Taroo no Ainugo no sono kenkyuu
 GEN Ainu-language GEN that research
 '(lit.) Taroo's that research of the Ainu language'
- c. Taroo no LGB no ano honyaku
 GEN GEN that translation
 '(lit.)Taroo's that translation of LGB'

The claim that the VN's with demonstratives are simple event nominals can be reinforced by nominal control. That is, while the VN's without demonstratives can control into infinitivals, as in (66a, b and c), those with demonstratives cannot do so, as seen in (66a'/b'/c').

(66)

- a. [[Sento ni katsu tame] no [NP tekigun no hashi no HAKAI]]
 battle DAT win sake GEN enemy GEN bridge GEN destruction
 '(lit.) The enemy's destruction of the bridge to win the battle'
- a'. *[[Sento ni katsu tame] no [NP tekigun no hashi no sono HAKAI]]
 battle DAT win sake GEN enemy GEN bridge GEN that destruction
 '(lit.) The enemy's that destruction of the bridge to win the battle'
- b. [[Gakui o toru tame] no [NP Taroo no Ainu-go no KENKYUU]]
 degree ACC obtain sake GEN GEN -language GEN research
 '(lit.) Taroo's study of the Ainu language to obtain a degree'
- b'. *[[Gakui o toru tame] no [NP Taroo no Ainu-go no sono KENKYUU]]
 degree ACC obtain sake GEN GEN -language GEN that research
 '(lit.) Taroo's that study of the Ainu language to obtain a degree'
- c. [[Okane o mookeru tame] no [NP Taroo no LGB no HONYAKU]]
 money ACC earn sake GEN GEN GEN translation
 '(lit.) Taroo's translation of LGB to earn money'
- c'. *[[Okane o mookeru tame] no [NP Taroo no LGB no sono HONYAKU]]
 money ACC earn sake GEN GEN GEN that translation
 '(lit.) Taroo's that translation of LGB to earn money'

What these examples show that the VN's with demonstratives are referential. The presence and absence of this referentiality is manifested as the difference in grammaticality with respect to the temporal clause construction and nominal control. Hence, VN's with demonstratives are referential, non-thematic, non-predicational simple event nominals, while those without demonstrative pronouns can be non-referential, thematic, predicational complex event nominals.

3.3.3.3.5. Plurality

Another test for nominal ambiguity is plurality. According to Grimshaw (1990), complex event nominals cannot be pluralized, as in (12), repeated below as (67).

(67) Grimshaw (1990: 54 (18))

- a. The assignments were long.
- b. *The assignments of the problems took a long time.
- c. Assignment of difficult problems always causes problems.

In Japanese, marking of number is not obligatory and when the marking is required, it often takes the form of a numeral classifier (Downing, 1996). Hence, Grimshaw's (1990) plurality test is tantamount to a numeral classifier test in Japanese. If Grimshaw (1990) is right, then, while (68a) is ambiguous between a simple event nominal reading and a complex event nominal reading, there should be no such ambiguity with the VN HONYAKU 'translation' in (68b).

(68)

- a. Taroo no gengogaku no HONYAKU.
GEN linguistics GEN translation
'Taroo's translation of Linguistics'
- b. Taroo no gengogaku no ni-do no HONYAKU .
NOM linguistics GEN two-CLAS(time) GEN translation
'(lit.) Taroo's two time translation of linguistics'

Since this VN is modified by the numeral classifier *ni-do* 'two-times', it can only be a simple event nominal. This claim can be substantiated by using the temporal clause construction and nominal control. As in (69a and b), the VN's without numeral classifiers can head the temporal clause; however, the same VN's cannot do so, once they are modified by numeral classifiers, as seen in (69a' and b').²⁰

²⁰ Citing the following examples, L. Saxon objects to the claim that complex event nominals cannot be pluralized.

- (i) Examination of the patient twice (Complex Event Nominal)
- (ii) *Twice examination of the patient. (As Complex Event Nominal)
- (iii) Two examinations of the patient (Only as Simple Event Nominal)

My answer is that the complex event nominal *phrase* can take such an adverbial as *twice*, since nothing prohibits it from assuming a bounded event reading, in the same sense as the bounded event reading associated with *The doctor's examination of the patient finished in five minutes*. However, this fact does not negate my argument that complex event nominals themselves cannot be pluralized by taking such numeral modifiers as *ni-kai* 'two-times'.

(69)

- a. Taroo no gengogaku no HONYAKU-go
 GEN linguistics GEN translation-after
 'After Taroo's translation of linguistics. . . .'
- a'. *Taroo no gengogaku no ni -do no HONYAKU-go
 GEN linguistics GEN two-CLA(time) GEN translation-after
 '(lit.) After Taroo's two time translations of linguistics. . . .'
- b. Taroo no Ainu-go no CHOOSA-go
 GEN -language GEN survey-after
 'After Taroo's survey of the Ainu language. . . .'
- b'. *Taroo no Ainu-go no ni-do no CHOOSA-go
 GEN -language GEN two-CLAS(time) GEN survey-after
 '(lit.) After Taroo's five time surveys of the Ainu language. . . .'

The same asymmetry in grammaticality can be obtained with nominal control. As in (70a and b), the bare VN's can control into infinitivals. However, when the same VN's are modified by numeral classifiers, they all fail to do so, as seen in (70a' and b').

(70)

- a. [[Okane o mookeru tame] no [NP Taroo no gengogaku no HONYAKU]]
 money ACC earn sake GEN GEN linguistics GEN translation
 '(lit.) Taroo's translation of linguistics to earn money'
- a'. *[[Okane o mookeru tame] no [NP Taroo no gengogaku no
 money ACC obtain sake GEN GEN linguistics GEN
 ni-do no HONYAKU]]
 two-CLAS(time) GEN translation
 '(lit.) Taroo's two time translations of linguistics to earn money'
- b. [[Gakui o toru tame] no [NP Taroo no Ainu-go no CHOOSA]]
 degree ACC obtain sake GEN GEN -language GEN survey
 '(lit.) Taroo's survey of the Ainu language to obtain a degree'

b. *[[Gakui o toru tame] no [NP Taroo no Ainu-go no
 degree ACC obtain sake GEN GEN -language GEN
 go-do no CHOOSA]]
 five-CLAS(time) GEN survey

'(lit.) Taroo's five time surveys of the Ainu language to obtain a degree'

Consequently, the numeral classifier or plurality test set in the temporal clause construction and the nominal control demonstrates that once VN's are modified by numeral classifiers, they function only as simple event nominals.

3.3.3.3.6. Summary

In this section, I have shown that any VN can function both as a non-thematic simple event nominal and as a thematic complex event nominal. Hence, the thematic status of VN's is always ambiguous. Thus, the VN in *Taroo no Ainu-go no KENKYUU* 'Taroo's study of the Ainu-language' may function either as a simple event nominal or a complex event nominal. The presence of argument-like satellite phrases does not by any means guarantee the thematic status of the VN.

To resolve the ambiguity between the two nominal readings, I have first established that the temporal adjunct clause construction (Iida, 1987; Tsujimura, 1992) and nominal control (Grimshaw, 1990; Lasnik, 1988; Roeper, 1987; Williams, 1985) are reliable tools to differentiate complex nominal readings of VN's from their simple event readings. Based on these constructions, I have demonstrated that when VN's are modified by referential modifiers, such as *excellent* and *interesting* or by demonstrative pronouns, or when they are pluralized by way of numeral quantification, these VN's function only as simple event nominals. In contrast, the accompaniment of aspectual modifiers can ensure the complex nominal readings of the VN's.

I have also demonstrated that in addition to these two different types of nominal readings, some VN's, such as DENWA 'telephone' and DENGON 'message', may even assume result nominal readings. The existence of such VN's agrees with Grimshaw's (1990) three way classification of nominals and, indeed, the existence of such VN's indicates that Grimshaw's (1990) three way classification is a valid hypothesis.

Chapter 4. Mono- and Bi-predicational *VN-o suru*

4.1. Introduction

In this chapter, I will demonstrate that, depending on whether the EVENT nominal phrases are headed by simple or complex event nominals, we obtain basically two types of *VN-o suru* constructions: monopredicational *VN-o suru* and bipredicational *VN-o suru*.¹ From the viewpoint of aspect, each type of *VN-o suru* can further be divided into telic and atelic forms. I will demonstrate how they can be distinguished from each other. Thus, what I will show in this chapter is essentially the disambiguation of *VN-o suru* forms based on their aspectual properties.

In so doing, I will show that there are two opposing directions of 'information flow' (Filip, 1993, 1996) in determining the telicity of *VN-o suru* constructions: one is from right to left, i.e., from *suru* to an accusative phrase and the other is from left to right, i.e., primarily from an accusative phrase to *suru*.² I will show how the interaction of (un)boundedness associated with *suru* and its accusative phrase primarily conditions the telicity of *VN-o suru* constructions. (1) lists an example for each type of *VN-o suru* construction.

¹ This issue will be carried throughout the next few chapters. Specifically, in Chapter 5 I will show that bipredicational *VN-o suru* is a control structure. *Suru* has its own argument structure and so has the complex event VN which heads the EVENT NP. The fact that there are two external arguments in *VN-o suru* constructions and that the external argument of the lower nominal predicate is always phonologically null, i.e., PRO, suggests that *VN-o suru* forms with complex event nominals are control structures. In Chapter 6, I will provide mono- and bi-predicational *VN-o suru* with syntactic analyses. In Chapter 7, I will contrast mono- and bi-predicational *VN-o suru* from the viewpoint of Conceptual Semantics. In so doing, I will also show how indexation between Jackendoff's (1990) action tier and thematic tier can account for the control structure of the bipredicational *VN-o suru* construction.

² In Chapter 6, based on Borer (1994), I will discuss the fact that there is a difference in category between the accusative phrases of mono- and bi-predicational *VN-o suru* constructions: while those of monopredicational *VN-o suru* are categorially DP, those of bipredicational *VN-o suru* are categorially NP. In this chapter, I simply assume that this categorial distinction is a valid hypothesis.

(1)

(i) Type A, Telic Monopredicational *VN-o suru*:

Taroo ga [Tokyo e no ryokoo] o shi-ta.
 NOM to GEN travel ACC do-PAST

'Taroo made a trip to Tokyo.'

(ii) Type B, Atelic Monopredicational *VN-o suru*:

Taroo ga [gorufu] o shi-ta.
 NOM golf ACC do-PAST

'Taroo played golf.'

(iii) Type C, Atelic Bipredicational *VN-o suru*:

Taroo_i ga [PRO_i eigo no BENKYOO] o shi-ta.
 NOM English GEN study ACC do-PAST

'Taroo studied English.'

(iv) Type D, Telic Bipredicational *VN-o suru*:

??Taroo_i ga (ichi-ji-kande) sono eigo o [PRO_i BENKYOO] o shi-ta.
 NOM (one-hour-in) that English ACC study ACC do-PAST

'Taroo studied that (subject of) English in a hour.'

This chapter is outlined as follows. In the following two sections, I will enumerate various forms of telic and atelic monopredicational *VN-o suru* forms. In Section 4.4, I will discuss the type-shift involving these two types of monopredicational *VN-o suru*. To account for the type-shift, I will employ 'specificity' in addition to '(un)boundedness', hence, slightly modifying the above initial approximation of monopredicational *VN-o suru*. In section 4.5, I will discuss how bipredicational *VN-o suru* is isolated from monopredicational *VN-o suru*. In sections 4.6 and 4.7, I will discuss the aspectual force of bipredicational *VN-o suru* constructions to demonstrate how even bipredicational *VN-o suru* formation assumes atelic and telic readings.

Given the above outline, the reader may wonder why I have to devote myself so much to monopredicational *VN-o suru* which is not directly related to the narrowly focused issue of the so-called Light Verb Construction. My answer is two-fold. First, since I adhere to the view that there is only one type of *suru*, I should be able to account for any type of *VN-o suru* construction regardless of its predicationality. Second, I have found that previous studies do not provide a clear picture of the so-called LVC since they do not address the difference between mono- and bi-predicational *VN-o suru* construction.

Hence, to provide a clear picture of *VN-o suru* formation in general and that of the so-called LVC, an elaboration of monopredicational *VN-o suru* formation is essential.

4.2. Type A Telic Monopredicational *VN-o Suru*

4.2.1. Introduction

As is well known, nouns which are regularly classified as mass nouns can assume a count sense, as exemplified in (2).

(2) (Filip, 1993: 70 (58))

- a. There are several German beers available. [kinds of beer]
- b. After two beers he's incoherent. [portion]

Likewise, unbounded events can be 'packaged' into individuated portions (cf. Mourelatos, 1978: 430; Bach, 1986: 11), since event semantics invoke the notion of an 'individuated event' (Bach, 1986), marking it off as one instance of a count entity from another (Filip, 1993: 251). The same kind of individuation or packaging is observed with the (type A) telic monopredicational *VN-o suru* forms. What I will do in this section is elicit various forms of type A (telic monopredicational) *VN-o suru*. To do so, I will mainly rely on Gil (1987) and Grimshaw (1990).

In discussing an NP typology, Gil (1987) argues that there are two types of language. Type A languages, such as English, which have configurational NP's and the distinction between count and mass nouns; and Type B languages, such as Japanese, which have non-configurational NP's and no distinction between count and mass nouns. Concerning the distinction between count and mass nouns, a few of the peculiarities of Japanese NP's are enumerated as follows.

Japanese NP's have no overt morphosyntactic marking of (in)definiteness, hence *hon* 'book' in (3b) can be either definite or indefinite.

(3) (Gil, 1987: 256 (1))

- a. Sam read a/the book.
- b. Susumu ga hon o yon-da.
 NOM book ACC read-PERF
 'Susumu read a/the book(s).'

Further, Japanese has no active use of nominal plural markings (cf. Martin, 1975) and Japanese NP's are not marked for number, suggesting that *Japanese treats all bare nouns as*

mass nouns. Since Japanese treats bare nouns as mass nouns, if the establishment of proper units for enumeration is required, it has to depend on a numeral classifier, as in (4).³

(4) (Gil, 1987: 258 (3))

a. Sam read three books.

b. Susumu ga san-satsu no hon o yon-da
 NOM three-CLS(volume) COP book ACC read-PERF

'Susumu read three volumes of books.'

What is evident from the above is that because Japanese does not distinguish mass nouns from count nouns, it lacks definite/indefinite articles and the obligatory distinction between singular and plural nouns. If unambiguous count noun readings are required, nouns have to be referentially modified. In this sense, Japanese nominal modifiers can function to transform mass or undetermined bare nouns into count nouns.

4.2.2. Types of Modifiers

There are several types of nominal modifiers which function to 'transform' the bare noun reading of an accusative phrase into a count noun reading: numeral classifiers, numeral affixes, demonstratives, relative clauses, quantifiers and LCS-arguments.⁴ In type A telic monopredicational *VN-o suru*, typically, the presence of these referential modifier(s) on an accusative DP conditions the event denoted by the DP to be understood as individuated and hence to be bounded. Ignoring Case assignment involving the accusative DP for now (the issue will be discussed in Chapter 6), the bounded reading of the accusative phrase primarily conditions the whole *VN-o suru* construction to assume a telic reading just as *the apple* does in *John ate the apple*, where the object functions as a 'Measured Event' (Tenny, 1987, 1992, 1994).

³ This claim is also supported by Downing (1996) and Muromatsu (1995). For instance, Muromatsu (1995) argues that a Japanese classifier functions to individuate the concept which is expressed by a bare noun. For instance, with the use of the classifier phrase, *go-too* 'five head' below, the bare noun *ushi* 'ox/oxen/cattle' is individuated to denote 'five oxen'.

(i) (from Muromatsu, 1995: 38 (1))
 go -too no ushi
 five-CLS(head) GEN cattle
 'five head of cattle (= five oxen)'

⁴ Filip (1993: 59) lists the following as examples of count noun modifiers: (i) indefinites (*alan*); (ii) numerals; (iii) quantifiers (*each/every...*); and (iv) demonstratives.

In the following, I will enumerate the *VN-o suru* with these modifiers. Each of these *VN-o suru* forms is accompanied by an *in*-phrase to show that these forms assume a telic reading. This telic reading in turn indicates that their accusative DP's function as 'Measured Events',⁵ since the only way for these *VN-o suru* forms to assume a telic reading is to override the aspectual attribute (i.e., PROCESS) of *suru* by the eventually bounded accusative DP's. In this sense, in the case of type A, the telicity of the whole *VN-o suru* formation is determined by the figurative 'information flow' (Fillip, 1993, 1996) from the accusative phrase to the PROCESS verb *suru*.

In conjunction with the above enumeration, I will also show why the presence of referential modifiers in the domain of accusative DP's assures that the DP's are headed by simple event nominals and, hence, the corresponding *VN-o suru* forms are monopredicational.

4.2.2.1. Numeral Classifiers

We learnt from Grimshaw (1990) that being treated as a count noun, a simple event nominal can be (singularized or) pluralized, as in (5a), but a complex event nominal cannot be, as in (5b).

(5) (from Grimshaw, 1990: 54 (18))

- a. The assignments were long.
- b. *The assignments of the problems took a long time.

In Chapter 3 (Section 3.3.3.3), I extended the above generalization to Japanese VN's, showing that if a VN is modified by a numeral classifier phrase, the VN fails to head a temporal adjunct clause construction (6a) or to control into an infinitival (6b); these two are independent tests of the status of VN's as complex event nominals.

⁵ 'Measured Event' refers to the aspectual entity which marks the temporal terminus of the event (Tenny, 1994: 11); and the direct internal argument is regarded as the sole argument which can 'measure out' the event (see Section 4.7.2). The notion is similar to Krifka's (1986, 1989, 1992) 'Gradual Patient' or 'Successive Patient' and Dowty's (1988, 1991) 'Incremental Theme', which encodes the notion of 'Homomorphism', which can be exemplified by the event of *mowing the lawn*: "[t]he state of parts of the lawn and their part-whole relationship is reflected in the parts of the event of mowing it and its part-whole relationships" (Dowty, 1991: 567).

(6)

- a. *Taroo no ichi-do no ryokoo-chuu
 GEN one-CLS(time) GEN travel-during
 '(lit.) during Taroo's one (lit. time of) travel. . . .'
- b. *[[Tomodachi ni au tame] no [DP Taroo no ichi-do no ryokoo]]
 friends DAT meet sake GEN GEN one-CLS(time) GEN travel
 '(lit.) Taroo's one (lit. time of) travel in order to meet (his) friends.'

Given that those nominals modified by numeral classifiers are simple event nominals, the following *VN-o suru* can only be monopredicational because, being simple event nominals, such modified nominals as *ryokoo* 'travel' and *honyaku* 'translation' lack verbal/thematic properties.⁶

(7)

- a. Taroo ga (is-shuu-kande) [DP ei ryokoo] o ichi-doi shi-ta.
 NOM one-week-in travel ACC one-CLS(time) do-PAST
 'Taroo made one (lit. time of) trip (in a week).'
- b. Taroo ga (is-shuu-kande) [DP ei honyaku] o ichi-doi shi-ta.
 NOM one-week-in translation ACC one-CLS(time) do-PAST
 'Taroo made one (lit. time of) translation (in a week).'
- c. Taroo ga (go-fun-kande) [DP ei keikoku] o ichi-doi shi-ta.
 NOM five-minute-in warning ACC one-CLS(time) do-PAST
 'Taroo made one (lit. time of) warning (in five minutes).'

Further, since these *VN-o suru* forms tolerate *in*-phrases, they must assume telic readings, indicating that their accusative DP's are bounded, overriding the PROCESS attribute of *suru*. Consequently, these examples in (7) belong to the (type A) telic monopredicational *VN-o suru*.

⁶ These examples involve Numeral Quantifier Floating, which leaves a trace inside the accusative DP. My argument here applies equally to those with no NQF.

(i) Taroo ga (is-shuu-kande) [DP ichi-do no ryokoo] o shi-ta.
 NOM one-week-for one-CLS(time) GEN travel ACC do-PAST
 'Taroo made one (lit. time of) trip (in a week).'

4.2.2.2. Numeral Affixation

The second type of modifiers is numeral affixational markers, such as *ichi-* 'one'. Given Grimshaw's (1990: 54) demonstration that complex event nominal in English cannot be modified by a singular marker, the Japanese VN's which are prefixed by the numeral, *ichi-* 'one' in (8) could only be simple event nominals.

(8)

- a. Taroo ga (is-shuu-kande) ichi-ryokoo o shi-ta.
 NOM one-week-in one-travel ACC do-PAST
 'Taroo made one trip (in a week).'
- b. Taroo ga (is-shuu-kande) ichi-honyaku o shi-ta.
 NOM one-week-in one-translation ACC do-PAST
 'Taroo made one translation (in a week).'
- c. Taroo ga (go-funkan-de) ichi-keikoku o shi-ta.
 NOM five-minute-in one-warning ACC do-PAST
 'Taroo made one warning (in five minutes).'

This prediction is borne out as shown by the ill-formedness of (9) which indicate incompatibility between the *ichi-*numeral modifier and the test frames for complex event nominals.

(9)

- a. *Taroo no ichi-ryokoo-chuu
 GEN one-travel-during
 '(lit.) during Taroo's one traveling, . . .'
- b. *[[Tomodachi ni au tame] no [DP Taroo no ichi-ryokoo]]
 friends DAT meet sake GEN GEN one-travel
 '(lit.) Taroo's one travel in order to meet (his) friends'

Further, the compatibility of affixed nouns with *in-*phrases indicates that the accusative DP's of these *VN-o suru* forms in (8) are all bounded. Hence, these sentences in (8) exemplify type A *VN-o suru* forms.

4.2.2.3. Demonstratives, Relativization, and Quantification

Exactly the same argumentation applies to 'relativization' (10), 'demonstratives' (11), and 'quantification' (12). To minimize repetition, I will mostly list the data, which

indicate two things. First, the VN's modified in these ways cannot head temporal adjunct clause constructions and cannot control into infinitivals, hence functioning only as simple event nominals. Second, due to their compatibility with *in*-phrases, the corresponding *VN-o suru* forms are nothing but type A (telic monopredicational).

(10) Relativization:

i. Temporal Adjunct Clause:

*Taroo no yakusoku-shite-oi-ta ryokoo-chuu...
 GEN promise-DO-leave-PAST travel during

'(lit.) while Taroo's traveling which he had promised. . . .'

ii. Rationale Clause:

*[[Tomodachi ni au tame] no [DP Taroo no yakusoku-shite-oi-ta ryokoo]]
 friends DAT meet sake GEN GEN promise-DO-leave-PAST travel

'(lit.) Taroo's travel which he had promised in order to meet (his) friends'

iii. *VN-o suru* with an *in*-phrase':

a. Taroo ga (is-shuu-kande) yakusoku-shite-oi-ta ryokoo o shi-ta.
 NOM one-week-in promise-DO-leave-PAST travel ACC do-PAST

'(In a week.) Taroo made a trip which he has promised.'

b. Taroo ga (ichi-ji-kande) [nokos-are-ta shigoto] o shi-ta.
 NOM one-hour-in leave-PASS-PAST work ACC do-PAST

'(In an hour.) Taroo did the work which has been left over.'

In these examples in (10), VN's modified by the relative clauses *yakusoku-shite-oi-ta* 'which (he) had promised' and *nokos-are-ta* 'which had been left over' function strictly as simple event nominals which serve to bound an event.

(11) Demonstratives:

(i) Temporal Adjunct Clause:

*Taroo no sono ryokoo-chuu
 GEN that travel-during

'(lit.) while Taroo's that traveling. . . .'

(ii) Rationale Clause:⁷

*[[Tomodachi ni au tame] no [DP Taroo no sono ryokoo]]
 friends to meet sake GEN GEN that travel

'(lit.) Taroo's that travel in order to meet (his) friends'

(iii) *VN-o suru* with an 'in-phrase':

a. Taroo ga (is-shuu-kande) sono ryokoo o shi-ta.
 NOM one-week-in that travel ACC do-PAST

'Taroo made that travel (in a week).'

b. Taroo ga (is-shuu-kande) sono honyaku o shi-ta.
 NOM one-week-in that translation ACC do-PAST

'Taroo made that translation (in a week).'

These examples in (11) show that demonstratives like *sono* 'that' are compatible only with simple event nominals, which as definite DP's can bound an event. Using these examples in the context for complex event nominals yields ungrammatical results. The same is true for nominals modified by the quantificational expressions *aru* 'certain' and *tokutei* 'specific'.

(12) Quantification:

(i) Temporal Adjunct Clause:

*Taroo ga aru(/tokutei no) ryokoo-chuu...
 NOM certain/specific GEN travel-during

'(lit.) while Taroo's certain(/specific) traveling. . . .'

(ii) Rationale Clause:

*[[Tomodachi ni au tame] no [DP Taroo no aru(/tokutei no) ryokoo]]
 friends DAT meet sake GEN GEN certain(/specific GEN) travel

'(lit.) Taroo's certain(/specific) travel in order to meet (his) friends'

⁷ Regardless of where a demonstrative is placed, the phrase modified by a demonstrative cannot control into an infinitival.

(i) *[[Tomodachi ni au tame] no [DP sono [Taroo no ryokoo]]
 friends to meet sake GEN that GEN travel
 '(lit.) That Taroo's travel in order to meet (his) friends'

(iii) *VN-o suru* with an 'in-phrase':

- a. Taroo ga (is-shuu-kande) aru(/tokutei no) ryokoo o shi-ta.
 NOM one-week-in certain(/specific GEN) travel ACC do-PAST
 'Taroo made a certain(/specific) trip (in a week).'
- b. Taroo ga (is-shuu-kande) aru(/tokutei no) honyaku o shi-ta.
 NOM one-week-in certain(/specific GEN) translation ACC do-PAST
 'Taroo made a certain(/specific) translation (in a week).'

These modified nominals, ungrammatical in contexts of complex event nominals, are grammatical as simple event nominals and can serve to make a situation involving them telic, as we see in (12iii).

4.2.2.4. LCS-Arguments

The last type of modifiers is LCS-arguments which are problematic because they are isomorphic to syntactic arguments. For instance, how do we know the PP phrases, such as *Tokyo-e(to)*, in (13) are non-arguments and the corresponding *VN-o suru* forms are monopredicational?

(13)

- a. Taroo ga [Tokyo e no ryokoo] o shi-ta.
 NOM to GEN travel ACC do-PAST
 'Taroo made a trip (which was) to Tokyo.'
- b. Taroo ga [Hanako to no aiseki] o shi-ta.
 NOM with GEN table-sharing ACC do-PAST
 'Taroo made a table-sharing (which was) with Hanako.'

Here compatibility with Numeral Quantifier Floating can provide an answer.

(14)

- a. Taroo ga (ichi-nichi-de) [Tokyo e no ryokoo] o ni-kai shi-ta.
 NOM one-day-in to GEN travel ACC two-time do-PAST
 '(lit.) Taroo made a Tokyo-trip twice (in a day).'
- b. Taroo ga (ichi-ji-kande) [Hanako to no aiseki] o ni-kai shi-ta.
 NOM one-hour-in with GEN table-sharing ACC two-time do-PAST
 'Taroo made a table-sharing (which was) with Hanako two times (in an hour).'

In these examples, the compatibility with the numeral classifier *ni-kai* 'two-time' exhibits the fact that the heads of the accusative DP's assume count noun readings. This possibility of count noun readings is caused by the fact that the accusative DP's can be temporally bounded, a fact assured by the presence of *in*-phrases. Given then Grimshaw's (1990) claim that simple event nominals assume count-noun readings and can be pluralized, we take the examples above as showing that their accusative DP's are headed by simple event nominals, whose satellites are not arguments. Hence, the *VN-o suru* forms in (13) must be classified as type A (telic monopredicational).

Consequently, we should regard such *VN-o suru* forms in (15) as telic monopredicational.

(15)

- a. Taroo ga (go-fun-kande) [*ei keikoku*] o **ichi-doi** shi-ta.
 NOM five-minute-in warning ACC one-CLS(time) do-PAST
 'Taroo made one (lit. time of) warning (in five minutes).'
- b. Taroo ga (go-fun-kande) **ichi-keikoku** o shi-ta.
 NOM five-minute-in one-warning ACC do-PAST
 'Taroo made one warning (in five minutes).'
- c. Taroo ga (go-fun-kande) **sono** keikoku o shi-ta.
 NOM five-minute-in that warning ACC do-PAST
 'Taroo made that warning (in five minutes).'
- d. Taroo ga (go-fun-kande) **dengon-s-are-ta** keikoku o shi-ta.
 NOM five-minute-in message-do-PASS-PAST warning ACC do-PAST
 'Taroo made the warning which was sent (to him) (in five minutes).'
- e. Taroo ga (go-fun-kande) [**murabito e no** keikoku] o shi-ta.
 NOM five-minute-in villagers to GEN warning ACC do-PAST
 'Taroo made a warning to the villagers (in five minutes).'

4.3. Type B Atelic Monpredicational *VN-o Suru*

The similarity between the type A (telic monopredicational) *VN-o suru* and the type B (atelic monopredicational) *VN-o suru* is that their accusative DP's are both headed by a (referential) simple event nominal. The difference is telicity. Unlike the accusative DP's of type A, those of type B are 'bare' in that the type B DP's lack any modification. This lack of modification conditions the DP's to assume non-count noun readings (cf. Gil, 1987) in

the same sense as the atelicity associated with *John drank milk*. Since there is no overriding of the aspectual attribute (i.e., PROCESS) of *suru* by its accusative DP, the aspectual attribute of *suru* is extended to the whole *VN-o suru*. Further, since the head of the accusative DP is non-predicational, type B is monopredicational.

4.3.1. With Action Nominals

The easiest way to show that monopredicational *VN-o suru* can be atelic is by using the so-called 'action nominals' which are devoid of thematic property (Martin, 1975). Specifically, I will use what I call 'game nouns', such as *gorufu* 'golf' and *tenisu* 'tennis'. In Chapter 3 (Section 3.3.3.3) we learnt that only thematic/predicational nominals are compatible with temporal adverbial clauses. Given this generalization, the fact that the 'game nouns' are incompatible with temporal adverbial affixation indicates that these nouns are (non-predicational) simple event nominals.

(16)

- a. *gorufu-zen, -chuu, -go '(lit.) golf-before, -during, -after'
- b. *yakyuu-zen, -chuu, -go '(lit.) baseball-before, -during, -after'
- c. *shoogi-zen, -chuu, -go '(lit.) chess-before, -during, -after'
- d. *tenisu-zen, -chuu, -go '(lit.) tennis-before, -during, -after'

Also these game nouns cannot control into infinitival clauses, as in (17), indicating that these nominals are non-predicational.

(17)

- a. *[[Okane o kasegu tame] no [DP Taroo no gorufu]]
 money ACC earn sake GEN GEN golf
 '(lit.) Taroo's golf in order to earn money'
- b. *[[Okane o kasegu tame] no [DP Taroo no yakyuu]]
 money ACC earn sake GEN GEN baseball
 '(lit.) Taroo's baseball in order to earn money'
- c. *[[Okane o kasegu tame] no [DP Taroo no tenisu]]
 money ACC earn sake GEN GEN tennis
 '(lit.) Taroo's tennis in order to earn money'

Given the non-predicationality of these nominals, the following *VN-o suru* must be monopredicational.

(18)

- a. Taroo ga gorufu o shi-ta.
 NOM golf ACC do-PAST
 'Taroo played golf.'
- c. Taroo ga yakyuu o shi-ta.
 NOM baseball ACC do-PAST
 'Taroo played baseball.'
- b. Taroo ga tenisu o shi-ta.
 NOM tennis ACC do-PAST
 'Taroo played tennis.'

Since there are no modifiers in the domain of the accusative DP's, these DP's assume non-count noun readings. The possibility of these readings can be ascertained by the fact that the corresponding *VN-o suru* forms are compatible with *for*-phrases, as in (19).

(19)

- a. Taroo ga ni-ji-kan gorufu o shi-ta.
 NOM two-hour-for golf ACC do-PAST
 'Taroo played golf for two hours.'
- c. Taroo ga ni-ji-kan yakyuu o shi-ta.
 NOM two-hour-for baseball ACC do-PAST
 'Taroo played baseball for two hours.'
- b. Taroo ga ni-ji-kan tenisu o shi-ta.
 NOM two-hour-for tennis ACC do-PAST
 'Taroo played tennis for two hours.'

Hence, these *VN-o suru* forms with bare accusative nominals are (type B) atelic monopredicational constructions.

Beside the game nouns, such action nominals as *kaimono* 'shopping', *araimono* 'washing', and *amimono* 'knitting' (Martin, 1975: 871) should also be treated as type B nominals, since these action nominals do not show any thematic/verbal properties, as is clear from the temporal affixation and nominal control tests.

(20)

a. *amimono-zen, -chuu, -go '(lit.) knitting-before, -during, -after'

a'. *[[Okane o kasegu tame] no [DP Hanako no amimono]]
 money ACC earn sake GEN GEN knitting

'(lit.) Hanako's knitting in order to earn money'

b. *araimono-zen, -chuu, -go '(lit.) washing-before, -during, -after'

b'. *[[Okane o kasegu tame] no [DP Hanako no arimono]]
 money ACC earn sake GEN GEN washing

'(lit.) Hanako's washing in order to earn money'

4.3.2. With Bare VN's

Beside the above action nominals, I will treat any bare VN's as type B nominals, given that the realization of the satellites, if they had any, would be obligatory should they be complex event VN's.

(21)

a. Taroo ga (is-shuu-kan) ryokoo o shi-ta.
 NOM one-week-for travel ACC do-PAST

'Taroo traveled (for a week).'

b. Taroo ga (ichi-ji-kan) benkyoo o shi-ta.
 NOM one-hour-for study ACC do-PAST

'Taroo studied (for an hour).'

c. Taroo ga (ichi-nen-kan) kenkyuu o shi-ta.
 NOM one-year-for research ACC do-PAST

'Taroo engaged in research (for an year).'

In other words, such bare VN's as in (21) are simple event nominals and lack any individuated event readings.

4.4. Type-shift between Type A and B

4.4.1. Introduction

The above enumeration of type A and B *VN-o suru* forms and the corresponding generalization are, however, imprecise. The generalization based mainly on the presence/absence of modifiers and corresponding (un)bounded readings cannot account for what I call 'type-shift' involving type A and B. While most of the type A *VN-o suru* forms

function only as type A, there is a form which can function even as type B *VN-o suru*. While the *VN-o suru* forms in (22) do not tolerate *for*-phrases, the *VN-o suru* form in (23) can.

(22)

(i) Numeral Classifier:

Taroo ga (***is-shuu-kan**) ryokoo o **ik-kai** shi-ta.
 NOM one-week-for travel ACC one-time do-PAST

'Taroo made one trip (for a week).'

(ii) Numeral Affixation:

Taroo ga (***is-shuu-kan**) **ichi**-ryokoo o shi-ta.
 NOM one-week-for one-travel ACC do-PAST

'Taroo made one trip (for a week).'

(iii) Relativization:

Taroo ga (***is-shuu-kan**) **Hanako to yakusoku-shite-oi-ta** ryokoo o shi-ta.
 NOM one-week-for with promise-DO-leave-PAST travel ACC do-PAST

'Taroo made a trip which he had promised with Hanako (for a week).'

(iv) Demonstrative:

Taroo ga (***?is-shuu-kan**) **sono** ryokoo o shi-ta.
 NOM one-week-for that travel ACC do-PAST

'Taroo made that trip to Tokyo (for a week).'

(v) Quantification:

Taroo ga (***?is-shuu-kan**) **aru** ryokoo o shi-ta
 NOM one-week-for certain travel ACC do-PAST

'Taroo made a certain trip (for a week).'

(23)

LCS-Argument:

Taroo ga (**is-shuu-kan**) **Tokyo e no** ryokoo o shi-ta.
 NOM one-week-for to GEN travel ACC do-PAST

'Taroo made a Tokyo-trip (for a week).'

The indication of this tolerance of a *for*-phrase in (23) is that the *VN-o suru* form is not associated with a measured event. Since its accusative DP is interpreted as a non-measured event, the *VN-o suru* form can accommodate a *for*-phrase, hence, functioning as type B.

The same kind of type shift can also be observed with the type B *VN-o suru*. As is clear from (24), the bare accusative DP's tolerate not only *for*-phrases but also *in*-phrases, suggesting that their accusative DP's can be interpreted either as measured events or not.

(24)

- a. Taroo ga **ichi-ji-kan/ichi-ji-kande** gorufu o shi-ta.
 NOM one-hour-for/one-hour-in golf ACC do-PAST
 'Taroo played golf for/in an hour.'
- b. Taroo ga **ichi-ji-kan/ichi-ji-kande** yakyuu o shi-ta.
 NOM one-hour-for/one-hour-in baseball ACC do-PAST
 'Taroo played baseball for/in an hour.'
- c. Taroo ga **ichi-ji-kan/ichi-ji-kande** shoogi o shi-ta.
 NOM one-hour-for/one-hour-in chess ACC do-PAST
 'Taroo played chess for/in an hour.'

4.4.2. Relevance of Specificity

What is suggested by (22) and (23) is that the notion of measured events (Tenny, 1987, 1992, 1994; see also Dowty, 1991; Krifka, 1989, 1990, 1992;) based on its '(un)boundedness' induced by the presence/absence of modifiers may be inaccurate. Possibly, some component is missing from my initial approximation of the monopredicational *VN-o suru*. I will argue that 'specificity' is this missing component.

It is generally assumed that the difference between definite and indefinites DP's can be captured with the notion of the Familiarity Condition and the Novelty Condition (Heim, 1982, 1988). While 'definites' are familiar in that their referents must have been introduced into the discourse, 'indefinites' ought to be novel in that they must introduce into the discourse referents which were not there previously. Diesing (1992), however, divides indefinites into two types: cardinal and presuppositional. She regards both 'presuppositional indefinites' and 'definites' as 'specifics' and regards the 'cardinal indefinites' as 'non-specifics'.⁸

It is clear that the Japanese does not have an overt determiner system, clearly a language-specific fact. This lack of a determiner system should not be understood as

⁸ Citing Turkish (Enç, 1991) and Dutch Case marking (De Haan, 1979; Bennis 1986; Rullmann 1989), Diesing (1992) shows how specific DP's involve object raising supporting her (Box-splitting) Mapping Hypothesis.

entailing that Japanese does not have the notion of 'specificity' --- which is semantic and hence to a large extent language-independent (Borer, 1994 . 1996; Enc, 1991; Diesing, 1992; Fodor and Sag, 1982; Heim, 1982 and among others).⁹

4.4.3. Type A and B Distinction Based on Specificity

I will argue that the notion of specificity plays a role in 'type shift' between type A and B *VN-o suru*. In the case of type A, those *VN-o suru* forms (22) with DP's high in referential specificity are stable and resist type shift, while the *VN-o suru* forms (23) with DP's low in referential specificity are unstable and susceptible to type shift. In other words, not all nominal modifiers affect referential specificity in the same way.

As for specificity, Fodor and Sag (1982) argue that it can be sensitive to 'descriptive richness' in that 'extra material' in an indefinite DP can facilitate its specific interpretation.¹⁰

In Fodor and Sag's (1982) sense, 'Relativization' as in (22iii) can be said to be 'rich in description'. Hence, being high in referential specificity, the relativized accusative

⁹ It is true that it is rather controversial whether the notion of specific is semantic (cf. Donnellan, 1966) or pragmatic (cf. Ludlow and Neale, 1991).

¹⁰ For instance, the indefinites in (ia) and (ib) are more likely to be referentially specific than the descriptively vaguer *someone* in (ic).

(i) (Fodor and Sag, 1982: 358-359 ((4/5/6))

a. *A student that Betty used to know in Arkansas* cheated on the exam.

b. *A friend of mine* cheated on the exam.

c. *Someone* cheated on the exam.

Also, 'topicalization' or 'left dislocation' conditions the specific reading, as seen in (ii).

(ii) (Fodor and Sag, 1982: 360: (13))

A Frenchman that I met in Tokyo, I went and had dinner with (him) in New York last week.

Further, indefinites with relative clause modifiers, especially non-restrictive relatives, strongly favor a specific reading.

(iii) (Fodor and Sag, 1982: 361 (22/23))

a. *A student in the syntax class who has a Ph.D. in astrophysics* cheated on the exam (restrictive).

b. *A student in the syntax class, who has a Ph.D. in astrophysics*, cheated on the exam (non-restrictive).

Further, such modifiers as *certain* and *particular* force a specific reading of an indefinite.

(iv) (Fodor and Sag, 1982: 362 (27/28))

a. I accused *a certain student* of cheating.

b. *A (one) particular claim* in this paper is false.

Lastly, Fodor and Sag (1982) claim that numerals fail to create specific readings. For instance, the referential reading of the subjects in (va) and (vb) tend to be less specific than that for the subject in (vc).

(v) (Fodor and Sag, 1982: 363 (31/32/1))

a. *One student in the syntax class* cheated on the exam.

b. *Seven students in the syntax class* cheated on the exam.

c. *A student in the syntax class* cheated on the exam.

DP prohibits the corresponding *VN-o suru* from assuming a type B atelic reading. Given the deictic nature of a demonstrative, the accusative DP modified by the 'demonstrative' (22iv) seems also to be high in specificity. Hence, the corresponding *VN-o suru* is resistant to type-shift. In English, such quantificational modifiers as *certain* favor a specific reading (Fodor and Sag, 1982). The same claim applies to Japanese quantificational modifiers, such as *aru* 'certain'. Being high in specificity, the quantified DP in (22v) prohibits the corresponding *VN-o suru* from assuming an atelic reading.

What is strange about (22) is (22i) with a Numeral Classifier and (22ii) with a Numeral Affix. According to Fodor and Sag (1982), English numerals do not induce strong specificity. Further, as is clear from (25), the fact that the numeral DP's do not induce wide scope readings, which are most often used as a criterion for specificity, tends to support this same conclusion.

(25)

- a. Daremo ga ryokoo o ichi-do shi-ta.
 everybody NOM travel ACC one-CLS(time) do-PAST
 'Everyone made one (lit. time of) trip.'
 (= 'For everyone, there is one (lit. time of) trip which he made.')
- b. Daremo ga ichi-ryokoo o shi-ta.
 everybody NOM one-travel ACC do-PAST
 'Everyone made one trip.'
 (= 'For everyone, there is one trip which he made.')

Despite the above indications, I claim that Japanese numerals do induce a strong specific reading. First, the ill-formedness of (22i) and (22ii) suggests that numerals induce strong specificity in Japanese. Second, my claim is supported by Hopper (1986: 313) who, based on his study of Malay, cites the inducing of specificity as the topmost attribute of numeral

classifiers.¹¹ Third, Downing (1996) also supports my claim. Studying extensively the Japanese classifier system, Downing (1996: 197) claims that "[i]n classifier languages, 'singulative marking' is required to explicitly denote individual referents", hence, suggesting that numeral classifiers would induce 'specificity'.

The above claim on the inducing of specificity should also be extended to numeral affixes. As pointed out by Martin (1975), Japanese, which is a numeral classifier language, has sporadic 'facultative plural marking'.¹² According to Givón (1984: 390), in such a language, numeral markers are used only when the speaker has some particular thing[s]/individual[s] in mind. In other words, the forms with numeral markers "refer to entities which are not only individuated but also specific and typically identifiable to the addressees" (Downing, 1996: 205). Hence, given that it is correct that Japanese numerals induce strong specificity, we can understand why the *VN-o suru* forms in (22i) with a numeral classifier and in (22ii) with numeral affix do not undergo type-shift.

Specificity is also relevant to type B *VN-o suru*. I have already shown that bare nominals, such as 'game nouns', are compatible with type B *VN-o suru*. However, the *VN-o suru* with such bare nouns are susceptible to type shift in that by way of associating with *in*-phrases, their accusative DP's can assume a measured event reading.

¹¹ Hopper (1986: 313-314) lists the following as attributes of classifiers: the use of classifiers increase the attributes cited in the left-hand column.

MORE	USE OF CLASSIFIERS	LESS
(1) Specific		Nonspecific
(2) Past/realis		Future/irrealis
(3) Concrete		Abstract
(4) Count		Mass
(5) Enumerated		Unenumerated
(6) Not intrinsically quantified		Intrinsically quantified
(7) Persistent		Not persistent
(8) Presentative		Anaphoric

¹² Instances of markers are as follows (Martin, 1975: 143-154):

- (i) explicit counting devices: e.g., *suu* 'a number of';
- (ii) quasi-suffixes: e.g., *-tachi*, collective plural;
- (iii) pluralizing prefixes: e.g., *ta-* 'many';
- (iv) reduplication: e.g., *shima-jima* '(lit.) island-island'; and
- (v) inherent plural referents: e.g., *oya-ko* '(lit.) parent(s) and child(ren)'.

(26)

a. Taroo ga **ni-ji-kande** gorufu o shi-ta.
 NOM two-hour-in golf ACC do-PAST

'Taroo played (a single round of) golf in two hours.'

b. Taroo ga **ni-ji-kande** yakyuu o shi-ta.
 NOM two-hour-in baseball ACC do-PAST

'Taroo played (a single game of) baseball in two hour.'

c. Taroo ga **ni-ji-kande** shoogi o shi-ta.
 NOM two-hour-in chess ACC do-PAST

'Taroo played (a single match of) chess in two hours.'

This type shift from type B to type A may be due to what Filip (1993) calls 'anchoring'.

(27) (Filip, 1993: 23)

If the universal interpretation concerns an undetermined noun phrase with an inherently unbounded noun, the only way in which the boundaries of the referent of such a noun phrase can be fixed, is to anchor it to a bounded entity in the discourse. In order to 'individuate' an entity in this way, given that it is named by an inherently unbounded noun, we need to 'identify' it contextually.

If Filip (1993) is correct, then, the accusative DP's in (26) are specific since *anchoring by way of identification* entails that the anchored referent is specific. That is, in the case of (26), *gorufu* 'golf', *yakyuu* 'baseball', and *shoogi* 'chess' must necessarily mean a 'single specific round' of golf, a 'single specific play' of baseball, and a 'single specific match' of chess play. Conversely, the above instances of type shift indicate that if a seemingly type B *VN-o suru* is associated with a specific accusative DP, such a *VN-o suru* form must be re-classified as type A.

If the above argument is right, there would be the interplay between 'boundedness' and 'specificity' in isolating the two types of monopredicational *VN-o suru* from each other. Those DP's which are bounded and high in specificity always function as accusative DP's for type A *VN-o suru*. In contrast, those DP's which are either bare or low in specificity are susceptible to the type shift, fitting the description of either the type A or the type B *VN-o suru*.

4.5. Isolation of Bipredicational *VN-o Suru*

4.5.1. Introduction

Before showing that bipredicational *VN-o suru* can be divided into two different types based on telicity, I will attempt to isolate the bipredicational *VN-o suru* from the monopredicational *VN-o suru*. To do so, I will divide *VN-o suru* into two groups: those with no overt satellites in the EVENT nominal domain, as in (28), and those with overt Theme(-like) satellites in the EVENT nominal domain, as in (29).

(28)

- a. Taroo ga Tokyo ni [RYOKOO] o suru.
NOM to travel ACC do
 'Taroo travels to Tokyo.'
- b. Taroo ga murabito ni ookami ga kuru to [KEIKOKU] o suru.
NOM villagers to wolf NOM come COMP warning ACC do
 'Taroo warns the villagers that the wolf would come.'
- c. ??Taroo ga shiryoo o [CHOOSA] o suru.
NOM files ACC examination ACC do
 'Taroo examines the files.'

(29)

- a. Taroo ga [eigo no BENKYOO/benkyoo] o suru.
NOM English GEN study ACC do
 'Taroo studies English.'
- b. Taroo ga [furansugo no KOOGI/koogi] o suru.
NOM French GEN lecture ACC do
 'Taroo lectures French.'
- c. Taroo ga [Ainugo no KENKYUU/kenkyuu] o suru.
NOM Ainu GEN research ACC do
 'Taroo researches Ainu.'

What I will show is that while those in (28) act only as bipredicational *VN-o suru*, those in (29) are ambiguous between mono- and bi-predicational *VN-o suru*.

4.5.2. *VN-o Suru* with No Theme(-like) Satellites

The prediction that those in (28) act only as bipredicational *VN-o suru* can be tested by the fact that these *VN-o suru* forms cannot tolerate *kare* 'he' or *zibun* 'self' either in an Agent reading or in a possessive reading.

(30)

- a. *Taroo ga Tokyo ni [kare/zibun no RYOKOO] o suru.
 NOM to he/self GEN travel ACC do
 'Taroo makes his/self's trip to Tokyo.'
- b. *Taroo ga murabito ni ookami ga kuru to [kare/zibun no KEIKOKU] o suru.
 NOM villagers to wolf NOM come COMP he/self GEN warning ACC do
 'Taroo makes his/self's warning to the villagers that the wolf would come.'
- c. *Taroo ga shiryoo o [kare/zibun no CHOOSA] o suru.
 NOM files ACC he/self GEN examination ACC do
 'Taroo conducts his/self's examination of the files.'

To account for the ungrammaticality with (30), and, more importantly, to verify my prediction that these *VN-o suru* forms in (28) are bipredicational, I will rely on two working hypotheses: the PRO and Incorporation hypotheses.¹³

4.5.2.1. Based on a PRO Hypothesis

One possible explanation of the incompatibility of *kare* 'he' and *zibun* 'self' in (30) is that the subject position of the embedded nominal predicate is a null-Case PRO position (Chomsky, 1995), into which a lexical item cannot be inserted. Under the assumption that the *VN-o suru* forms in (28) are bipredicational control structures whose embedded subject position is a null-Case position, we can account for why it is not possible to insert such lexical items as *kare* and *zibun*.

Also, this PRO hypothesis may fare well with the notion of 'argument promotion'. Under the assumption that argument promotion does not take place with simple event nominals, the presence of the 'promoted' clausal satellites, such as *Tokyo-ni* 'to Tokyo' and *murabito-ni* 'to villagers', indirectly assures us that the head of the EVENT nominals in (28) cannot be simple event nominals. This assurance is asserted by the following

¹³ The PRO hypothesis will be substantiated later in Chapter 5 and the Incorporation hypothesis will be substantiated in Chapter 6.

examples in (31) which indicate that when there is no presence of 'promoted' clausal satellites, i.e., when the heads of the accusative DP's are not complex event nominals, *kare* 'he' and *zibun* 'self' can be realized in EVENT nominal domains.

(31)

- a. Taroo ga (is-shuu-kande) [kare/zibun no ryokoo] o shi-ta.
 NOM one-week-in he/self GEN travel ACC do-PAST
 'Taroo made his/self's trip (in a week).'
- b. Taroo ga (go-fun-kande) [kare/zibun no keikoku] o shi-ta.
 NOM five-minute-in he/self GEN warning ACC do-PAST
 'Taroo made his/self's warning (in five minutes).'
- c. Taroo ga (ichi-ji-kande) [kare/zibun no choosa] o shi-ta.
 NOM one-hour-in he/self GEN examination ACC do-PAST
 'Taroo conducted his/self's examination (in one hour).'

Consequently, the plausibility of the PRO hypothesis indicates that those *VN-o suru* in (28) are bipredicational, which ought to be represented in control structures, as seen in (32).

(32)

- a. Taroo_i ga Tokyo ni [PRO_i RYOKOO] o suru.
 NOM to travel ACC do
 'Taroo travels to Tokyo.'
- b. Taroo_i ga murabito ni ookami ga kuru to [PRO_i KEIKOKU] o suru.
 NOM villagers to wolf NOM come COMP warning ACC do
 'Taroo warns the villagers that the wolf would come.'
- c. ??Taroo_i ga shiryoo o [PRO_i CHOOSA] o suru.
 NOM files ACC examination ACC do
 'Taroo examines the files.'

4.5.2.2. Based on an Incorporation Hypothesis

The second possible explanation for the incompatibility of *kare* 'he' and *zibun* 'self' with the *VN-o suru* in (30) is an Incorporation or Restructuring Hypothesis. One observational generalization is that when there are no overt satellite phrases in the domain of the EVENT nominals, the EVENT nominals themselves become insensitive to various syntactic operations, such as topicalization (33a), passivization (33b), and adverbial insertion (33c) (see Grimshaw and Mester, 1988; Isoda, 1991; Sells, 1990).

(33)

- a. * [RYOKOO] wa Taroo ga Tokyo ni shi-ta.
 trip TOP NOM to do-PAST
 '(lit.) As for the trip, Taroo made (it) to Tokyo.'
- b. *[RYOKOO] ga Tokyo ni Taroo niyotte s-are-ta.
 trip NOM to by do-PASS-PAST
 '(lit.) A trip was made to Tokyo by Taroo.'
- c. *Taroo ga Tokyo ni [RYOKOO] o isoide shi-ta.
 NOM to travel ACC quickly do-PAST
 'Taroo traveled to Tokyo in a hurry.'

I would like to remind you that, as is clear from (34), such frozen phenomena are not observed if referential satellites are present in the EVENT nominal domain, i.e., when *VN-o suru* involve simple event nominals.

(34)

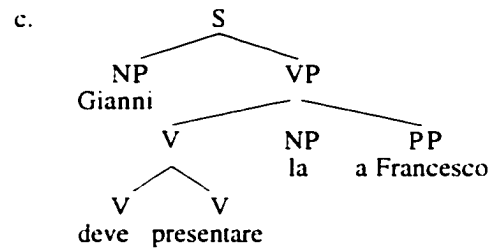
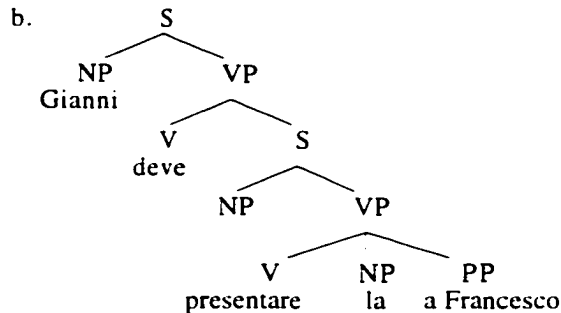
- a. [Zibun no ryokoo] wa Taroo ga shi-ta.
 self GEN trip TOP NOM do-PAST
 '(lit.)As for self's trip, Taroo made (it).'
- b. [Zibun no ryokoo] ga Taroo niyotte s-are-ta.
 self GEN trip NOM by do-PASS-PAST
 '(lit.)Self's trip was made by Traoo.'
- c. Taroo ga [zibun no ryokoo] o isoide shi-ta.
 NOM self GEN travel ACC quickly do-PAST
 'Taroo made self's trip in a hurry.'

Then, given Rizzi's (1982) and Burzio's (1986) claims that bipredicational control structures can undergo restructuring,¹⁴ Miyagawa's (1987b) claim that restructuring exists

¹⁴ Rizzi (1982) hypothesizes that Italian has a Restructuring Rule which, as seen in (ic), "optionally reanalyzes a terminal substring of $V_X(P)V$ [V_X being a triggering class, P being an infinitival complementizer, and V being an infinitive verb] as a single verbal complex, hence automatically transforming the underlying bisentential structure into a simple sentence" (Rizzi, 1982: 5).

(i) (cf. Rizzi, 1982: 5 (16))

a. Gianni must introduce her to Francesco.



Burzio (1986) supports Rizzi's (1982) proposal of the Restructuring Rule. However, unlike Rizzi (1982), Burzio (1986) assumes no Subject Deletion. Furthermore, Burzio (1986) assumes that the Restructuring Rule consists essentially of VP-movement, which he proposes in his account of causative, as seen in (ii).

(ii) (Burzio, 1986: 228 (1c))

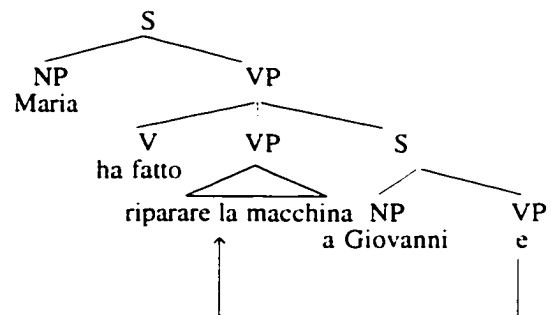
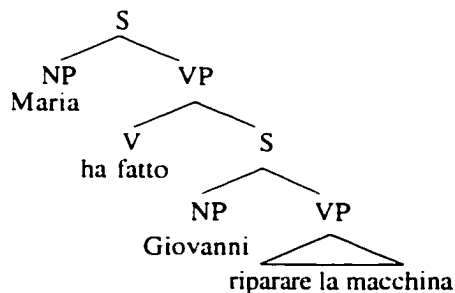
a. Maria ha fatto riparare la macchina a Giovanni.

has made repair the car to

'Maria had Giovanni repair the car.'

b. Burzio (1986: 229: (3a))

c. Burzio (1986: 229: (3b))



The difference between a causative and a control construction (i.e., another type of restructuring constructions) is then that the main and embedded subjects are coindexed in the case of a control construction but not so in a causative.

in Japanese,¹⁵ Baker's (1988, 1996) demonstration that restructuring can be captured as Incorporation,¹⁶ and Borer's (1994) claim that Incorporation involves only non-referential NP's, we can regard the presence of 'frozen phenomena' in (33) as the sign of bipredicationality, involving non-referential, thematic, complex event nominals (and the non-presence of frozen phenomena in (34) as the sign of monopredicationality, involving referential, non-thematic, simple event nominals). Hence, the plausibility of the Incorporation Hypothesis also indicates that those *VN-o suru* forms with no overt satellites in the EVENT NP domain and with overt satellites in the clausal domain are bipredicational.

¹⁵ Focusing specifically on such Purpose Expressions (PE) as (i).

(i) (from Miyagawa, 1987b: 273 (1))

Taroo_i ga [PRO_i hon o kai ni] itta.
 NOM book ACC buy for-the-sake-of went

'Taroo went to buy a book.'

Miyagawa (1987b) claims that the Restructuring Rule proposed for some Romance languages applies to the Japanese PE and that it can account for the fact that "the PE bifurcates structure, sometimes behaving as a bisentential structure, other times as a simple structure" (Miyagawa, 1987b: 273).

¹⁶ Baker (1988: 204-208) accounts for the restructuring rule as ' V^0 -to- V^0 incorporation'. For instance, for such a control construction as (i)

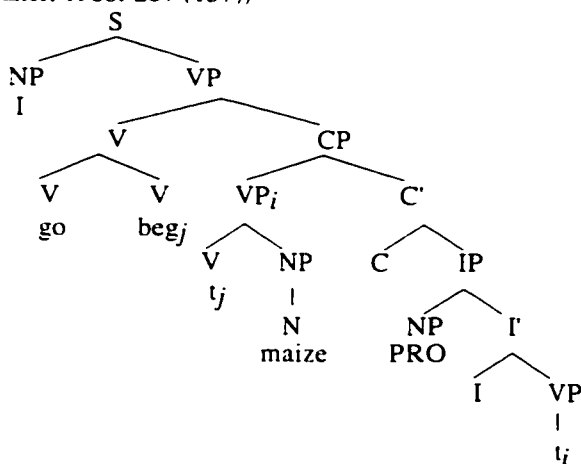
(i) (Baker, 1988: 204 (127a))

Ndi-ka-pemp-a pamanga
 1singSUB-go-beg-ASP maize

'I am going to beg maize'

where "the object of the lower clause acts like the object of the complex verb --- and the subject of the lower clause is obligatorily missing" (Baker, 1988: 204), (ii) is postulated as its S-structure. Once the base VP is adjoined to the spec of C, the head of the VP is incorporated into the matrix verb.

(ii) (Baker, 1988: 207 (137))



4.5.3. *VN-o suru* with Theme-(like) Satellites

Instances of the *VN-o suru* whose EVENT nominals contain overt Theme(-like) satellites in the EVENT nominal domains are found in (29). As for these *VN-o suru*, I will make the following predictions: they can be either monopredicational or bipredicational.

4.5.3.1. Monopredicational *VN-o suru*

Concerning (29), we can apply nominal modification to their accusative nominals, as seen in (35).

(35)

- a. Taroo ga [eigo no **sono** benkyoo] o shi-ta.
 NOM English GEN that study ACC do-past
 '(lit.) Taroo made that study of English.'
- b. Taroo ga [eigo no **ichi**-benkyoo] o shi-ta.
 NOM English GEN one-study ACC do-PAST
 '(lit.) Taroo made one (lit. session of) study of English.'
- c. Taroo ga [eigo no t_i benkyoo] o **ichi-do**_i shi-ta.
 NOM English GEN study ACC one-CLS(time) do-PAST
 '(lit.) Taroo made one (time of) study of English.'

Since these accusative nominals take referential modifiers, these *VN-o suru* forms are *bona fide* monopredicational constructions, given the two test constructions for complex event nominals in (36).

(36)

- a. *Taroo no eigo no **sono** benkyoo-chuu
 GEN English GEN that study-during
 '(lit.) during Taroo's that study of English. . . .'
- a'. *[[Shiken ni ukaru tame] no [DP Taroo no eigo no **sono** benkyoo]]
 exam. DAT pass sake GEN GEN English GEN that study
 '(lit.) Taroo's that study of English in order to pass an exam'
- b. *Taroo no eigo no **ichi**-benkyoo-chuu
 GEN English GEN one--study-during
 '(lit.) during Taroo's one (lit. session of) study of English. . . .'

- b'. *[[Shiken ni ukaru tame] no [DP Taroo no eigo no **ichi-benkyoo**]]
 exam DAT pass sake GEN GEN English GEN one-study
 '(lit.) Taroo's one (lit. session of) study of English in order to pass an exam'
- c. *Taroo no eigo no **ichi-do** no benkyoo-chuu
 GEN English GEN one-CLS(time) GEN study-during
 '(lit.) during Taroo's one (lit. time of) study of English. . . .'
- c'. *[[Shiken ni ukaru tame] no [DP Taroo no eigo no **ichi-do** no benkyoo]]
 exam DAT pass sake GEN GEN English GEN one-CLS GEN study
 '(lit.) Taroo's one (lit. time of) study of English in order to pass an exam'

Further, if the accusative DP of the *VN-o suru* forms in (29) is regarded as denoting a *single specific session* of study, lecturing, or research by *anchoring* (Filip, 1993: 23) even without such a nominal modifier as *sono* 'that', *ichi-* 'one-', or *ichi-do* 'one-time', these *VN-o suru* forms should be classified as falling into the (type A) telic monopredicational construction.

(37)

- a. Taroo ga (ichi-ji-kande) [eigo no benkyoo] o shi-ta.
 NOM one-hour-in English GEN study ACC do-PAST
 'Taroo made a (single session of) study on English (in an hour).'
- b. Taroo ga (ichi-ji-kande) [furansugo no koogi] o shi-ta.
 NOM one-hour-in French GEN lecture ACC do-PAST
 'Taroo gave a (single session of) lecture on French (in an hour).'
- c. Taroo ga (ichi-ji-kande) [Ainugo no kenkyuu] o shi-ta.
 NOM one-hour-in Ainu GEN research ACC do-PAST
 'Taroo conducted a (single session of) research on Ainu (in an hour).'

4.5.3.2. Mono- or Bi-predicational *VN-o suru*

The corollary of the above telic monopredicational reading is that when there are no individuated event readings associated with the accusative phrases, the corresponding *VN-o suru* forms (29) can be atelic constructions, which could be either mono- or bi-predicational. These two possibilities are warranted.

(38)

- a. Taroo ga **ichi-ji-kan** [eigo no BENKYOO/benkyoo] o shi-ta.
 NOM one-hour-for English GEN study ACC do-PAST
 'Taroo studied English for an hour.'
- b. Taroo ga **ichi-ji-kan** [furansugo no KOOGI/koogi] o shi-ta.
 NOM one-hour-for French GEN lecture ACC do-PAST
 'Taroo lectured French for an hour.'
- c. Taroo ga **ichi-nen-kan** [Ainugo no KENKYUU/kenyuu] o shi-ta.
 NOM one-year-for Ainu GEN research ACC do-PAST
 'Taroo researched Ainu for an year.'

In (38), there is nothing which prevents these *VN-o suru* from being classified as the (type B) atelic monopredicational. That is, these *VN-o suru* are accompanied by *for*-phrases, indicating that they are atelic; and the presence of *for*-phrases does not induce any *anchoring* of the accusative DP referents onto any specific discorsal objects. Hence, these *VN-o suru* can be analyzed as type B monopredicational.

However, the above possibility does not negate the possibility that these *VN-o suru* are isomorphic to bipredicational *VN-o suru*. The reason is that if such an Agent-like phrase as *kare* 'he' or *zibun* 'self' is placed inside the EVENT nominals, the *VN-o suru* forms would become ungrammatical under the conditions that they retain both an atelic reading (accompanied by a *for*-phrase) and an *Agent* reading of *kare* 'he' or *zibun* 'self'. This fact is compatible with the PRO hypothesis which applies exclusively to bipredicational *VN-o suru*.

(39)

- a. *Tarooi ga ichi-ji-kan [kare_i/zibun_i no eigo no BENKYOO] o shi-ta.
 NOM one-hour-for he/self GEN English GEN study ACC do-PAST
 '(lit.) Taroo made his/self's study on English for an hour.'
- b. *Tarooi ga ichi-ji-kan [kare_i/zibun_i no furansugo no KOOGI] o shi-ta.
 NOM one-hour-for he/self GEN French GEN lecture ACC do-PAST
 '(lit.) Taroo made his/self's lecture on French for an hour.'
- c. *Tarooi ga ichi-nen-kan [kare_i/zibun_i no Ainugo no KENKYUU] o shi-ta.
 NOM one-year-for he/self GEN Ainu GEN research ACC do-PAST
 '(lit.) Taroo made his/self's research on Ainu for an year.'

If these *VN-o suru* forms were to function exclusively as (type B) atelic monopredicational, the ungrammaticality of (39) would not be able to be accounted for.

4.5.3.3. Conclusion

Consequently, based on the nominal and temporal-aspectual modification tests, we can claim that while these *VN-o suru* forms in (40) are monopredicational, those in (29), which is repeated as (41), can be either mono- or bi-predicational.

(40)

- a. Taroo ga [kare /zibun no eigo no benkyoo] o shi-ta.
NOM he/self GEN English GEN study ACC do-PAST
 '(lit.) Taroo made his/self's study on English.'
- b. Taroao ga [kare /zibun no eigo no koogi] o shi-ta.
NOM he/self GEN English GEN lecture ACC do-PAST
 'The professor made his/self's lecture on English.'
- c. Taroo ga [kare /zibun no Ainu-go no kenkyuu] o shi-ta.
NOM he/self GEN Ainu GEN research ACC do-past
 'Taroo made his/self's research on the Ainu language.'

(41)

- a. Taroo ga [eigo no BENKYOO/benkyoo] o shi-ta.
NOM English GEN study ACC do-PAST
 'Taroo studied English.'
- b. Taroo ga [furansugo no KOOGI/koogi] o shi-ta.
NOM French GEN lecture ACC do-PAST
 'Taroo lectured French.'
- c. Taroo ga [Ainugo no KENKYUU/kenkyuu] o shi-ta.
NOM Ainu GEN research ACC do-PAST
 'Taroo researched the Ainu language.'

4.5.4. Summary

In sum, I have isolated the bipredicational *VN-o suru* from monopredicational *VN-o suru*. Those *VN-o suru* forms in (28) which have (promoted) satellites in the clausal domains but have no overt satellites in the EVENT nominal domains are exclusively bipredicational. Meanwhile, those *VN-o suru* in (29)/(41) which have Theme(-like) satellites in the EVENT nominal domains can be either mono- or bi-predicational *VN-o suru*.

As for the two groups of *bipredicational VN-o suru*, I will show in the following sections that, as far as telicity is concerned, while those in the former group (28) could be either atelic or telic constructions depending on whether promoted satellites function as temporal terminus of events or not, those in the latter group (29)/(41) are exclusively atelic constructions.

4.6. Type C Atelic Bipredicational *VN-o Suru*

4.6.1 Introduction

In the next two sections, 4.6 and 4.7, I will discuss the aspectual force of bipredicational *VN-o suru*. This discussion will lead us to the generalization that, just as in the case of monopredicational *VN-o suru*, bipredicational *VN-o suru* can be of two types: atelic and telic constructions. Citing (42) as examples, I will first discuss atelic bipredicational *VN-o suru*.

(42)

- a. Taroo ga (ichi-ji-kan) [eigo no BENKYOO] o shi-ta.
 NOM one-hour-for English GEN study ACC do-PAST
 'Taroo studied English (for an hour).'
- b. Taroo ga (is-shuu-kan) Tokyo ni [RYOKOO] o shi-ta.
 NOM one-week-for to travel ACC do-PAST
 'Taroo traveled to Tokyo (for a week).'
- c. Taroo ga (go-fun-kan) murabito ni ookami ga kuru to
 NOM five-minute-for villagers to wolf NOM come COMP
 [KEIKOKU] o shi-ta.
 warning ACC do- PAST
 '(For five minutes,) Taroo warned the villagers that the wolf would come.'

The *VN-o suru* in (42) assume atelic readings due to the following reasons. Their EVENT NP's fail to function as measured events given their non-referentiality. In (42b) and (42c), promoted PP's also fail to function as the terminus of events. It is a fact that a Goal PP is not guaranteed to bound an event. For instance, in English, "*out of the room, to the park, a mile, across the desert, over a sea* express a bounded Path [...] By contrast, *toward the house, down the road, over water, for miles and miles* express an unbounded Path" (Filip, 1993: 72). The compatibility with a *for*-phrase in (42b) and (42c) indicates

that their *ni*-marked phrases function merely as unbounded paths, failing to give rise to telic interpretations of corresponding *VN-o suru*.¹⁷

The *VN-o suru* exemplified in (42) involve what I call the PROCESS constraint which is imposed by *suru* to its EVENT NP. In the following section, I will review previous studies (Kageyama, 1991; Miyamoto, 1993; Terada, 1990; Uchida and Nakayama, 1993) to demonstrate the presence of the PROCESS constraint, which I will tie to the presence of what I call type C atelic bipredicational *VN-o suru*.

4.6.2. The PROCESS Constraint

4.6.2.1. Review of Previous Studies

4.6.2.1.1. Implication of Kageyama's (1991) Data

In discussing the internal structure of the accusative-marked 'Pred(icational) NP' in the so-called LVC, Kageyama (1991) claims that it is only Theme arguments which are able to stay inside the Pred NP's. However, Kageyama (1991) noticed that the notion of Theme is not sufficient, since there are instances of the *VN-o suru* whose Pred NP's do not tolerate even Theme arguments. These instances Kageyama (1991) divides into two groups. The first group (43) consists of *VN-o suru* whose Theme arguments are significantly affected and the second group (44) consists of *VN-o suru* whose Theme arguments are not affected in any significant way.

(43) (from Kageyama, 1991: 188)

- | | |
|--|--------------------------|
| a. *[suri no TAIHO] o suru
pickpocket GEN arrest ACC do | 'to arrest a pickpocket' |
| b. *[daijin no SATSUGAI] o suru
minister GEN murder ACC do | 'to murder a minister' |
| c. *[naikaku no DATOO] o suru
cabinet GEN overthrow ACC do | 'to overthrow a cabinet' |
| d. *[kioku no SOOSHITSU] o suru
memory GEN losing ACC do | 'to lose one's memory' |

¹⁷These *ni*-marked phrases are obviously ambiguous between their bounded and unbounded path readings.

(44) (from Kageyama, 1991: 188)

- a. *[gaisha no SHOYUU] o suru 'to own an imported car'
imported-car GEN owning ACC do
- b. *[tomodachi no SHINYOO] o suru 'to have faith in one's friend'
friend GEN trust ACC do
- c. *[ketten no JIKAKU] o suru 'to be aware of one's own defects'
defect GEN being-aware ACC do
- d. *[butsuri no SENKOO] o suru 'to major in physics'
physics GEN majoring ACC do

Under the assumption that the above distinction has to do with the notion of Transitivity, Kageyama (1991) ranks VN's in terms of Hopper and Thompson' (1980) Transitivity Hierarchy, as in (45).¹⁸

(45) (from Kageyama, 1991: 189: (45))

lower	<-----	Transitivity	----->	higher
SOURCE	PATH	////////////////////////////////////	THEME	////////////////////////////////////
*SOTSUGYOO	*SANPO	*SHOYUU	KAISEE	*SATSUGAI
'graduate'	'stroll'	'possess'	'revise'	'murder'

¹⁸ Hopper and Thompson (1980: 252) list the following as Transitivity features and their binary values:

	HIGH	LOW
A. PARTICIPANTS	1 participant	2 or more participants
B. KINESIS	action	non-action
C. ASPECT	telic	atelic
D. PUNCTUALITY	punctual	non-punctual
E. VOLITIONALITY	volitional	non-volitional
F. AFFIRMATION	affirmative	negative
G. MODE	realis	irrealis
H. AGENCY	high in potency	low in potency
I. AFFECTEDNESS OF OBJ	OBJ totally affected	OBJ not affected
J. INDIVIDUATION OF OBJ	OBJ highly individuated	OBJ non-individuated

(46) (from Kageyama, 1991: 188: (42))

- a. *[daigaku no SOTSUGYOO] o suru 'to graduate from college'
- b. *[kooen no SANPO] o suru 'to have a stroll in the park'
- c. *[gaisha no SHOYUU] o suru 'to own an imported car'
- d. [kenpoo no KAISEE] o suru 'to make a revision of the constitution'
- e. *[daijin no SATSUGAI] o suru 'to murder a minister'

According to Kageyama (1991), if VN's are associated with *prototypical* Theme arguments, these VN's are eligible to realize themselves inside Pred NP's: however, if the Theme arguments of VN's are ranked not around the center of the Transitivity scale, these VN's cannot realize themselves inside Pred NP's. According to Kageyama (1991), only KAISEE 'revision' of all of the examples in (46) has a theme argument which meets the criterion.

4.6.2.1.2. Criticism of Kageyama (1991)

Although Kageyama's (1991) suggestion is interesting and seems to be significant, he misses a very important generalization. From the aspectual point of view, the VN's grouped as (47), whose Themes are claimed to be seriously affected, are all ACHIEVEMENTS.

(47)

- a. TAIHO(-suru) 'to arrest '
- b. SATSUGAI(-suru) 'to murder'
- c. DATOO(-suru) 'to overthrow'
- d. SOOSHITSU(-suru) 'to lose'

Meanwhile the VN's grouped as (48), whose Themes are claimed to be not affected in a significant way, are all STATES.

(48)

- a. SHOYUU(-suru) 'to own'
- b. SHINYOO(-suru) 'to have faith in'
- c. JIKAKU(-suru) 'to be aware of'
- d. SENKOO(-suru) 'to major'

Hence, the ungrammaticality of the *VN-o suru* forms in (43) and (44) stems from the aspectual specification of their VN's. That is, such aspectual types as STATES and ACHIEVEMENTS (and ACCOMPLISHMENTS)¹⁹ are incompatible with *VN-o suru*. This generalization is also reinforced in Kageyama's (1991) own data. All the forms in (49) which are regarded as grammatical by Kageyama (1991) obviously involve ACTIVITY VN's.

(49) (from Kageyama, 1991: 187)

- a. [tsuki no TANKEN] o suru 'to make an exploration of the moon'
moon GEN exploration ACC do
- b. [i no KENSA] o suru 'to make an examination of the stomach'
stomach GEN examination ACC do
- c. [paatii no JUNBI] o suru 'to make preparations for the party'
party GEN preparation ACC do
- d. [ronbun no TENAOSHI] o suru 'to make revisions to a paper'
paper GEN revision ACC do

In sum, what I call Kageyama's (1991) Data clearly suggest that aspect plays an important role in the formation of atelic bipredicational *VN-o suru*.²⁰

4.6.2.1.3. Implication of Terada's (1990) Data

As described in Chapter 2, *suru* imposes an Agent requirement on the head of the accusative NP of *VN-o suru*, as seen in (50).

¹⁹ The parenthesis indicates the fact that ACCOMPLISHMENT VN's are compatible with *VN-o suru* but they express merely PROCESSES.

²⁰ As argued in Section 4.5.3, such *VN-o suru* forms with embedded Theme arguments can not only be bi-predicational but also mono-predicational. The question to ask then is whether *suru* imposes a PROCESS constraint on the non-thematic simple event nominals which head the accusative phrases of monopredicational constructions. Given that such prototypical simple event nominals as game nouns do not have their own aspectual property, I assume that it is not possible to impose such an aspectual constraint on simple event nominals.

(50) (Terada, 1990: 108-111)

(i) Experiencer Subject :

*Takashi wa Noboru no kooi ni [KANDOO] o shi-ta.
 TOP GEN kindness to delight ACC do-PAST
 'Takashi was delighted with Noboru's kindness.'

(ii) Goal Subject :

*Hironaka hakase wa [nooberu shoo no JUSHOO] o shi-ta.
 doctor TOP Nobel prize GEN receiving ACC do-PAST
 'Dr. Hironaka received a Nobel prize.'

(iii) Instrumental Subject :

*Dainamaito ga [gunjikichi no BAKUHA] o shi-ta.
 dynamite NOM base GEN blasting ACC do-PAST
 'Dynamite blasted the military base.'

(iv) Source Subject :

*Sono jikken wa sono riron ga tadashii to yuu [SHOOMEI] o shi-ta.
 that experiment TOP that theory NOM correct COMP proof ACC do-PAST
 'That experiment proved that the theory was right.'

The data in (51) yield further observations. Note that none of the VN's are ACTIVITIES.

(51)

- | | | |
|-------------------|-------------------|---------------|
| a. KANDOO(-suru) | 'to be delighted' | [STATE] |
| b. JUSHOO(-suru) | 'to receive' | [ACHIEVEMENT] |
| c. BAKUHA(-suru) | 'to blast' | [ACHIEVEMENT] |
| d. SHOOMEI(-suru) | 'to prove' | [ACHIEVEMENT] |

Furthermore, the Agent requirement alone would not be able to rule out the following ungrammatical cases.

(52) (Terada, 1990: 117)

- a. ?*Jinushi wa Takashi kara [tochi no BAISHUU] o shi-ta.
 landlord TOP from land GEN acquisition ACC do-PAST
 'The landlord bought land from Takashi.'
- b. ?*Nisoo wa ryooseitachi kara [sono zasshi no BOSSHUU] o shi-ta.
 nun TOP dorm-students from that magazine GEN confiscation ACC do-PAST
 'The nun confiscated the magazine from the students in the dormitory.'

c. ?*Yakuza ga shuhutachi ni [nise daiya no HANBAI] o shi-ta.
 NOM housewives to fake diamond GEN sale ACC do-PAST

'Yakuzas sold fake diamonds to housewives.'

We would be able to account for the ungrammaticality of (52) if we assume that the ungrammaticality stems from the violation of the aspectual constraint such that non-ACTIVITY VN's (53) cannot head the accusative NP of bipredicational *VN-o suru*.

(53)

- | | | |
|-------------------|---------------------------------|---------------|
| a. BAISHUU(-suru) | 'to acquire through purchasing' | [ACHIEVEMENT] |
| b. BOTSHUU(-suru) | 'to confiscate' | [ACHIEVEMENT] |
| c. HANBAI(-suru) | 'to sell' | [ACHIEVEMENT] |

In sum, Terada's (1990) Data also suggest that aspect plays a significant role in the formation of bipredicational *VN-o suru*.

4.6.2.1.4. Uchida and Nakayama's (1993) Claim

Unlike the above two studies which are unaware of the significance of aspect, Uchida and Nakayama (1993) clearly claim that *VN-o suru* is incompatible with certain aspectual types of VN's. Uchida and Nakayama (1993) classify VN's into two types, as in (54).

(54) (Uchida and Nakayama, 1993, 633: (23/24))

(i) Group A

- | | |
|-------------------------------|---------------|
| BENKYOO-suru / BENKYOO-o suru | 'to study' |
| KENKYUU-suru / KENKYUU-o suru | 'to research' |
| SOOJI-suru / SOOJI-o suru | 'to clean' |
| SYUURI-suru / SYUURI-o suru | 'to repair' |
| UNTEN-suru / UNTEN-o suru | 'to drive' |

(ii) Group B

- | | |
|--------------------------------|--------------------|
| CHUUSHI-suru / *CHUUSHI-o-suru | 'to cancel' |
| GOKAI-suru / *GOKAI-o-suru | 'to misunderstand' |
| HAKAI-suru / *HAKAI-o-suru | 'to destroy' |
| SENKYO-suru / *SENKYO-o-suru | 'to occupy' |
| TAIHO-suru / *TAIHO-o-suru | 'to arrest' |

The VN's in group A denote ACTIVITIES/ACCOMPLISHMENTS and those in group B denote ACHIEVEMENTS or STATES. To support this classification, Uchida and Nakayama (1993) use two pieces of evidence: reinterpretation of *te-iru* and temporal modification.

The *te-iru* verbal form denotes ACTIVITY when affixed to ACTIVITY/ACCOMPLISHMENT verbs, or STATE when affixed to ACHIEVEMENT or STATE verbs. As exemplified in (55) of *VN-suru* formation, the affixation of *te-iru* to the VN's in group A results in progressive readings.

(55) (Uchida and Nakayama, 1993: 634 (25/26))

a. John wa DNA o KENKYUU-shi-te iru.
TOP ACC research-doing

'John is doing his research on DNA.'

b. Mary ga heya o SOOJI-shi-te iru.
NOM room ACC cleaning-doing

'Mary is cleaning her room.'

In contrast, the affixation of *te-iru* to the VN's in group B results in stative reading, as in (56).

(56) (Uchida and Nakayama, 1993: 634 (29/30))

a. Teki ga machi o SENKYO-shi-te iru.
enemy NOM town ACC occupation-doing

'*The enemy is occupying the town.'

'The enemy has occupied the town.'

b. Yamada keiji wa suri o TAIHO-shi-te iru.
office TOP pickpocket ACC arrest-doing

'*Officer Yamada is arresting a pickpocket.'

'Officer Yamada has arrested a pickpocket.'

Further, unlike the VN's in group A (54i), those in group B (54ii) are incompatible with telic temporal modifiers.

(57) (Uchida and Nakayama, 1993: 635 (31a/32a))

a. Mary wa ichi-jikan no aida niwa o SOOJI-shi-te ita.
TOP one-hour GEN for garden ACC cleaning-doing

'Mary cleaned the garden for one hour.'

- b. John wa san-nenkan no aida DNA o KENKYUU-shi-te ita.
 TOP three-year GEN for ACC research-doing

'John researched DNA for three years.'

(58) (Uchida and Nakayama, 1993: 635 (33b/34b))

- a. Keikan ga ichi-jikan-de suri o TAIHO-shita.
 police NOM one-hour-in pickpocket ACC arrest-did

'The policemen arrested the pickpockets in one hour.'

- b. Guntai ga ichi-jikan-de hashi o HAKAI-shita.
 army NOM one-hour-in bridge ACC destruction-did

'The army destroyed the bridge in one hour.'

Based on these two pieces of evidence, Uchida and Nakayama (1993) claim that the VN's in group A are ACTIVITY/ACCOMPLISHMENT predicates and those in group B are ACHIEVEMENT/STATE predicates; and only the VN of the ACTIVITY/ACCOMPLISHMENT type are compatible with VN-o suru forms, as indicted in (54).

4.6.2.1.5. Miyamoto's (1993) Claim

Working independently of Uchida and Nakayama (1993), Miyamoto (1993) also proposes that *VN-o suru* is highly sensitive to aspect, formulating this sensitivity as what he calls a *P(rocess)-Template Hypothesis*. Based on Pustejovsky's (1992) templatic sub-event analyses, Miyamoto (1993) hypothesizes that *suru* imposes an aspectual constraint on the accusative NP that only *Process* (ACTIVITY) can be its event type. Thus, the accusative EVENT NP is incompatible with *States* and *Transitions* (i.e. ACCOMPLISHMENTS and ACHIEVEMENTS). In other words, the accusative NP cannot contain any element which specifies a state or a natural end-point. Thus, as in (59), psych VN's, whose event type is typically *State*, cannot head accusative NP's.

(59)

- *Taroo wa Hanako no kooi ni [KANDOO] o shi-ta.
 TOP GEN kindness DAT delight ACC do-PAST

'Taroo was delighted with Hanako's kindness.'

Also, as seen in (60), the VN's whose event type is *Transition* cannot head accusative NP's.

(60)

- a. *Sooridaijin ga [SHIBOO] o shi-ta.
 prime minister NOM death ACC do-PAST
 'The Prime minister died.'
- b. *Terorisuto ga [daijin no SATSUGAI] o shi-ta.
 terrorist NOM minister GEN assassin ACC do-PAST
 'Terrorists assassinated a minister.'

However, *Transition* type VN's could be allowed to head accusative NP's if they do not bring into the domain of the accusative NP any end-point, such as a Goai phrase, as in (61).

(61)

- a. Taroo ga Tokyo ni [RYOKOO] o shi-ta.
 NOM to travel ACC do-PAST
- b. *Taroo ga [Tokyo e no RYOKOO] o shita.
 NOM to GEN travel ACC do-PAST
 'Taroo made a trip to Tokyo.'

Hence, Miyamoto's (1993) claim is similar to Uchida and Nakayama's (1993), except for the following two matters: (i) the PROCESS constraint is extended to account for why even PP satellites would not be realized NP-internally; (ii) not only STATES and ACHIEVEMENTS, but also ACCOMPLISHMENTS are incompatible with *VN-o suru*.

4.6.3. Perfective Paradox

In sum, regardless of the differences in motivations and claims, what is common among the reviewed studies is the indication that aspect plays a significant role in the formation of (atelic) bipredicational *VN-o suru*. Also, concerning the atelic bipredicational *VN-o suru*, I agree with Miyamoto's (1993) very basic claim that the head of the EVENT NP must be associated with PROCESS. The piece of evidence which supports this claim over Uchida and Nakayama's claim that it can be either ACCOMPLISHMENT or ACTIVITY is the 'Perfective Paradox' (cf. Bach, 1986; Singh, 1991). When ACCOMPLISHMENT VN's head the accusative NP of *VN-o suru*, these VN's necessarily assume a PROCESS reading with no entailment of the resulting state which would be brought about by the associated action, as is evident from (62).

(62)

(i) VN-suru form:

* Taroo wa kuruma o SHUURI-shi-ta ga SHUURI deki-nakat-ta.
 TOP car ACC repair-do-PAST but repair-can-NEG-PAST

'Taroo repaired the car but (he) could not repair (it).'

(ii) VN-o suru form:

Taroo wa [kuruma no SHUURI] o shi-ta ga SHUURI-deki-nakat-ta.
 TOP car GEN repair ACC do-PAST but repair-can-NEG-PAST

'Taroo repaired the car but (he) could not repair (it).'

The initial clause of the *VN-o suru* form in (62ii) does not, as part of its meaning, denote the state of a car having been repaired; rather it merely denotes the *activity* which is supposed to have led to its completion. This activity, however, did not reach its end-point; this failure is expressed by the second clause, hence creating the perfective paradox.

What is indicated by the perfective paradox is that the PROCESS constraint itself may not prohibit ACCOMPLISHMENT VN's from heading the EVENT NP's of *VN-o suru* forms.

(63)

- a. [kuruma no SHUURI] o suru
 parcel GEN delivery ACC do
 'repair a car'
- b. [komugi no YUNYUU] o suru
 wheat GEN import ACC do
 'import wheat'
- c. [ie no KAIZOO] o suru
 house GEN renovation ACC do
 'renovate a house'

For instance, (63) can be grammatical or ungrammatical, depending on whether they entail termini or not. If they do, as in (64a), they sound odd and are ungrammatical. If they do not, as in (64b), they are grammatical.

(64)

- a. ??Taroo ga **ik-kagetsu-kande** [ie no KAIZOO] o shi-ta.
 NOM one-month-in house GEN renovation ACC do-PAST

'Taroo has renovated the house in a month.'

- b. Taroo ga **ik-kagetsu-kan** [ie no KAIZOO] o shi-teir-u.
 NOM one-month-for house GEN renovation ACC do-PROG-PRES

'Taroo has been renovating the house for a month.'

The point is that the EVENT NP of type C *VN-o suru* must denote PROCESS.

4.6.4. Conclusion

Based on the implicit and explicit claims made by the previous studies and the evidence for a perfective paradox, I have shown that the EVENT NP of the atelic bipredicational *VN-o suru* must denote a PROCESS. In this sense, *suru* extends its own aspectual attribute (PROCESS) onto its accusative NP, creating information flow from right to left. Such *VN-o suru* forms as in (42) have neither measured event nor bounded path phrases which give raise to the telic interpretation of *VN-o suru* forms. Consequently, they fall into the classification of the (type C) atelic bipredicational *VN-o suru*.

4.7. Type D Telic Bipredicational *VN-o Suru*

4.7.1. Introduction

In this section, I will show that there are also telic bipredicational *VN-o suru* constructions. Typical examples of this type, which I call type D, are in (65). The type D *VN-o suru* denote bounded events, bounded due either to the presence of bounded paths or the presence of measured events in clausal domains.

(65)²¹

- a. Taroo ga (is-shuukan-de) Tokyo ni [RYOKOO] o shi-ta.
 NOM on-week-in to travel ACC do-PAST

'Taroo traveled to Tokyo (in a week).'

²¹ The grammaticality associated with (65b and c), i.e., '??', is due to the violation of the surface double-*o* constraint (Saito and Hoshi, 1994).

- b. ??Taroo ga (ichi-ji-kande) sono shiryoo o [CHOOSA] o shi-ta.
 NOM on-hour-in that file ACC examination ACC do-PAST

'Taroo examined that file (in an hour).'

- c. ??Taroo ga (ichi-nen-kande) sono ronbun o [KANSEI] o shi-ta.
 NOM one-year-in that thesis ACC completion ACC do-PAST

'Taroo completed the thesis (in a year).'

In the case of (65a), the compatibility with an *in*-phrase indicates that the promoted Goal functions as a *bounded* path (cf. Filip, 1993: 72). Hence, the whole *VN-o suru* form assumes a telic reading in the same sense as telicity associated with *John run to the store in/*for a minute*. In the case of (65b), given that the promoted Theme marked by *sono* 'that' denotes a bounded entity, the whole *VN-o suru* form assumes a telic reading in the same sense as the telicity associated with *John ate the apple*. What is strange with (65c) is that, while allowing KANSEI 'completion' (ACHIEVEMENT) to head their accusative NP, the *VN-o suru* formation disregards the PROCESS constraint. Plausibly, the PROCESS constraint is violable if and only if a Theme argument is *not trapped* inside the EVENT NP (and if it denotes a bounded entity). If trapped, as in (66), ungrammaticality would result, the ungrammaticality attributable to the PROCESS constraint violation.²²

(66)

- *Taroo ga [ronbun no KANSEI] o shi-ta.
 NOM thesis GEN completion ACC do-PAST

'Taroo completed the thesis.'

²² The comparison among (i), (ii), and (iii) indicates that the 'perfective paradox' also don't function in the *double o VN-o suru* constructions (due to the presence of a measured event in a clausal domain). While the type C *VN-o suru* (ii) with a 'trapped Theme' exhibits a perfective paradox, the type D *double o VN-o suru* (iii) does not.

(i) VN-suru form:

* Taroo wa kuruma o SHUURI-shi-ta ga SHUURI-deki-nakat-ta.

TOP car ACC repair-do-PAST but repair-can-NEG-PAST

'Taroo repaired the car but (he) could not repair (it).'

(ii) VN-o suru form:

Taroo wa [kuruma no SHUURI] o shi-ta ga SHUURI-deki-nakat-ta.

TOP car GEN repair ACC do-PAST but repair-can-NEG-PAST

'Taroo repaired the car but (he) could not repair (it).'

(iii) Double o VN-o suru:

* Taroo wa kuruma o [SHUURI] o shi-ta ga SHUURI-deki-nakat-ta.

TOP car ACC repair ACC do-PAST but repair-can-NEG-PAST

'Taroo repaired the car but (he) could not repair (it).'

Since the clausal realization of a bounded Theme argument does allow even a telic nominal to head the EVENT NP, (65c) fits into the classification of the type D telic bipredicational *VN-o suru*.

In the following section, I will review Tenny (1994) to infuse some theoretical significance to the PROCESS constraint discussed in the previous section. This theoretical infusion will simultaneously substantiate my claim that even bipredicational *VN-o suru* can assume telic readings.

4.7.2. Tenny's (1994) 'Measuring Out'

The PROCESS hypothesis which I drew in Section 4.6 is a mere observational generalization. Given the meaning of *suru* 'do', it is predicted that the EVENT NP which contributes to the semantic content of the *VN-o suru* form denotes PROCESS. By the same token, given that STATE and PROCESS are totally incompatible, it is understandable why STATE VN's cannot head the accusative NP. What is not totally clear is why (ACCOMPLISHMENT and) ACHIEVEMENT VN's are incompatible with type C bipredicational *VN-o suru*.

In developing her theory of aspect, Tenny (1987, 1992, 1994) discusses the notion of 'measuring out' (cf. also Krifka, 1989, 1990, 1992; Dowty, 1991; Jackendoff, 1991, 1996), where 'measuring out' refers to the aspectual role "played by the argument in marking the temporal terminus of the event" (Tenny, 1994: 11). Further, the direct internal argument is regarded as the sole argument which can 'measure out' the event (cf. Tenny, 1994: 11 (9ii)).

To argue for the notion of 'measuring out', Tenny (1994) first classifies verbs into the following types: stative verbs,²³ non-stative non-delimiting verbs,²⁴ and non-stative delimiting verbs.²⁵ Among these three types of verbs, only the non-stative delimiting

²³ (from Tenny, 1994: 13 (10))

- (i) John likes Bill.
- (ii) Mary knows calculus.

²⁴ (from Tenny, 1994: 13 (11))

- (i) Dan pounded the wall (*in an hour/for an hour).
- (ii) Lisa studied French (*in an hour/for an hour).

²⁵ (from Tenny, 1994: 14 (12))

- (i) Mary built a house (in a day/*for a day).
- (ii) Sue fixed the sink (in an hour/??for an hour).

verbs are claimed to be relevant to the notion of 'measuring out'. The verbs of this type are divided further into three subtypes: Incremental Theme verbs (cf. Dowty, 1991), Change of State verbs, and Route verbs with Path Objects. Why these verbs 'measure out' events is explained as follows.

(67) (Tenny, 1994: 15 (13))

eat an apple

In (67), the event of eating is regarded to progress throughout the internal argument (i.e., *an apple*), until *the apple* is totally consumed. Hence, in a sense, *the apple* provides a measure of the eating event. In a similar manner, change-of-state verbs also have arguments which measure out the event, as in the case of *ripen*.

(68) (Tenny, 1994: 16 (15))

ripen the fruit

In the event of (68), "the fruit becomes riper and riper until the event of ripening is accomplished, at which point the fruit has acquired the property of ripeness" (Tenny, 1994: 16). Further, the path objects of route verbs 'measure out' the event over time.

(69) (Tenny, 1994: 17 (17))

- a. Sue walked the Appalachian Trail.
- b. Bill climbed the ladder.

For instance, in (69), "the walking and climbing are measured out by the length of the Appalachian Trail and the length of the ladder, respectively" (Tenny, 1994: 17).

4.7.3. Implications of Tenny (1994)

Based on Tenny's (1994) above argument, we can account for why (ACCOMPLISHMENT and) ACHIEVEMENT VN's cannot head the EVENT NP's of the type C atelic bipredicational *VN-o suru*. That is, unlike the case of *VN-suru*, in the case of *VN-o suru*, their Theme arguments are all *trapped* in the EVENT NP domains, failing to function as Incremental Themes (70a' and b'), Changed States (71a' and b'), or as Path Objects (71a' and b').

(70) Incremental Theme VN's:

- a. Isuraerujin ga kuni o FUKKOO-shi-ta.
 Israelis NOM nation ACC rebuilding-do-PAST
- a'. *?Isuraerujin ga [kuni no FUKKOO] o shi-ta.
 Israelis NOM nation GEN rebuilding ACC do-PAST
 'Israelis have rebuild the nation.'
- b. Seizaisho ga mori o BASSAI-shi-ta.
 mill NOM forest ACC cut-do-PAST
- b'. *?Seizaisho ga [mori no BASSAI] o shi-ta.
 mill NOM forest GEN cut ACC do-PAST
 'The mill has harvested the forest.'

(71) Change of State VN's:

- a. Teki ga kichi o BAKUHA-shi-ta.
 enemy NOM base ACC blow-up-do-PAST
- b'. *?Teki ga [kichi no BAKUHA] o shi-ta.
 enemy NOM base GEN blow-up ACC do-PAST
 'The enemy blew up the base.'
- b. Taroo ga saifu o FUNSHITSU-shi-ta.
 NOM wallet ACC loss-do-PAST
- b. *Taroo ga [saifu no FUNSHITSU] o shi-ta.
 NOM wallet GEN loss ACC do-PAST
 'Taroo lost (his) wallet.'

(72) Route VN's with Path Objects:

- a. Taroo ga 42.195 kiro o KANSOO-shi-ta.
 NOM kilometers ACC complete-run-do-PAST
- a'. *Taroo ga [42.195 kiro no KANSOO] o shi-ta.
 NOM kilometers GEN complete-run ACC do-PAST
 'Taroo has run the whole distance of 42.195 kilometers.'
- b. Taroo ga nihon-retto o JUUDAN-shi-ta.
 NOM Japan-archipelago ACC traverse-do-PAST
- b'. *Taroo ga [nihon-retto no JUUDAN] o shi-ta.
 NOM Japan-archipelago GEN traverse ACC do-PAST
 'Taroo traveled across the Japan Archipelago.'

The only way to restore the grammaticality of these *VN-o suru* forms is to promote their NP-internal Theme arguments which, then, can function as 'temporal terminus of events'. The *trapped* arguments are incapable of doing so. This incapability is manifested as the PROCESS constraint, accounting for why ACCOMPLISHMENT and ACHIEVEMENT VN's are incompatible with type C bipredicational *VN-o suru*.

4.7.4. Instances of Type D *VN-o Suru*

Under the assumption that *double-o VN-o suru* constructions are allowed (Dubinsky, 1994; Kageyama, 1991; Saito and Hoshi, 1994; Sells, 1990), once the NP-internal Theme arguments are 'promoted', they would become able to function as Incremental Themes (73a' and b'), Changed States (74a' and b'), or Path Objects (75a' and b'). Since these promoted Themes function as 'temporal terminus of events', even such telic VN's as FUKKOO 'rebuilding', FUNSHITSU 'loss', and KANSOO 'completion of running' can head the EVENT NP's of bipredicational *VN-o suru*, disregarding the PROCESS constraint.

(73) Incremental Theme VN's:²⁶

a'. *?Isuraerujin ga [kuni no FUKKOO] o shi-ta.
 Israelis NOM nation GEN rebuilding ACC do-PAST

a'. ??Isuraerujin ga kuni o [FUKKOO] o shi-ta.
 Israelis NOM nation ACC rebuilding ACC do-PAST

'Israelis have rebuild the nation.'

b. *?Seizaisho ga [mori no BASSAI] o shi-ta.
 mill NOM forest GEN cut ACC do-PAST

b'. ??Seizaisho ga mori o BASSAI o shi-ta.
 mill NOM forest ACC cut ACC do-PAST

'The mill harvested the forest.'

²⁶ The grammaticality associated, for instance, with (72a), i.e., '*?', is due to the violation of the PROCESS constraint, while the grammaticality associated with (72a'), i.e., '??', is due to the violation of the surface *double-o* constraint (Saito and Hoshi, 1994).

(74) Change of State VN's:

a. *?Teki ga [kichi no BAKUHA] o shi-ta.
 enemy NOM base GEN blow-up ACC do-PAST

a'. ??Teki ga kichi o [BAKUHA] o shi-ta.
 enemy NOM base GEN blow-up ACC do-PAST

'The enemy blew up the base.'

b. *Taroo ga [saifu no FUNSHITSU] o shi-ta.
 NOM wallet GEN loss ACC do-PAST

b'. ??Taroo ga saifu o [FUNSHITSU] o shi-ta.
 NOM wallet ACC loss ACC do-PAST

'Taroo lost (his) wallet.'

(75) Route VN's with Path Objects:

a'. *Taroo ga [42.195 kiro no KANSOO] o shi-ta.
 NOM kilometers GEN complete-run ACC do-PAST

a'. ??Taroo ga 42.195 kiro o [KANSOO] o shi-ta.
 NOM kilometers ACC complete-run ACC do-PAST

'Taroo has run the whole distance of 42.195 kilometers.'

b'. *Taroo ga [nihon-retto no JUUDAN] o shi-ta.
 NOM Japan-archipelago GEN cross ACC do-PAST

b. ??Taroo ga nihon-retto o [JUUDAN] o shi-ta.
 NOM Japan-archipelago ACC cross ACC do-PAST

'Taroo walked across the Japan Archipelago.'

In this sense, Tenny's (1994) claim that the direct internal argument (i.e., Theme) is the sole argument which can 'measure out' the event is somewhat inaccurate: to 'measure out' the event, the direct internal argument must be mapped into a clausal domain (see Dowty (1991) for a similar claim). It seems to be that the issue of 'measuring out' and its syntactic constraint are further related with the issue of Transitivity. And possibly this is what Kageyama (1991) has in mind when he employs Hopper and Thompson's (1980) Transitivity Hierarchy. I will leave the issue of Transitivity for future study.

Consequently, bipredicational *VN-o suru* assume telic readings in the following circumstances:

- (i) if a promoted Goal functions as a bounded path (as in (65a)); and
- (ii) if a promoted Theme denotes a bounded entity (as in (65b)).

4.8. Summary

The main aim of this section was disambiguation. I have shown that *VN-o suru* formations can be mono- or bi-predicational constructions depending on whether their EVENT nominal phrases are headed by non-thematic, simple event nominals or by thematic, complex event nominals. Further, I have shown that the mono- and bi-predicational *VN-o suru* can be divided into two types differing in telicity. The above characterization sheds a further light on *VN-o suru* constructions, showing also that the characterization does not stem from the weight of *suru* but from the (non-)thematic property of nominals heading the accusative phrases of *VN-o suru*.

Chapter 5. Bi-predicational *VN-o suru* as Control Structure

5.1. Introduction

This very short chapter is devoted to demonstrating that the bipredicational *VN-o suru* construction is a control structure (Matsumoto, 1992a and b; Terada, 1990).¹ A preliminary assumption of this Control Hypothesis is that *suru* has its own argument structure and so has the VN which heads the EVENT NP of *VN-o suru* forms. The fact that there are two external arguments in *VN-o suru* constructions and that the external argument of the lower nominal predicate is always phonologically null, i.e., PRO, suggests that *VN-o suru* forms with complex event nominals are control structures.²

My demonstration will obviously negate the validity of Argument Transfer (Grimshaw and Mester, 1988), since Argument Transfer is incompatible with control, which requires two external arguments.

To develop the above argument, I will in Section 5.2 introduce Terada's (1990) and Matsumoto's (1992a and b) suggestion that (bipredicational) *VN-o suru* forms are control structures. I will in Section 5.3 present lexical, morphosyntactic, and syntacticosemantic evidence for the control hypothesis. In doing so, I will also examine Grimshaw's (1990) A(rgument)-adjunct hypothesis which claims that a nominal's external argument is not realized syntactically. To pave the way to my control hypothesis, I will provide counterevidence for the A-adjunct hypothesis.

¹ In developing my argument, I will ignore the difference between telic and atelic readings of the bipredicational *VN-o suru* constructions since the aspectual difference is insignificant to the argumentation of this chapter.

² For the actual structural descriptions of control structure of bipredicational *VN-o suru*, please refer to Chapter 6 (Section 6.6.4.3) where, based on Minimalism, the structural derivations of RYOKOO(travel)-, BENKYOO(study)-, and KEIKOKU(warning)-type *VN-o suru* constructions are illustrated. Since comprehension of these tree representations requires theoretical assumptions made by Minimalism (Chomsky, 1995), I do not present any structural description of bipredicational *VN-o suru* as a control structure in this chapter.

5.2. Control Hypothesis

5.2.1. Terada (1990)

Among the previous studies on the light verb construction, there are two studies which suggest that it involves control: one is Terada (1990) and the other is Matsumoto (1992a and b). In arguing against Grimshaw and Mester's (1988) Transfer Hypothesis and defending a heavy *suru* hypothesis, Terada (1990) briefly suggests that *VN-o suru* is a control structure, citing the fact that the upper predicate *suru* licenses the external argument Agent and the lower nominal predicate has an empty subject. The coindexation in (1) indicates obligatory control.

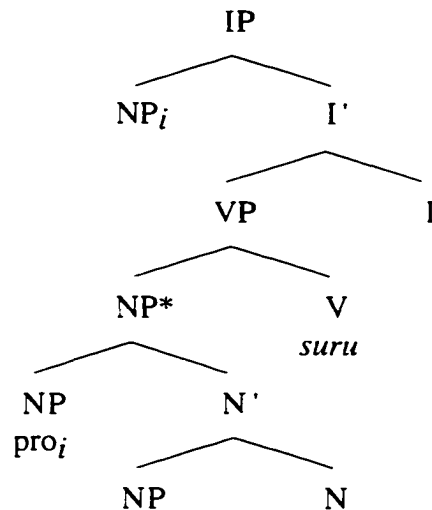
(1) (Terada, 1990, 115 (28))

Takashi_i ga [e_i gakuensai no KIKAKU] o shi-ta.
 NOM s.festival GEN planning ACC do-PAST

'Takashi did a planning of the school festival.'

As for the categorial status of the controlled empty subject, citing the fact that it is governed by the head N, Terada (1990) assumes it to be *pro* rather than PRO, as seen in (2).

(2) (Terada, 1990: 115 (28b))



5.2.2. Matsumoto (1992a and b)

Based on the framework of LFG (Bresnan, 1982), Matsumoto (1992) also makes a suggestion that *VN-o suru* is a control structure, arguing that "the light verb is a control verb, an argument of which binds or controls the subject of its predicative complement

headed by the verbal noun. That is, the light verb construction is essentially the same as the XCOMP construction" (Matsumoto, 1992: 104). This control relation between the subject of *suru* and that of a VN is clearly illustrated in the f(unctional)-structure (4).

(3) (Matsumoto, 1992a: 74 (1))

Seehu wa sono chihoo e busshi no YUSOO o shi-ta.
 gov't TOP the region GOAL goods GEN transportation ACC do-PAST
 'The government transported the goods to the region.'

(4) (Matsumoto, 1992a: 108 (48b))³

$$\left[\begin{array}{l} \text{PRED} \quad \text{'do < SUBJ, XCOMP >} \\ \text{SUBJ} \quad [\text{PRED 'government'}]_i \\ \text{XCOMP} \quad \left[\begin{array}{l} \text{PRED 'transportation < SUBJ, OBJ, OBL}_{\text{GOAL}} \text{ >'} \\ \text{SUBJ}_j \\ \text{OBJ} \quad [\text{PRED 'goods'}] \\ \text{OBL}_{\text{GOAL}} [\text{PRED 'region'}] \end{array} \right] \end{array} \right]$$

5.3. Evidence for the Control Structure

5.3.1. Introduction

Although Terada (1990) and Matsumoto (1992a and b) suggest that (bipredicational) *VN-o suru* is a control structure, unfortunately they provide little evidence for their control hypotheses. What I will do in the rest of this chapter is pursue their suggestion and provide evidence to substantiate their claim. The pieces of evidence I will present come from such diverse areas as lexical, morphosyntactic, syntactic, and syntacticosemantic configurations.

³ In the actual matrix, the two SUBJ's are conjoined by a arch line rather than the 'i' indexes.

5.3.2. Lexical Evidence

5.3.2.1. Argument Structure

The first piece of evidence for the control hypothesis is lexical. Basically, I will show that subjects of verbal noun phrases are obligatory. The corollary of this obligatoriness is that at the lexical level the VN's which head the noun phrases are associated with external arguments. Hence, a claim can be made that in the VN-*o suru* construction, there is a control relationship between the empty subject of the accusative NP headed by a complex VN and the matrix subject of *suru* since out of two coindexed subjects only one of them is syntactically realized overtly.

From Ohakado (1990) reviewed in Chapter 2 (Section 2.6.2.2.1) and Terada (1991), we have learnt that the matrix subject of VN-*o suru* has to be an Agent. Further, from chapter 3, we have learnt that complex VN's are associated with thematic properties. The fact that only one out of two external arguments is realized phonologically suggest the presence of an empty subject.

(5)

- | | | | |
|---------------------------------------|---|--|---|
| a. <i>suru</i> (x (y))
Agent EVENT | b. RYOKOO 'travel'
(x (y))
Agent Goal | c. BENKYOO 'study'
(x (y))
Agent Theme | d. KEIKOKU 'warning'
(x (y (z)))
Agent Goal Theme |
|---------------------------------------|---|--|---|

That is, if the external argument of an accusative NP is phonologically realized, such instances of VN-*o suru* will be ungrammatical, as seen in (6).

(6)

- a. Taroo_i ga Tokyo ni [*Taroo/*kare_i/*zibun_i no RYOKOO] o shi-ta.
NOM to he/self GEN travel ACC do-PAST
'Taroo made Taroo's/his/self's trip to Tokyo.'
- b. ??Taroo_i ga eigo o [*Taroo/*kare_i/*zibun_i no BENKYOO] o shi-ta.
NOM English ACC he/self GEN study ACC do-PAST
'Taroo did Taroo's/his/self's study of English.'

c. Taroo_i ga murabito ni ookami ga kuru to
 NOM villagers to wolf NOM come COMP

[*Taroo/*kare_i/*zibun_i no KEIKOKU] o shi-ta.
 he/self GEN warning ACC do-PAST

'Taroo made Taroo's/his/self's warning to the villagers that
 the wolf would come.'

5.3.2.1.1. A-adjunct Hypothesis (Grimshaw, 1990)

One complication arising from the above claim is the A(rgument)-adjunct Hypothesis (Grimshaw, 1990). According to Grimshaw (1990), the external argument of derived nominals is lexically suppressed as exemplified in (7), where "[a]nnotation of an argument with 'Ø' indicates that the argument has been suppressed and therefore cannot be syntactically satisfied" (Grimshaw, 1990:108). (Compare also Zubizarreta, 1985: 252-259.)

(7) (Grimshaw, 1990:108)

a. The enemy destroyed the city.

destroy (x (y))
 Agent Theme

b. The enemy's destruction of the city

destruction (R (x-Ø (y)))
 Agent Theme

c. The city was destroyed by the enemy.

destroyed (x-Ø (y))
 Agent Theme

Hence, in Grimshaw's (1990) terms, the external thematic argument of derived nominals parallels the external argument of passives, neither of which is obligatorily projected into syntax. Grimshaw (1990) cites a few pieces of evidence for the suppressed external argument, which does not function as an argument but rather as an adjunct: (i) the optionality of a subject in nominal constructions; (ii) the impossibility of having expletive possessive phrases in nominal constructions; and, (iii) the inability of the possessive phrase to control PRO of an adverbial clause (i.e., Adverbial Equi (cf. MacCawley, 1988)).

If Grimshaw's (1990) A-adjunct hypothesis is correct, then there would be no reason to project the external argument of a VN into syntax as an empty subject, and the control relationship observed in *VN-o suru* would better be accounted for either by event control (Williams, 1985; Grimshaw, 1990) or by way of argument binding (cf. Jackendoff, 1990). Since the validity of the A-adjunct hypothesis has consequences for syntactic representations of *VN-o suru*, I will examine it. My examination will show that VN's as complex event nominals defy the A-adjunct hypothesis. Prior to showing the counterevidence for the A-adjunct hypothesis, I would like to point out that, for instance, Abney (1987) provides several pieces of evidence that the external argument of nominals is indeed projected into syntax as PRO.⁴ Also, Sakamoto (1991, 1996) demonstrates that

⁴ Opting for the so-called NP PRO hypothesis (cf. Williams, 1985), Abney (1987) shows, first, in (i), that the 'attempter' must be the same as the 'leaver'.

(i) (from Abney, 1987: 80)

- a. Any attempt to leave.
- b. Any attempt [PRO to leave].

The second piece of evidence has to do with Binding Principle A. Given Principle A, there must be a local antecedent for the anaphor *themselves* in (ii).

(ii) (from Abney, 1987: 81))

- a. [DP pictures of themselves] bother the men.
- b. [DP PRO_i pictures of themselves_i] bother the men.

The third piece of evidence has to do with Principle B.

(iii) (from Abney, 1987: (84))

- a. [DP criticism of them]
- b. [DP *PRO_i criticisms of them_i]

If PRO is postulated as in (iii), it becomes possible to explain why the 'criticizer' cannot be *them*.

The fourth piece of the evidence has to do with Principle C.

(iv) (from Abney, 1987: (85); originally from Ross (1967))

- a. the realization that he/John has broken the law.
- b. PRO_i the realization [CP that he_i has broken the law]
- c. PRO*_{i/j} the realization that John_i has broken that law

In (iva), the 'realizer' can be *he* but cannot be *John*. Upon the postulation of PRO, Principle B can account for why the 'realizer' can be *he*: in (ivb) the pronoun has its antecedent which is outside the governing category of the CP. Further, Principle C can account for why the 'realizer' cannot be the R-expression *John*: in (ivc) the R-expression, which ought to be free everywhere, is coindexed to PRO.

this 'NP PRO theory' is a valid hypothesis even in Japanese.⁵ The indication of these two studies is that the A-adjunct hypothesis remains controversial.

5.3.2.1.2. Evidence Against the A-adjunct Hypothesis

To argue that VN's as complex event nominals defy the A-adjunct hypothesis, I will present a few pieces of evidence to support the hypothesis that the external argument of complex VN's is indeed projected into syntax. All my evidence below involves a *pro*

⁵ To defend the NP PRO theory in Japanese, Sakamoto (1991, 1996) provides several pieces of evidence very much in the spirit of Abney (1987). First, analogous to an English example (i), its Japanese counterpart (ii) contains an understood subject, PRO.

(i) (from Abney, 1987: 80)

Any attempt to [PRO leave].

(ii) (from Sakamoto, 1991: 244 (102))

a. Taroo ga [PRO nigedashi] tagatteiru.
NOM escape want

'Taroo wants [PRO to escape].'

b. [PRO nigedasu tame no] arayuru kokoromi/keikaku.
escape in order to every attempt/plan

'every attempt/plan [PRO in order to escape]'

Second, in (iii), "[s]ince there is no overt subject in the above example, a PRO subject of the noun *shuppan* (publication) would be the only candidate as an antecedent".

(iii) (Sakamoto, 1991: 245: (104))

[zibun_i no hon] no PRO_i shuppan.
self GEN book GEN publication
'PRO_i publication of self_i's book'

Third, in (iva), Principle B insists that the pronoun *karera* 'they' be free in its governing category of the entire NP in (ivb).

(iv) (from Sakamoto, 1991: 246 (105))

a. *PRO_i criticisms of them_i.
b. karera_i -e -no PRO*_{i/j} hihan.
they LOC GEN criticism
'(lit.) criticism to them'

Sakamoto's fourth, final argument has to do with Principle C.

(v) (from Sakamoto, 1991: 246: (106))

a. [zibun/Taroo ga hooritsu o okashita]to yuu ninshiki
self NOM law ACC break that recognition
'recognition that he/Taroo has broken the law'

b. [zibun_i ga hooritsu o okashita]to yuu PRO_i ninshiki
self_i NOM law ACC break that recognition
'PRO_i recognition that he_i has broken the law'

c. [Taroo_i ga hooritsu o okashita] to yuu PRO*_{i/j} ninshiki.
NOM law ACC break that recognition
'(someone's) recognition that Taroo has broken the law'

Concerning (va), the 'recognizer' can be *zibun* 'self' but it cannot be *Taroo*. If PRO is postulated as in (vb), the fact that the 'recognizer' must be *zibun* can be accounted for as that the anaphor *zibun* is usually bound by a subject in Japanese. Further, as seen in (vc), Principle C can account for the unavailability of the bound reading between the R-expression *Taroo*, which should never be bound by any antecedent, including PRO.

subject; the intent is that the use of *pro* highlights my point that, although invisible, complex VN's realize their subjects syntactically.

5.3.2.1.2.1. *-Kata Gerund*

The so-called *-kata* 'way' gerund is the first piece of evidence for the claim that complex VN's are not only associated with an external argument but also with a syntactic subject. Sugioka (1992) demonstrates that when a single argument is realized in the *-kata* gerund, the argument that is realized is the thematic object, rather than as its subject.

(8) (Sugioka, 1992, 56)

- a. sensei no sasoi-kata
teacher GEN invitation-way
'how to invite a teacher'
- b. tomodachi no hagemashi-kata
friends GEN encouragement-way
'way of encouraging a friend'

(9) is a control structure with this *-kata* gerund, in which there is only one phonologically realized argument, the object.

(9)

- a. [hukei o inshoozukeru tame no] seito no oshie-kata
parents ACC impress in order to GEN students GEN teaching-way
'way to teach students in order to impress (their) parents'
- b. [hoshookin o damashitoru tame no] hune no shizume-kata
insurance ACC appropriate in order to GEN ship GEN sinking-way
'way to sink a ship in order to appropriate the insurance'

Because (9a) and (9b) are both gerunds and exhibit the control relation, the transitive nominals *oshie*- 'teach', *shizume*- 'sink' must have a subject and an object, both of which are associated with full-fledged argument structure. Obviously, the subject NP's in (9a) and (9b) are phonologically null, but shown in (10) as *pro*.

(10)

- a. [EC_i hukei o inshoozukeru tame] no (pro_i no) seito no oshie-kata
parents ACC impress sake GEN GEN students GEN teaching-way
'*pro*'s way to teach students in order to impress (their) parents'

- b. [EC_i hoshookin o damashitoru tame] no (pro_i no) hune no shizume-kata
 insurance ACC appropriate sake GEN GEN ship GEN sinking-way
 'pro's way to sink a ship in order to appropriate the insurance'

In the parallel manner, VN's can also assume control involving a rationale clause, as seen in (11).

(11)

- [hakushigoo o toru tame] no Ainu-go no chuu-ya no KENKYUU.
 Ph.D. ACC obtain sake GEN -language GEN day-night GEN research
 'the day and night research of the Ainu language in order to obtain a Ph.D.'

Since nominal control is possible even when a subject NP is not phonologically present, the structural parallelism between (9) and (10) suggests that (11) should also have a *pro* subject, which controls the empty subject of the rationale clause, as in (12).

(12)

- [EC_i Hakushigoo o toru tame no] (pro_i no) Ainu-go no
 Ph.D. ACC obtain in order to GEN GEN -language GEN
 chyuuya no KENKYUU
 day and night GEN research

'pro's day and night research of the Ainu language in order to obtain a Ph.D.'

The control facts illustrated above constitute counter-evidence to Grimshaw's (1990) A-Adjunct Hypothesis.

5.3.2.1.2.2. Honorification

Honorification is the second piece of evidence for the claim that complex VN's have an obligatory unsuppressed subject. Japanese is noted for impoverished *agreement*. One of the rare agreement systems the language has is honorification. The conversion of a verb into the *o-V-ni-naru* form is used for subject honorification and the conversion of a verb into the *o-V-suru* form is for object honorification (cf., Harada, 1976; Prideaux, 1970; Shibatani, 1990). Thus, (13) expresses the speaker's deference to the individual denoted by the subject whereas (14) expresses the speaker's deference to the individual denoted by the object.

(13)

a. Sensei ga seito o o-shikari-ni-nat-ta.
 teacher NOM students ACC scold HON PAST

'The teacher scolded the student.'

b. *Seito ga sensei o o-shikari-ni-nat-ta.
 student NOM teacher ACC scold HON PAST

'The student scolded the teacher.'

(14)

a. Seito ga sensei o o-tasuke-shi-ta.
 student NOM teacher ACC help HON PST

'The student helped the teacher.'

b. *Sensei ga seito o o-tasuke-shi-ta.
 teacher NOM student ACC help HON PST

'The teacher helped the student.'

VN's, too, can have subject honorification when they are prefixed by *go-*.⁶

Judging from the pair in (15) and (16), it is evident that it is the individual denoted by the subject phrase and not the object phrase which enjoys deference.

(15)

a. sensei no seito no go-HIHAN
 teacher GEN student GEN HON-criticism

'the teacher's blame of the student'

b. *seito no sensei no go-HIHAN
 student GEN teacher GEN HON-blame

'the student's blame of the teacher'

(16)

a. sensei no seito no go-SHIDOO
 teacher GEN student GEN HON-guidance

'the teacher's guidance of the students'

⁶ Nouns can be affixed by *o-* or *go-* for honorification. The difference between these two is that *o-* is usually for native Japanese nouns, such as *hana* 'flower' and *go-* is used for Sino-Japanese nouns, such as *KENKYUU* 'research'.

- b. **seito no sensei no go-SHIDOO*
 student GEN teacher GEN HON-guidance
 'the students' guidance of the teacher'

Given the fact that no scrambling is allowed inside the nominal phrase if scrambling results in difficulty identifying who is subject and who is object, it is the phrase-initial subject phrase whose content receives deference denoted by the *go-* prefix. As is clear from (21), then, such honorific nominals take a rational clause even if an honorified subject phrase is phonologically not present.

(17)

- a. [*hukei no hyooban o eru tame no*] *seito no*
 parents GEN reputation ACC obtain sake GEN students GEN
chuu-ya no go-SHIDOO
 day-night GEN HON-guidance

'the guidance of the students day and night in order to obtain a good reputation from (their) parents'

- b. [*ii kaisha o tsukuru tame no*] *hira-shain no*
 good corporation ACC make sake GEN non-rank-employees GEN
chuu-ya no go-SHIEN
 day-night GEN HON-support

'the support to the non-rank employees day and night in order to establish a sound corporation'

Although phonologically not present, both (17a) and (17b) should have a syntactic subject whose content receives deference expressed by the morphological honorific *go-* prefix. The reason is that our world knowledge tells us that *seito* 'student' and *hira-shain* 'non-rank employees' are generally not types of people to be honorified. Thus, these examples should have an honorified subject phrase, matching the morphological marking: e.g., *sensei* 'teacher' in (17a) and *shachoo* 'president' in (17b). If the external arguments of the VN's were lexically suppressed and were not to be projected into syntax, as the A-adjunct Hypothesis postulates, there would be no reason why the syntactically unrealized subjects must be morphologically marked. Rather, the morphological honorific marking indicates the obligatory presence of an empty subject, which is associated with the external argument of the VN's. Consequently, the honorification constitutes counter-evidence to the A-adjunct hypothesis.

5.3.2.1.2.3. *Zibun*-binding

The third piece of counter-evidence to the A-Adjunct Hypothesis is *zibun*-binding. Different from English reflexives, which obey Binding Condition A, the Japanese reflexive *zibun* is often characterized by its long-distance binding and subject-orientation (cf. Katada, 1991).⁷ Let us look at the examples in (18), in which *zibun* is contained in an object NP.

(18)

- a. [gakui o toru tame] no [*zibun* no kuni no
degree ACC take sake GEN self GEN country GEN
seiji-koozoo] no KENKYUU
political structure GEN research

'the research of the political structure of one's own country in order to obtain a degree'

- b. [hokenkin o damashitoru tame] no [*zibun* no ie] no HOOKA
insurance ACC appropriate sake GEN self GEN house GEN arson

'the arson of one's own house in order to appropriate insurance money'

Given the subject constraint, *zibun* in these examples must have a subject NP as its antecedent. The most likely candidate for the antecedent is *pro*, which can also function as a controller of the empty subject in the rationale clause.⁸

⁷ See also Iida (1992, 1996) for an excellent summary of previous works and her account of *zibun*-binding in the framework of HPSG (Head-driven Phrase Structure Grammar). To account for both the syntactic behavior and discourse characteristics of *zibun*-binding, Iida (1992) proposes a conjunctive approach to *zibun*-binding, claiming that, besides its perspective sensitivity, *zibun* has to obey the minimum syntactic constraint: "*zibun* may not *o-command* its antecedent" (Iida, 1992: 121 (92)). *O-command*, a notion based on the obliqueness hierarchy, is defined as follow (Pollard and Sag, 1987, 1994).

O-command: Let Y and Z be synsem [syntacticosemantic] objects with Y referential, Y *o-commands* Z just in case Y is less oblique than some X that dominates Z. In case X = Z, Y is said to *locally o-command* Z.

(from Iida, 1992: 119 (82))

What the definition of *o-command* says is that a phrase Y *o-commands* everything which is, or which is contained in, a more oblique argument of the same head. Thus, Iida's (1992) constraint means that an antecedent of *zibun* must be in an argument phrase which is higher in the obliqueness hierarchy than the argument NP which contains *zibun*.

⁸ If we follows Iida's (1992) *O-command* approach, *zibun* in these examples must have an antecedent in a SUBJ phrase because it is only a SUBJ that is higher than an OBJ in the obliqueness hierarchy. Because the SUBJ is phonologically null, we have to postulate *pro*.

(19)

- a. [EC_i gakui o toru tame] no [(pro_i no) [[zibun_i no kuni] no
 degree ACC take sake GEN GEN self GEN country GEN
 seiji-koozoo] no KENKYUU]
 political-structure GEN research

'the research of the political structure of one's own country in order to obtain a degree'

- b. [EC_i hokenkin o damashitoru tame] no [(pro_i no)
 insurance ACC appropriate sake GEN GEN
 [zibun_i no ie] no HOOKA]
 self GEN house GEN arson

'the arson of one's own house in order to appropriate insurance money'

The plausibility of postulating such a *pro* constitutes counter-evidence to the A-Adjunct Hypothesis, in that complex VN's have an obligatory syntactic subject.

Based on the above pieces of evidence, I do not find support for Grimshaw's (1990) A-Adjunct Hypothesis, which claims that the external argument position of nominals is lexically suppressed and need not be syntactically projected.

5.3.2.1.2.4. Conclusion

Going back to the original topic of the lexical evidence of control for bipredicational *VN-o suru*, we can conclude that both *suru* and complex VN's license external agent arguments, both of which are then projected into syntax. Of these two subjects, only the matrix subject is realized phonologically. The possibility of coindexing these two agent subjects indicates then that these instances of *VN-o suru* are in a control relation.

5.3.3. Morphosyntactic Evidence: Double-honorific-marking

The second kind of evidence for control is morphosyntactic, involving double honorific marking. In bipredicational *VN-o suru* forms, double-marking of honorification is possible, as in (20) where *go-* is prefixed to the VN to honor the downstairs subject and *-sare-* is infix to the matrix verb to honor the upstairs subject.⁹ Importantly, in this construction, the downstairs subject must be phonologically null.

⁹ The subject honorific *sare* is not compatible with *suru* 'do'; the honorific can however be affixed to the semantically equivalent verb *nasu*.

(20)

Sense_i ga seito ni [EC_i eigo no go-KYOOJU]
 teacher NOM students to English GEN HON-teaching

o na-sare-ta.
 ACC do-HON-PAST

'The teacher taught the students English.'

In (20), it is the semantic content of the matrix subject which enjoys deference. The fact that this very subject controls the embedded empty subject can be known by two facts.

(21)

a. Sense_i ga seito_j ni [EC_i/*_j eigo no go-KYOOJU] o na-sare-ta.
 teacher NOM students to English GEN HON-teaching ACC do-HON-PAST

'The teacher taught the students English.'

b. *Seito_i ga sensei ni [*seito/*kare_i/*zibun_i no eigo no
 student NOM teacher to student/he/elf GEN English GEN

go-KYOOJU] o na-sare-ta.
 HON-teaching ACC do-HON-PAST

'The student taught the teacher English.'

First, as is clear from coindexation in (21a), the matrix indirect object with no honorification cannot control the embedded empty subject whose honorification is specified by the *go*-honorific. Second, in (21b), there is a semantic incongruity which leads to the ungrammaticality of the sentence. That is, although for the embedded empty subject, honorification is specified by the *go*-honorific, the semantic content of the matrix subject, *seito* 'student', is not compatible with the *sare*-honorific, being thus unable to control the embedded empty subject due to a mismatch of honorific agreement. Consequently, the double-honorific marking in (20) indicates that bipredicational *VN-o suru* is a control structure since, while the matrix subject and the embedded subject denote the same individual to be honored, the latter is phonologically expressed as a null element.

5.3.4. Syntacticosemantic Evidence

5.3.4.1 Introduction

In this section, I will provide syntacticosemantic evidence for my control hypothesis. I will also argue that the empty subject of the lower nominal predicate is best characterized as anaphoric PRO in that it cannot be substituted by a R(eferential)-expression

and as far as the referential property is concerned, this PRO resembles *zibun* in that it takes the closest subject as its antecedent .

5.3.4.2. Control Relation Is Restricted to Subject

The first piece of syntactic evidence is that the control relationship is restricted to a downstairs subject.

(22)

- a. *Keisatsu_i ga [EC_j EC_i TORISHIRABE] o shi-ta.
 police NOM interrogation ACC do-past
 '(lit.) The police interrogated.'
- b. Keisatsu_i ga [EC_i hannin no TORISHIRABE] o shi-ta.
 police NOM suspect GEN interrogation ACC do-past.
 'The police interrogated a suspect.'

For instance, the semantic incongruity in (22a) due to coindexing the matrix subject *keisatsu* 'police' with the embedded empty object *hannin* 'suspect' indicates that, unlike in (22b) where the control relation holds between the matrix subject and the embedded empty subject, the control relationship cannot be extended to the embedded empty object. Hence, (22b), an instance of bipredicational *VN-o suru*, demonstrates the very basic characteristic of control that control involves an embedded subject.

5.3.4.3. Coreferential Possibility

The second syntactic evidence that bipredicational *VN-o suru* is a control structure has to do with coreference possibilities. The controlled empty subject exhibits the prototypical characteristic of a [+anaphor] element. That is, as seen in (23), the empty subject takes the closest subject as a controller while having no possibility of an arbitrary reading.

(23)

- a. Hanako_j wa [Taroo_i ga Tokyo ni [EC_{i/*j/*k} RYOKOO] o
 TOP NOM to travel ACC
 suru] no yo]to it-ta.
 do NL COMP say-PAST
 'Hanako said that Taroo was going to travel to Tokyo.'

b. Hanako_j wa [Taroo_i ga Sachiko_k to [EC_{i/*j/*k/*l} AISEKI] o
 TOP NOM with table-sharing ACC
 suru no yo]to it-ta.
 do NL COMP say-PAST

'Hanako said that Taroo was going to share a table with Sachiko.'

c. Hanako_j wa [[Taroo_i ga [EC_{i/*j/*k} Ainu-go no KENKYUU]
 TOP NOM language GEN research
 o suru] no yo]to it-ta.
 ACC do NL COMP say-PAST

'Hanako said that Taroo was going to study the Ainu-language.'

d. Hanako_k wa [[Taroo_i ga murabito_j ni [EC_{i/*j/*k/*l} ookami ga kuru
 TOP NOM villagers to wolf NOM come
 to no KEIKOKU] o suru] no yo]to it-ta.
 COMP GEN warning ACC do NL COMP say-PAST

'Hanako said that Taroo would warn the villagers that the wolf was coming.'

Further, this anaphoric nature of the controlled empty subject can be confirmed by the double accusative NP construction in (24) where, unlike the subject of the deeply embedded VN, the embedded subject of in the *VN-o suru* construction, *TEIAN-o suru*, must be bound by a matrix subject.

(24)

Hanako_i ga Taroo_j ni [EC_{i/*j/*k/*Hanako} [EC_{i/j/k} Ainu-go
 NOM to -language
 no KENKYUU] no TEIAN] o suru.
 GEN research GEN proposal ACC do

'Hanako makes a proposal of studying the Ainu-language to Taroo.'

Consequently, the above coreferential possibility indicates two things: bipredicational *VN-o suru* is a control structure and the empty subject has an anaphoric property, seeking the closest *subject* as its antecedent.

5.3.4.4. Split Antecedent

The third syntactic piece of evidence for the claim that bipredicational *VN-o suru* is a control structure and its empty subject has the referential property of anaphors is split antecedence. It is a well-known fact that an anaphor cannot have a split antecedent while a pronoun can.

(25)

(i) Anaphor:

*John_i asked Mary_j about themselves_{i+j}.

(ii) Pronoun:

Mary_i told John_j that they_{i+j} should study the Ainu-language.

This contrast in taking a split antecedent is observed in control structures as well: while PRO of obligatory control cannot have a split antecedent, PRO of non-obligatory control can (Bouchard, 1984; Bresnan, 1982; Chomsky, 1986).

(26)

(i) Obligatory Control:

*Tom_i told Joe_j [PRO_{i+j} to shave themselves].

(ii) Non-obligatory Control:

Mary_i thought that I_j said that [PRO_{i+j} to see each other_{i+j}] would be not easy.

My split antecedent test will demonstrate that bipredicational *VN-o suru* involves obligatory control, having an anaphoric empty subject. My test concerns the employment of *kyoodoo-*, a Sino-Japanese affix meaning 'joint-'. The prefixation of *kyoodoo-* forces the empty subject of a VN to find a split antecedent.

(27) *Kyoodoo-* 'joint-' Test:

a. Hanako_i ga Taroo_j ni [EC_i [EC_{i+j} Ainu-go no kyoodoo_{i+j} -KENKYUU]
 NOM to language GEN joint-research
 no TEIAN] o shi-ta.
 GEN proposal ACC do-PAST

'Hanako made to Taroo a proposal of joint-research (with Taroo) on the Ainu-language.'

b. *Hanako_i ga Taroo_j ni [EC_{i+j} [EC Ainu-go no KENKYUU] no
 NOM to language GEN research GEN
 kyoodoo_{i+j} -TEIAN] o shi-ta.
 joint-proposal ACC do-PAST

'Hanako made to Taroo a joint-proposal (with Taroo) of studying the Ainu-language.'

As we see in the case in which one VN is embedded within another, the precise location of *kyoodoo* prefixation will tell us whether a designated empty subject can have a split antecedent or not. The VN embedded within a VN allows the prefix, but the VN within the *VN-o suru* construction does not. This demonstrates that the embedded subject of the bipredicational *VN-o suru* construction is anaphoric while the deeply embedded subject is not.

5.3.4.5. Sloppy Identity

The fourth piece of evidence for the control structure for the bipredicational *VN-o suru* is sloppy identification (Ross, 1967, 1986; Sag, 1976; Chierchia, 1984, 1988).¹⁰ Examples of sloppy identity are found in (28). In (28) showing obligatory control, the demonstrative *so* can engender only a sloppy reading, referring not to the proposition but only to the property (i.e., predicate) of a preceding sentence, as underlined.

(28) Obligatory Control:

- a. John_i tried [PRO_i to leave], and so did Mary
- b. = Mary_j tried [PRO_j to leave].

In contrast, in (29) showing non-obligatory control, *so* is ambiguous in that it can refer either to the proposition or property of a preceding sentence, yielding non-sloppy (29a) or sloppy (29b) identity interpretation.

(29) Non-obligatory Control:

- Susan_i believes that [it is necessary [PRO_i to criticize herself], and so does John.
- a. = John believes that [it is necessary [for Susan to criticize herself].
- b. = John_j believes that [it is necessary [PRO_j to criticize himself].

Given the above contrast, the prediction can be made that if bipredicational *VN-o suru* is a control structure which involves obligatory control, then it should exhibit sloppy identity; and the demonstrative *so* 'so' should not be ambiguous; it should refer only to the *property* of a preceding sentence. This prediction is borne out, as seen in (30).

¹⁰ This piece of evidence is syntacticosemantic.

(30)

a. Taroo_i ga [PRO_i Ainu-go no KENKYUU] o shi.
 NOM language GEN research ACC do

Naoko mo soo shi-ta.
 too so do-PAST

'Taroo studied the Ainu-language and so did Naoko.'

b. Taroo_i ga murabito ni [PRO_i ookami ga kuru to no KEIKOKU]
 NOM villagers to wolf NOM come COMP GEN warning

o shi, Naoko mo murabito ni soo shi-ta.
 ACC do too villagers to so do-PAST

'Taroo warned the villagers that the wolf was coming and so did Naoko.'

As a result, (30) should indicate two things: bipredicational *VN-o suru* is a control structure and it involves obligatory control, whose embedded empty subject must be obligatorily controlled by the matrix subject.

5.4. Summary

In sum, based on the pieces of evidence which come from such diverse areas as lexical, morphosyntactic and syntacticosemantic configurations, I have substantiated the following: (i) the bipredicational *VN-o suru* construction constitutes a control structure; and (ii) the embedded subject should best be characterized as PRO. My demonstration obviously poses a serious problem to such light *suru* hypotheses as Grimshaw and Mester's (1988) Transfer Hypothesis.

Chapter 6. Syntactic Analysis

6.1. Introduction

In this Chapter, I will conduct syntactic analyses of mono- and bi-predicational *VN-o suru* constructions. My analyses will be based on Chomsky's (1995) Minimalism.¹ Since syntacticosemantic properties of the accusative phrases play important roles for my analyses, I will first characterize these phrases based on my discussion in Chapter 4 as well as on Borer (1994). Assisted by Borer, I will show that *VN-o suru* constructions involve three different types of accusative phrases differing in referentiality, specificity, category, and Case. Taking these type differences as a point of departure, I will provide syntactic characterization of mono- and bi-predicational *VN-o suru*. In doing so, I will illustrate that the peculiarities of the bipredicational *VN-o suru*, such as argument promotion and frozen phenomena, are closely tied to accusative Case marking.

The following is the outline of this Chapter. In Section 6.2, I will briefly reiterate a generalization on the accusative phrases which we obtain in Chapter 4. In Section 6.3, I will enhance this generalization based on Borer (1994). In Section 6.4, I will enumerate the basic issues to be accounted for with respect to mono- and bi-predicational *VN-o suru*. In Sections 6.5 and 6.6, I will provide syntactic analyses of these constructions. In Section 6.7, I will conclude this chapter.

6.2. Generalization on Accusative Phrases

In Chapter 3, based on Grimshaw (1990), I demonstrate that any VN can be associated with a non-thematic, simple event reading or a thematic, complex event reading. Based on this dichotomy in reading, in Chapter 4, I demonstrate that there are two types of *VN-o suru* constructions: one is monopredicational and the other is bipredicational. Based

¹ The main reason why I employ Minimalism is that it provides a means to account for one of the intriguing aspects of the so-called LVC, i.e., 'argument promotion'. Minimalism allows us to integrate the 'promotion' of arguments as part of clausal tree building. Such flexibility is not found within the Government and Binding theory of Chomsky (1981, 1986b).

on the semantic properties of their accusative phrases. I further classify each of these *VN-o suru* constructions into telic and atelic forms.

In so doing, the accusative phrases of the monopredicational *VN-o suru* constructions are defined as follows. One type of accusative phrase assumes an individuated and hence bounded event reading due to the presence of referential modifiers (see Chapter 4, Section 4.2.2). Besides a bounded reading, the accusative phrase assumes a specific reading, especially when its referential modifiers are high in specificity (see Chapter 4, Section 4.4.3). The other type lacks any referential modifiers: this lack of modification conditions an 'undeterminate mass noun' reading which in turn conditions its unbounded reading (see Section Chapter 4, 4.3). Due to the unbounded reading, the accusative phrase assumes a non-specific reading (see Chapter 4, Section 4.4.3). In sum, the accusative phrases of monopredicational *VN-o suru* forms is divided into two types: (a) a specific and bounded phrase and (b) a non-specific and unbounded phrase, both of which are headed by non-thematic, simple event nominals.

As for the accusative phrase of bipredicational *VN-o suru*, I argue in Chapter 4 that it is headed by a complex event nominal and it does not take any referential satellite, such as a modifier, quantifier, and demonstrative (see Chapter 4, Section 4.5). Due to its lack of association with a referential satellite, which otherwise transforms a mass noun reading of the phrase into a count noun reading, the accusative phrase does not assume a bounded event reading. This lack of a bounded event reading in turn yields a non-specific reading. In sum, Table 6.1 lists the general characteristics of the accusative phrases of both mono- and bi-predicational *VN-o suru*.

Table 6.1.

A Preliminary Classification of Accusative Phrases of *VN-o Suru* Constructions

	Acc. Phrase of Monopred. <i>VN-o Suru</i>		Acc. Phrase of Bipred. <i>VN-o Suru</i>
Eventive Reading	Bounded	Unbounded	Unbounded
Specificity	Specific	Non-specific	Non-specific
Nominal Head	Non-thematic N.	Non-thematic N.	Thematic N.

6.3. Review of Borer (1994): Three Types of Accusative Phrases

6.3.1. Introduction

To enhance the above characterization of the three types of accusative phrases, I will borrow some notions from Borer (1994), who coincidentally argues for classifying accusative phrases into three types. Borer (1994) proposes three different accusative phrases based on a difference in referential specificity. Since Borer (1994) depends in turn on Enç (1991), who discusses different types of specificity, I will first review Enç (1991).

6.3.2. Enç's (1991) Two Types of Specifics

Claiming that "specificity involves linking objects to the domain of discourse in some manner or other", Enç (1991: 21) divides specifics into two types: 'relational specifics', such as *a certain N*, which do not presuppose existence, and 'partitive (or subset) specifics' which presuppose existence. The difference between these two types of specifics can be illustrated with the following examples from Turkish.

(1) (Enç, 1991: 6 (16-18))

- a. Odam -a birkac couk girdi.
my-room-DAT several child entered
'Several children entered my room.'
- b. Iki kiz-i taniyordum.
two girl-ACC I-knew
'I knew two girls.'
- c. Iki kiz taniyordum.
two girl I-knew
'I knew two girls.'

For the context introduced by (1a), both (1b) and (1c) are possible utterances. The difference in case marking, however, results in a difference in interpretations. In (1b), with the accusative phrase, the 'two girls' must be interpreted as two of the girls who entered the room: i.e., a partitive (subset) interpretation. In contrast, in (1c) with the object phrase lacking morphological case, the 'two girls' must be interpreted as additional girls: i.e., a relational specific interpretation.

6.3.3. Borers' (1994) Three Types of Accusative Phrases

Enç's (1991) two way classification of specifics is endorsed by Borer (1994), though Borer's treatment incorporates insights from Heim (1982, 1988) and Diesing (1992) --- and consequently employs different terms. Adding 'non-referential non-specifics' to the two types of specifics, Borer (1994: 39) classifies accusative phrases into three types, as in Table 6.2.

Table 6.2.
Enç's (1991) and Borer's (1994) Classifications of Accusative Phrases

N-Type	Category	Borer (1994)	Enç (1991)
A	DP	Referential Specifics	Partitive (Subset) specifics
B	DP	Referential Non-specifics	Relational Specifics
C	NP	Non-referential Non-specifics	Non-specifics

Assuming then that all the referential binding proceeds through D, both type A and B referential accusative phrases are categorially regarded as DP while type C non-referential phrases are regarded as NP.

The main characteristic of the type A DP's is that they measure events in the sense of Tenny (1994) since, these DP's are those which denote atomic or quantized events (Borer, 1996: 7). The referential non-specific type B DP's are crucially associated with empty D's. In other words, the referential non-specificity is attributed to the emptiness of D. The non-referential non-specific type C NPs incorporate into the V and form complex predicates VP (Borer, 1994: 40; see also Diesing, 1992).

Further, Borer (1994) claims that despite the fact that these phrases are all marked by accusative, their Case differs from each other. Given the fact that in such languages as Finnish and German, the difference between a specific and a non-specific results in the difference in assignment between structural Case and partitive Case (Deprez, 1991; Filip, 1993, 1996; Hoop, 1992), the referential specific nominal is marked by structural Case,

and the referential non-specific nominal is marked by partitive Case.² As for the non-referential nominal, Borer (1994) claims that it is marked by inherent Case.³ Hence, Borer's (1994) three way classification of accusative phrases can be summarized as Table 6.3.

Table 6.3.
Borer's (1994) Proposal on the Three Types of Accusative Phrases

N-Type	Category	Accusative Case	Semantic Property
A	DP	Structural Case	Referential Specifics
B	DP	Partitive Case	Referential Non-specifics
C	NP	Inherent Case	Non-referential Non-specifics

6.3.4. Implications of Borer (1994)

The similarity between my generalizations in Section 6.2 (see Table 6.1) and Borer's (1994) classification of accusative phrases (see Table 6.3) is undeniable. Exploiting this similarity, I will borrow two notions from Borer (1994), the categorial distinction between DP and NP and the three types of Case distinction, and use these to better characterize the accusative phrases of *VN-o suru* formation.

² Confusingly, the term 'partitive' is applied to different noun phrase types in Enç's and Borer's systems. The existential reading which Borer claims for referential non-specificity (following Diesing, 1992) is linked to partitive Case.

³ According to Borer (1994), the difference in accusative marking follows from differences in functional categories. In the case of a referential specific DP, the functional category 'Asp(ectual) E(vent)' is projected, and structural accusative Case is assigned at [Spec, AspEP] where the DP is interpreted as an Measured Event in the sense of Tenny (1994). Borer (1994) claims that in the absence of such an aspectual phrase, a 'F(unctional shell)' is projected so that a referential non-specific DP can be assigned partitive Case once it raises to the Spec position of F. As for the non-referential non-specific NP, Borer (1994) argues that it remains in the VP since there is no Case motivation for it to move out of the VP. Any NP which remains in the VP domain is incorporated into the verb.

6.3.4.1. Categorical Differences and Referentiality

6.3.4.1.1. Introduction

An implication of the parallelism between my and Borer's (1994) classifications is that the accusative phrases of monopredicational *VN-o suru* are referential DP's while those of bipredicational *VN-o suru* are non-referential NP's. This implication is in turn based on another implication that the presence or absence of referentiality can be tied to the difference in nominal type between the simple event nominal and the complex event nominal. Based on these implications, I re-characterize the accusative phrases of *VN-o suru* constructions as follows.

In the case of what I call 'telic monopredicational *VN-o suru*', its accusative phrase is headed by a referential, simple event nominal. Assuming that referential binding proceeds through D (Borer, 1994; Longobardi, 1994; Noguchi, 1995), the accusative phrase is categorially DP. The same is said with an atelic monopredicational *VN-o suru*. In the case of bipredicational *VN-o suru*, its accusative phrase is headed by a complex event nominal. Given that (i) its head is non-referential (i.e., predicational) and (ii) the whole accusative phrase assumes nothing but a non-referential reading (judging from its incompatibility with referential modifiers), the phrase is categorially NP.

6.3.4.1.2. Difference between DP and NP

To infuse some substance into the above re-characterization, I will discuss the significance of 'empty D', and also, based on Longobardi (1994), provide a piece of evidence for the categorial distinction between DP and NP.

6.3.4.1.2.1. Significance of Empty D(eterminer)

Borer (1994) and Longobardi (1994) discuss the possible presence of empty D(eterminer). In doing so, both studies stand on the common ground that a phrase associated with D is referential.⁴ Further, both studies agree that any phrase which is associated with an empty D must have a non-count, mass noun reading and be subject to existential closure (cf. Heim, 1982, 1988). Even though Longobardi (1994) does not employ the notion of specificity, his claim that a phrase with empty D has nothing but an

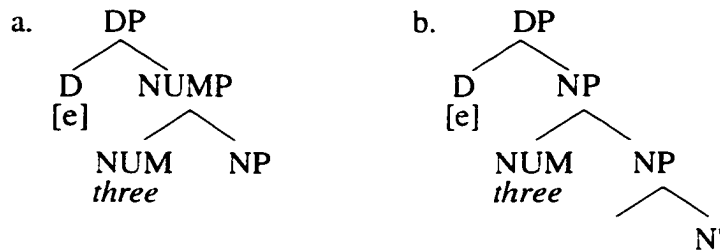
⁴ See Longobardi (1994) for evidence.

'undeterminate mass noun reading' implies that he also regards, as Borer (1994) does, that such a phrase ought to be non-specific. Hence both Longobardi (1994) and Borer (1994) agree that referential non-specific is associated with empty D.

A slight difference between these studies concerns referential modifiers.

Longobardi (1994: 612-621) indicates that any phrase associated with empty D ought to be a *bare* noun. Meanwhile, Borer claims that a referential non-specific nominal need not be bare and any pre-nominal numeral expression (e.g., *a* and *three*) can be treated as having its own functional projection, as in (2a), or adjoined to NP, as in (2b), while retaining its D position empty.

(2) (Borer, 1994: 40 (47a and b))



As for this difference in view on the possible presence or absence of referential modifiers, I suggest that Longobardi (1994) and Borer (1994) are both right. We have seen in Chapter 4 (Section 4.3) that prototypical instances of atelic monopredicational *VN-o suru* comprise of bare accusative nominals, and the lack of referential modifiers regularly assures a non-specific reading of these phrases --- unless denoted entities are identified with discursual entities by way of 'anchoring' (cf. Filip, 1993: see Chapter 4, Section 4.4.3). In this sense, Longobardi's view that a referential non-specific nominal associated with empty D ought to be bare is correct. However Borer's view is also right. Even though in Japanese the presence of referential nominals regularly induces specific readings (see Chapter 4, Section 4.4.2), there are referential modifiers, such as LCS arguments, which do not necessarily induce such a specific reading (see Chapter 4, Section 4.4). In this sense, Borer's view that a referential non-specific nominal can be associated with referential modifiers is also correct.

To deal with these rather contradictory views and empirical observations, I will make a suggestion. Following Borer (1994), let us assume that referential modifiers are projected either as their own functional category ADJP or adjoined to NP. The inducing of

a specific reading due to the presence of referential modifiers can then be accounted for as the movement of a referential modifier into the empty D position. (I will leave it open if the filler is an actual modifier or its associated features). The moved modifier then functions to close the functional category in the sense of Fukui (1986, 1995). Since the filled D conditions a specific reading, this movement can account for the empirical observation that in Japanese referential modifiers regularly induce a specific reading. On the other hand, if there is no movement, the D position will stay empty. This lack of movement and presence of empty D can then account for why a referential modifier does not necessarily induce a specific reading.

In sum, based on Borer (1994) and Longobardi (1994), I assume that accusative phrases of monopredicational *VN-o suru* are categorially DP and the semantic differences between these phrases can be accounted for as the difference in filled or empty D position.

6.3.4.1.2.2. Evidence for NP

As for evidence for the presence of NP as opposed to DP, Longobardi (1994) claims that relativization can be used as a test (see Longobardi, 1994 for evidence). If Longobardi (1994) is right, then the relativization tests (3) suggest that the accusative phrases of those bipredicational *VN-o suru* (3a) are categorially NP, while those of monopredicational *VN-o suru* (3b) are categorially DP.

(3)

(i) Bipredicational *VN-o suru*: (Isoda, 1991: 7 (17))

a. John wa murabito ni ookami ga kuru to KEIKOKU o shi-ta.
 TOP villagers to wolf NOM come COMP warning ACC do-PAST
 'John warned the villagers that a wolf would come.'

a'. *[John ga murabito ni ookami ga kuru to shi-ta] KEIKOKU
 NOM villagers to wolf NOM come COMP do-PAST warning
 '(lit.) warning which John made to villagers that a wolf would come'

(ii) Monopredicational *VN-o suru*:

b. Taroo ga [Tokyo e no (sono) ryokoo] o shi-ta.
 NOM to GEN (that) travel ACC do-PAST

'Taroo made (that) trip to Tokyo.'

b'. Taroo ga shi-ta [Tokyo e no (sono) ryokoo]]
 NOM do-PAST to GEN (that) travel

'(lit.) (That) Tokyo-trip which Taroo made'

One implication of the test is as follows. If relativization is applied to the atelic monopredicational *VN-o suru* with a non-specific accusative phrase, the phrase assumes the specific reading due to its descriptive richness. This type shift can be accounted for under the assumption that both are associated with D-position which may contribute to specific or non-specific readings of monopredicational *VN-o suru*. However, such an option is not available with bipredicational *VN-o suru*, suggesting that they lack a D-position, hence are unable to assume such specific reading. Given Longobardi (1994), this incompatibility of bipredicational *VN-o suru* with relativization indicates that the constructions are categorially NP.

Although further investigation is required, the distinction between DP and NP is one way to characterize the accusative phrases of *VN-o suru* formation, and I will include this criterion as part of my characterization.

6.3.4.2. Case Distinction

6.3.4.2.1. Three Types of Accusative Case

A further re-characterization of accusative phrases of *VN-o suru* formation has to do with their Case. One implication of the parallelism between my classification of accusative phrases (cf. Table 6.1) and Borer's (1994) (cf. Table 6.3) is that the accusative phrases of *VN-o suru* constructions are each associated with different Case-markers. First, given that in such languages as Finnish and German, the presence and absence of specificity is reflected in the Case distinction between structural and partitive Case, it is plausible to assume that, for instance, the following monopredicational constructions are distinctively associated either with structural Case (4i) or with partitive Case (4ii).

(4)

(i) With Specific Accusative DP's:

- a. Taroo ga ichi-ji-kande **sono gorufu o** shi-ta.
 NOM one-hour-in that golf ACC do-PAST
 'Taroo played that (round of) golf in an hour.'
- b. Taroo ga ichi-ji-kande **sono shoogi o** shi-ta.
 NOM one-hour-in that chess ACC do-PAST
 'Taroo played that (match of) chess in an hour.'

(ii) With Non-specific Accusative DP's:

- c. Taroo ga ichi-ji-kan **gorufu o** shi-ta.
 NOM one-hour-for golf ACC do-PAST
 'Taroo played golf for an hour.'
- d. Taroo ga ichi-ji-kan **shoogi o** shi-ta.
 NOM one-hour-for chess ACC do-PAST
 'Taroo played chess for an hour.'

I have no evidence for the Case distinction between structural and partitive Case: I simply assume that this Case distinction based on specificity is universal and hence applies to Japanese.

Second, as for inherent Case, Borer (1994) implies that it can co-exist either with structural or partitive Case. I will show that this implication is warranted. To do so, I crucially assume that such examples as (5) showing *double o VN-o suru* formation are grammatical, as claimed by Dubinsky (1994), Kageyama (1991), Saito and Hoshi (1994), and Sells (1990).

(5)

- a. ??Taroo ga eigo o BENKYOO o suru.
 NOM English ACC study ACC do
 'Taroo studies English.'
- b. ??Taroo ga Ainu-go o KENKYUU o suru.
 NOM language ACC research ACC do
 'Taroo researches the Ainu language.'

Even though (5) violates a double-*o* constraint against two instances of the case-marker *o* in the same clause, the violation merely involves the so-called 'surface double-*o* constraint':

accordingly, (5) ought to be grammatically acceptable.⁵ Such grammaticality is obviously absent from the causative (6b) where there are two structural Cases, hence, violating the 'standard double-*o* constraint', discussed by Harada (1973), Kuroda (1978, 1988), and Poser (1989).

(6)

a. Taroo ga hon-o yomu.
NOM book ACC read

'Taroo reads (a) book(s).'

b. Taroo ga [Hanako-ni/*-o hon-o yom]-ase-ta.
NOM DAT/ACC book ACC read-CAUS-PAST

'Taroo made Hanako read (a) book(s).'

That inherent Case can co-exist with another type of Case can be demonstrated by (7). In (7), an *in*-phrase is used to induce the specific bounded reading of *eigo* 'English' and *Ainu-go* 'Ainu-language' and a *for*-phrase is used to induce the non-specific unbounded reading of these phrases. By assumption, the promoted Themes are marked by structural Case (if bounded and specific) or by partitive Case (if unbounded and non-specific).

(7)

a. ??Taroo ga (ichi-ji-kan) eigo-o [BENKYOO] o shi-ta.
NOM one-hour-for English ACC study ACC do-PAST

'Taroo studied English for an hour.'

a'. ??Taroo ga (ichi-ji-kande) eigo-o [BENKYOO] o shi-ta.
NOM one-hour-in English ACC study ACC do-PAST

'Taroo studied (a session of) English in an hour.'

⁵ As mentioned in Footnote 12 in Chapter 2, Kageyama (1991: 199 (67)) cites the following which he overheard in a TV interview to illustrate the fact that *double o VN-o suru* should be grammatically acceptable.

(i) ?Sekkaku tsukutta setsubi-o donoyooni-shite katsuyoo-o shiteiku ka.
with-effort made facilities ACC in-what-way utilize ACC do-going Q
toyuu koto ga mondai desu.
COMP thing NOM question is
'The question is, how should we utilize the facilities made with such a big effort?'

- b. ??Taroo ga (ichi-nen-kan) **Ainugo-o** [KENKYUU] o shi-ta.
 NOM one-year-for Ainu ACC research ACC do-PAST

'Taroo researched the Ainu language for a year.'

- b'. ??Taroo ga (ichi-nen-kande) **Ainugo-o** [KENKYUU] o shi-ta.
 NOM one-year-in Ainu ACC research ACC do-PAST

'Taroo researched (a subject of) the Ainu language in a year.'

The fact that (7) is grammatical and that a structural Case and a partitive Case are mutually exclusive --- since a nominal cannot be bounded specific and unbounded non-specific at the same time --- indicates that the Case assigned to the EVENT NP's can be nothing but inherent Case. Hence, (7) indicates that inherent accusative Case can co-exist either with structural or partitive Case.

Furthermore, compare the above bipredicational *VN-o suru* (7) with the monopredicational *VN-o suru* (8), whose monopredicationality is assured by the presence of *sono* 'that'.

(8)

- a. *Taroo ga (ichi-ji-kande/-kan) **eigo-o** [sono benkyoo]-o shi-ta.
 NOM one-hour-in/for English ACC that study ACC do-PAST

'Taroo did that study of English in/for an hour.'

- b. *Taroo ga (ichi-nen-kande/-kan) **Ainugo-o** [sono kenkyuu]-o shi-ta.
 NOM one-year-in/for Ainu ACC that research ACC do-PAST

'Taroo did that research of the Ainu language in/for a year.'

The contrast in grammaticality is striking and it illustrates two points. First, the monopredicational *VN-o suru* in (8) lacks a nominal phrase marked by inherent Case and inevitably involves the possible combinations of structural and partitive Case. This is ruled out. Second, since the presence of two accusatives is allowed for the bipredicational *VN-o suru* (7), this construction must be associated with an inherent Case which is accompanied either by structural or partitive Case.

Hence, while inherent Case is constantly present to mark the EVENT NP, the presence of a structural Case or a partitive Case is optional and the latter two are mutually exclusive. As will be seen later in Section 6.6, the fact that *the EVENT NP of the bipredicational VN-o suru is marked by inherent accusative Case* will play a very significant role in my analyses.

6.3.4.2.2. Underspecification

One complication involving the Case distinction is: How can the verb *suru* check off three different types of accusative Case features? Is *suru* associated with three different Case features? This seems an unlikely possibility. My proposal is that Case-checking can be done by way of 'underspecification'. That is, what kind of accusative Case is checked off is determined by the nominal, since in Japanese there is 'information flow' from an object to a verb (see Chapter 4). Given that Case- and phi-features⁶ are specified prior to it being 'selected' for a derivation (cf. Chomsky, 1995: 237), we can assume that a verbal noun is assigned with its own appropriate Case feature at the lexicon; and this assignment is performed, based on the semantic property of the verbal noun. In contrast, the Case for *suru* is underspecified: merely 'accusative'. Hence, *suru* associated with an accusative Case feature checks off the Case feature of a verbal noun phrase in syntax, regardless of what kind of Case feature it is associated with.

6.3.5. Summary

To conclude this Section, I list Table 6.4, defining the syntacticosemantic properties of the accusative phrases of *VN-o suru* formation.⁷ Relying on the characterization in Table 6.4, I will conduct syntactic analyses of mono- and bi-predicational *VN-o suru*.

Table 6.4.
Three Types of Accusative Phrases of *VN-o suru* Constructions

N-Type	Category	Accusative Case	Semantic Property
A	DP	Structural Case	Referential Specifics
B	DP	Partitive Case	Referential Non-specifics
C	NP	Inherent Case	Non-referential Non-specifics

⁶ Phi-features specify person, number, and gender.

⁷ The Table looks the same as Table 6.3. Borer's (1994) characterization of accusative phrases.

6.4. Things To Be Accounted For

Before providing syntactic analyses, I will briefly summarize what ought to be accounted for with respect to mono- and bi-predicational *VN-o suru*.

6.4.1. Monopredicational *VN-o Suru*

A number of syntactic questions arise in connection with the monopredicational *VN-o suru*. How does the external argument of *suru* receive an Agent reading and its internal argument an EVENT reading? How does the matrix subject of *suru* receive a nominative Case and how does its object receive either a structural accusative Case or a partitive accusative Case? Further, how can a 'specific and bound event reading' be accomplished when the EVENT argument is assigned a structural accusative Case?: and how can a 'non-specific and unbounded event reading' be accomplished when the EVENT argument is assigned a partitive accusative Case?

6.4.2. Bipredicational *VN-o Suru*

As for the bipredicational *VN-o suru*, the empirical generalizations which require syntactic accounts can be illustrated by employing the following three types of VN's.

(9)

- | | | |
|------------|-----------|----------------------|
| a. BENKYOO | 'study' | <Agent, Theme> |
| b. RYOKOO | 'travel' | <Agent, Goal> |
| c. KEIKOKU | 'warning' | <Agent, Goal, Theme> |

These three VN's are typical of their classes and represent respectively VN's with Agent and Theme, VN's of directed motion, and VN's of transfer. BENKYOO, RYOKOO, and KEIKOKU will be used throughout the rest of this chapter as examples of these semantic types of VN's.

The first issue to be accounted for is: Why can a PP argument of the VN not stay inside the accusative NP domain, as seen in (10)?

(10)

a. *Taroo_i ga [PRO_i Tokyo e no RYOKOO] o suru.
 NOM to GEN travel ACC do

'Taroo travels to Tokyo.'

a'. Taroo_i ga Tokyo ni [PRO_i RYOKOO] o suru.
 NOM to travel ACC do

'Taroo travels to Tokyo.'

b. *Taroo_i ga [PRO_i murabito e no ookami-ga kuru to no KEIKOKU] o suru.
 NOM villagers to GEN wolf NOM come COMP GEN warning ACC do

'Taroo warns the villagers that a wolf will come.'

b'. Taroo_i ga murabito ni [PRO_i ookami-ga kuru to no KEIKOKU] o suru.
 NOM villagers to wolf NOM come COMP GEN warning ACC do

'Taroo warns the villagers that a wolf will come.'

While the *VN-o suru* forms in (10a) and (10b) are grammatical as monopredicational *VN-o suru*, why are these very forms ruled out as bipredicational *VN-o suru*?

The second issue is: How can we account for the fact that the NP-internal Theme DP and CP arguments can *optionally* be 'promoted', as seen in (11)?

(11)

a. Taroo_i ga [PRO_i eigo no BENKYOO] o suru.
 NOM English GEN study ACC do

a'. ??Taroo_i ga eigo o [PRO_i BENKYOO] o suru.
 NOM English ACC study ACC do

'Taroo studies English.'

b. Taroo_i ga murabito ni [PRO_i ookami ga kuru to no KEIKOKU] o suru.
 NOM villagers to wolf NOM come COMP GEN warning ACC do

b'. Taroo_i ga murabito ni ookami ga kuru to [PRO_i KEIKOKU] o suru.
 NOM villagers to wolf NOM come COMP warning ACC do

'Taroo warns the villagers that a wolf will come.'

The third issue concerns 'frozen phenomena': if there is no phonologically realized argument present in the EVENT NP domains, why would the EVENT NP's become frozen, that is, insensitive to such syntactic processes as 'adverbial insertion' which involve a word order change, as illustrated in (12)?

(12)

- a. *Taroo_i ga Tokyo ni [PRO_i RYOKOO] o **hitoride** suru.
 NOM to travel ACC alone do
 'Taroo travels to Tokyo by himself.'
- b. Taroo_i ga [PRO_i eigo no BENKYOO] o **isshookenmei** suru.
 NOM English GEN study ACC diligently do
- b'. *Taroo_i ga eigo o [PRO_i BENKYOO] o **isshookenmei** suru.
 NOM English ACC study ACC diligently do
 'Taroo diligently studies English.'
- c. Taroo_i ga murabito ni [PRO_i ookami-ga kuru to no KEIKOKU] o
 NOM villagers to wolf NOM come COMP GEN warning ACC
isoide suru.
 quickly do
- c'. *Taroo_i ga murabito ni ookami-ga kuru to [PRO_i KEIKOKU] o
 NOM villagers to wolf NOM come COMP warning ACC
isoide suru.
 quickly do
 'Taroo promptly warns the villagers that a wolf will come.'

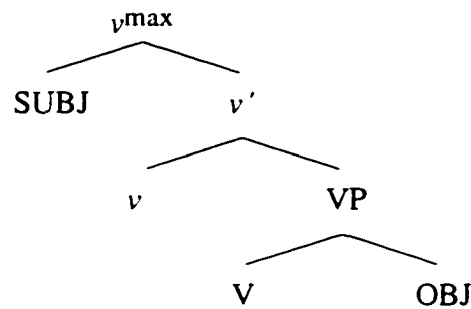
In the following section, I will provide these issues with syntactic accounts.

6.5. Syntactic Accounts of the Monopredicational *VN-o Suru*

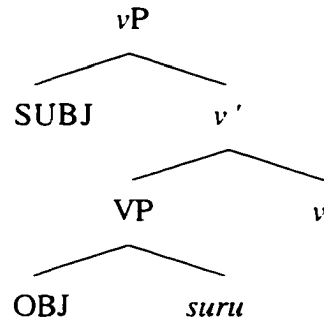
If we adopt the basic assumptions of Minimalism (Chomsky, 1995), the syntactic account of monopredicational *VN-o suru* is straightforward. The main syntactic issues enumerated above basically concern Case-checking and θ -role discharge.

First, assuming that (13) is the syntactic structure associated with a transitive verb, we can regard (14) as the syntactic structure underlying VP's headed by *suru*.

(13) (Chomsky, 1995: 352)⁸



(14) Structure of *Suru*:

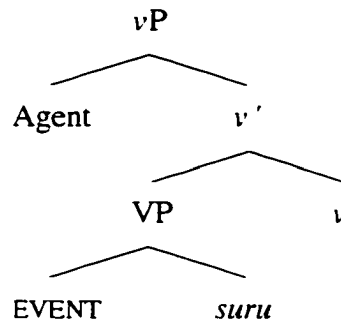


Further, given the Minimalist assumption that θ -role discharge is performed configurationally (Chomsky, 1995; Hale and Keyser, 1992, 1993), we can assume that while an EVENT role is discharged by *suru* to the OBJ in its complement position, an Agent role is discharged to the SUBJ of the *v* by a head-spec relation, as in (15).⁹

⁸ Confusingly given our main concern, the small 'v' is termed a light verb, whose main function is the assignment of an external θ -role (cf. Chomsky, 1995: 315).

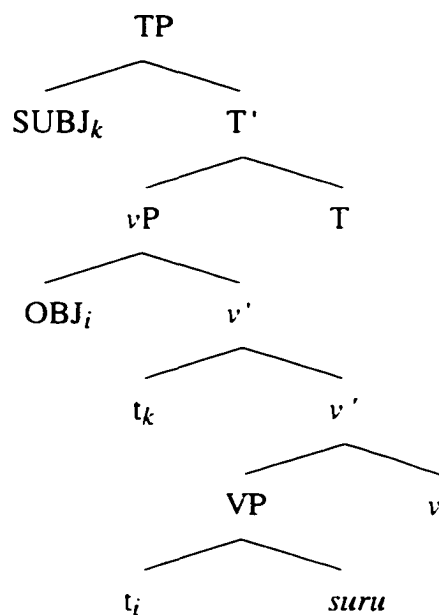
⁹ I assume that even though *v* is the actual assigner of an external θ -role, the external θ -role itself originates in *suru*. Following Chomsky (1995), I assume that thematic roles are interpreted at the interface level of LF based on the principle of Full Interpretation.

(15)



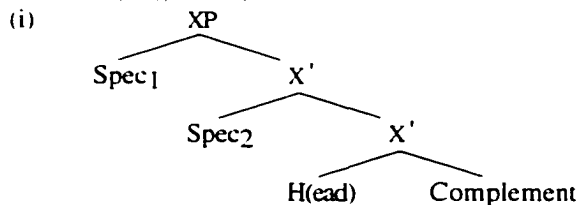
As for Case-checking, under the assumption that, as in English, T (=Infl) in Japanese is associated with a strong nominal feature (Chomsky, 1995: 232-233), the SUBJ raises before Spell-Out to the spec of T, where its nominative Case-feature is checked off by T in the head-spec relation, as in (16).¹⁰

¹⁰ Strong features have to be checked off prior to Spell-Out so that they do not cause a derivation to crash. Since the checking-off operation is typically done in the [spec. head] configuration, the need for the strong feature to be checked off prior to Spell-Out forces movement of an element to the specifier position associated with the strong feature. It is such requirements which derive the postulation of movement operations in Minimalism --- quite parallel to Case-driven movement in the earlier Government and Binding theory (Chomsky, 1981 and 1986b).

(16)¹¹

As we have already seen, the monopredicational *VN-o suru* involves not just one but two types of accusatives. Hence, Case-checking should involve the following two issues: (i) how can the two types of accusative Cases be checked differently?; and (ii) how can the two eventive readings which are tied to these two differing Cases be accomplished? Taking (17) as an example of telic monopredicational *VN-o suru* constructions and (18) as that of their atelic counterparts, I will show how the above issues can be accounted for.

¹¹ The *vP* in the tree is an example of a multiple spec construction, which is illustrated in Chomsky (1995, 286 (58)) as in (i).



(17) Telic Monopredicational *VN-o suru*:

(Accusative phrase = [structural Case], [+bounded], [+specific])

Taroo ga (is-shuu-kande) [**sono ryokoo**]-o shi-ta.
 NOM one-week-in that travel ACC do-PAST

'Taroo made that trip (in a week).'

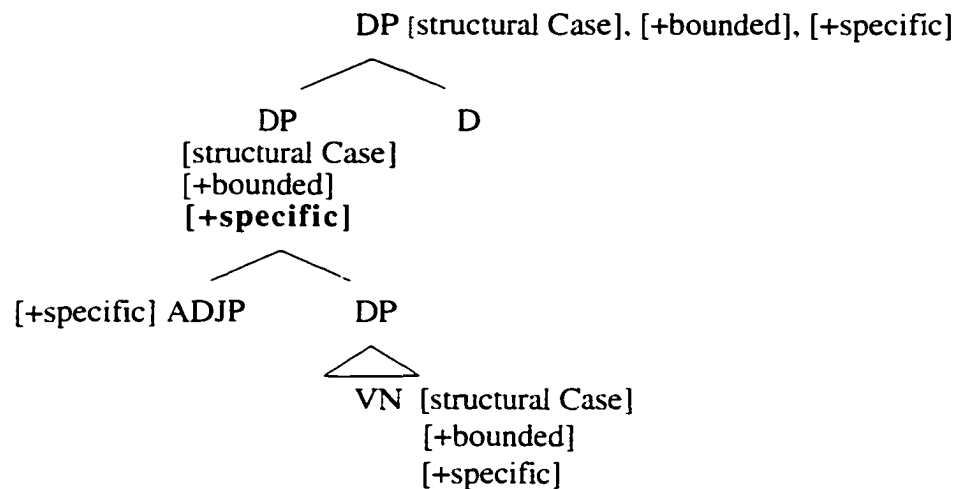
(18) Atelic Monopredicational *VN-o suru*:

(Accusative phrase = [partitive Case], [-bounded], [-specific])

Taroo ga (ichi-ji-kan) [**gorufu**]-o shi-ta.
 NOM one-hour-for golf ACC do-PAST

'Taroo played golf (for an hour).'

Following Chomsky (1995: 237), let us first assume that Case and semantic features of verbal nouns are assigned at the Lexicon. Second, let us assume that these features percolate up through a tree, as shown in (19) for (17).¹²

(19)¹³

Third, let us assume that a modifier can be assigned a feature [+specific] or [-specific] depending on the degree of richness in referential specificity (see Chapter 4 (Section 4.4.3)). Fourth, the specific feature assigned to a modifier also percolates up through its

¹² Based on Chomsky (1995: 251-253), I assume that the percolation itself is part of Copying Theory --- features are copied onto higher nodes.

¹³ I assume that *sono* 'that' is an adjective and also that an adjective phrase is adjoined to an NP (cf. (2b) in Section 6.3.4.1.2.1).

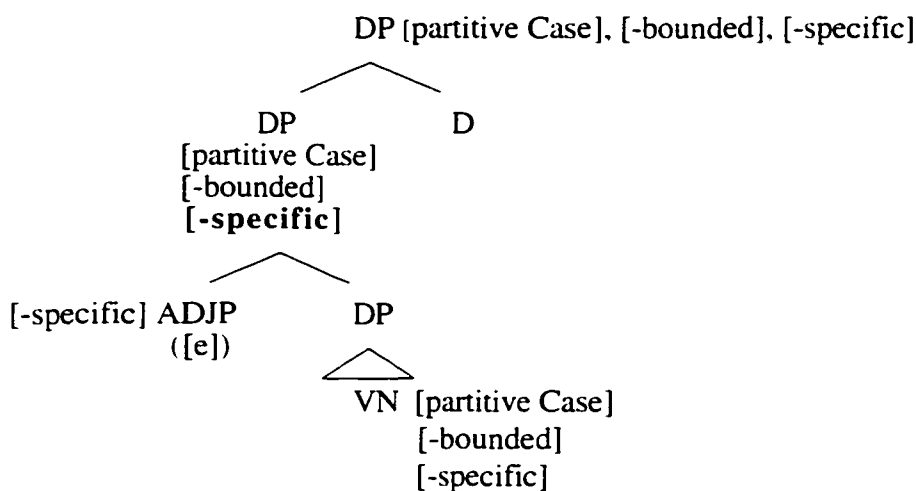
own phrase tree node and then to a nominal phrasal tree node. Fifth, let us assume that there is a 'unification' of the features and their values in the sense of Shieber (1986). If feature values do not match, then there will be a feature clash, and the associated derivation will crash.

In the case of (19), since the feature value [+specific] assigned to the modifier *sono* 'that' matches that of the verbal noun, there is no feature clash, and the whole verbal noun phrase will have the [structural Case], [+bounded], [+specific].¹⁴

If however the verbal noun associated with such features as [structural Case], [+bounded], [+specific] is coupled with a modifier low in specificity (i.e., [-specific]), then, there will be a feature value clash and the derivation will crash --- unless the entity of such an accusative phrase is 'anchored' to a discursual entity in the sense of Filip (1993: 23).

In the case of atelic monopredicational *VN-o suru* constructions, the heads of their accusative phrases are assigned partitive Case and the semantic features [-bounded] and [-specific], as shown in (20) for the example (18).

(20)



In such an instance, under the assumption that, there is a feature [-specific], even though the ADJP position is empty, a unification of the two feature sets takes place at the

¹⁴ As mentioned in Section 6.3.4.1.2.1, if a filled or empty D position is regarded as representing referential specificity, it is possible that the feature [+/-specific] occupies the highest D position in the accusative phrase rather than that it would percolate up the highest DP phrasal node.

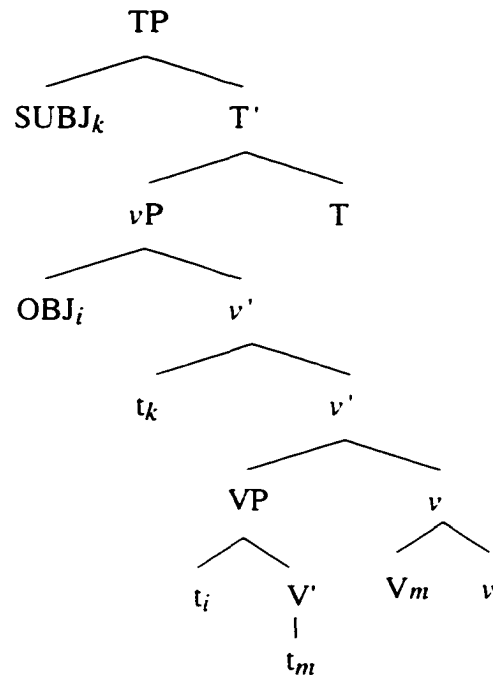
upper DP node. Since there is no feature clash, the unified set of features percolates up to the highest DP node. The same is true when the verbal noun is associated with a modifier low in specificity (see Chapter 4 (Section 4.4.3)). If, however, the verbal noun is associated with a modifier high in specificity, the derivation will clash, since the feature value (i.e., [+specific]) of such a modifier and the feature value (i.e., [-specific]) associated with the verbal noun do not match. Hence, there is no possibility that such expression as (21) would assume partitive Case and such semantic features as [-specific] and [-bounded].

(21)

Taroo ga **Hanako to yakusoku-shite-oi-ta** ryokoo o shi-ta.
 NOM with promise-DO-leave-PAST travel ACC do-PAST
 'Taroo made a trip which he had promised with Hanako.'

Case-checking is not problematic either if we assume that it is done in terms of underspecification: what kind of accusative Case is checked off is determined by the nominal (see Section 6.3.4). While a verbal noun is assigned either a structural accusative Case or a partitive accusative Case at the lexical level, the Case for *suru* is underspecified: merely 'accusative'. Hence, *suru* associated with an accusative Case feature checks off the Case feature of a verbal noun phrase, regardless of its Case feature, as long as it is accusative. As in (22), *suru* raises and adjoins to the *v*; and the complex verb, [_v V *v*] checks off the Case feature of the OBJ.

(22)



If the above is a plausible scenario, the account of the structural and partitive Case assignment and their corresponding semantic readings should pose no problem for us.

6.6. Syntactic Accounts of the Bipredicational *VN-o Suru*

6.6.1. Introduction

The syntactic issues associated with bipredicational *VN-o suru* are not as simple as those with the monopredicational *VN-o suru*. I would like to show that the peculiarities associated with the bipredicational *VN-o suru*, i.e., argument-promotion and frozen phenomena, are closely tied to inherent accusative Case assignment.

Nominative Case-checking has been taken care of, since it is the same as for the monopredicational *VN-o suru*. Thematic role assignment of Agent to the matrix subject and EVENT to the matrix object has also been taken care of, since it is also the same as for the monopredicational *VN-o suru*. The issues which require syntactic explanations are those mentioned in Section 6.4: (i) how can inherent Case for the EVENT NP be assigned? (ii) how can the 'promotion' of EVENT NP arguments be accounted for? and (iii) how can the so-called 'frozen phenomena' be accounted for?

The basic idea I will advance is that there are two positions where inherent accusative Case is assigned to EVENT NP's: (i) in situ or (ii) at [spec, ν P]. To put it very roughly, if inherent accusative Case is assigned in situ, a PP argument escapes the EVENT NP domain so as to avoid double Case-marking under the assumption that the accusative Case marking itself transforms the EVENT NP into a nominal genitive Case domain. Under the assumption that overt incorporation transforms the EVENT NP further into a verbal domain in the spirit of Baker (1988), the DP and CP arguments must also be promoted so that their Case can be checked off.

Alternatively, if an EVENT NP raises and its inherent accusative Case is checked off at [spec, ν P], there will be no overt incorporation. With no overt incorporation, NP-internal DP and CP arguments are nominally Case-marked, while only a PP argument promotes itself so as to avoid an unwanted genitive Case.

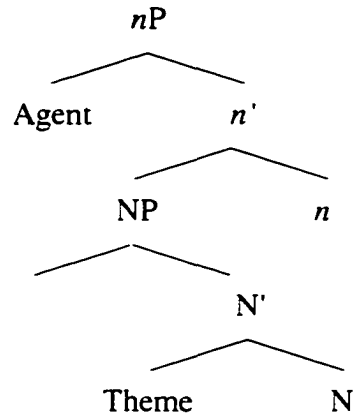
As prerequisites for elaborating the above scenario, I will (a) represent the argument structure of VN's, (b) review Chomsky's (1995) and Lasnik's (1995) views on inherent Case assignment, (c) cast my doubt on LF incorporation hypotheses (Dubinsky, 1994; Saito and Hoshi, 1994), and (d) discuss the nature of the Japanese genitive *no*-marker.

6.6.2. θ -role Discharge in the NP Domain

The structures I assume are shaped by three claims in the literature: Larson's (1988) view that each phrasal projection allows a single complement, the idea due to Hale and Keyser (1992, 1993) that argument structure is conveyed configurationally, and the X-bar Principle (Chomsky, 1970). Adopting these views, I assume the following (23), (24), and (25) as the structure of BENKYOO-, RYOKOO- and KEIKOKU-type VN's. In the case of BENKYOO 'study' (23), while the Theme role is discharged to the internal argument by virtue of the head-complement relation, the Agent role is discharged by *n* to the external argument in the [spec, *n*P].¹⁵

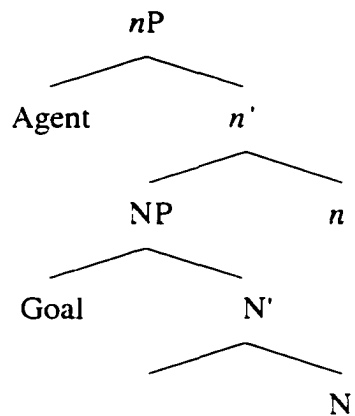
¹⁵ In parallel to '*v*', I assume that '*n*' is an actual external θ -role assigner, even though the external θ -role itself originates in N. Obviously, the structure of the *n*P is defined in parallel to ν P.

(23) BENKYOO-type:



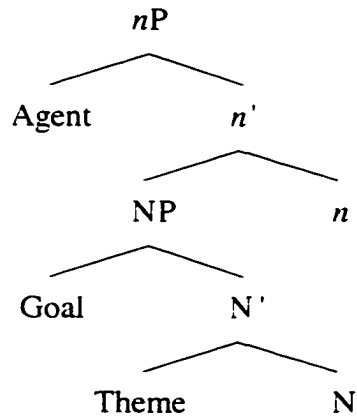
As for RYOKOO 'travel', I follow Larson (1988) in assuming that the Goal role is discharged by *N* to its spec, and the Agent role likewise by *n* to its spec.

(24) RYOKOO-type:



KEIKOKU 'warning' (25) combines these effects: the Theme role is discharged by *N* by means of the head-complement relation, the Goal role is discharged by *N* to its spec, and the Agent role is discharged by *n*.

(25) KEIKOKU-type:



6.6.3. Inherent Case-assignment for the EVENT NP

Since I argue that bipredicational *VN-o suru* involves inherent Case assignment, I need to explore research on this concept. To do so, I will review Chomsky's (1995) and Lasnik's (1995) views on inherent Case assignment. Based then on adverbial insertion (Ura, 1996), I will show that as far as bipredicational *VN-o suru* is concerned, inherent accusative Case can be assigned either in situ or at [spec, *vP*].

6.6.3.1. Views on Inherent Case Marking

With respect to (verbal) inherent Case assignment, there are two views: one view claims that an inherent Case can be assigned in situ by means of the head-complement relation (Chomsky, 1995). The other view claims that inherent Case is assigned by spec-head agreement, as any other Case is (Lasnik, 1995).

6.6.3.1.1. Chomsky's (1995) Claim

In the framework of Government and Binding theory, Chomsky (1986b) claims that inherent Case can be distinguished from Structural (Abstract) Case in three ways:¹⁶ (i) while Structural (Abstract) Case is assigned at S-structure, inherent Case is assigned at D-structure; (ii) inherent Case is assigned by means of the head-complement relation; and, (iii) a head must assign a θ -role to the bearer of an inherent Case. Chomsky (1995)

¹⁶ I assume that Structural (Abstract) Case consists of structural (nominative, accusative and, possibly, dative) Case and partitive (accusative) Case.

basically carries over the idea to Minimalist and claims that "[i]t would be more natural to suppose that structural Case in general is the realization of a spec-head relation, while inherent Case, which [. . .] is associated with θ -marking, is assigned by lexical heads" (Chomsky, 1995: 120). A consequence of this view is the possibility that an NP receiving an inherent Case does not move in the course of a derivation, being in the necessary relation with its Case-assigner from the beginning.

6.6.3.1.2. Lasnik's (1995) Claim

Chomsky's (1995) proposal on inherent Case assignment disturbs one of the most elegant aspects of Minimalism: the elimination of 'Government' and the proposal that all Case checking is done by spec-head agreement. Lasnik (1995) seeks to regain the symmetry in Case assignment through the claim that the Greed principle be abandoned.¹⁷ This claim derives mainly from his study on existential constructions (e.g., *There is [α a strange man] in the garden*), which exhibit a movement relation at LF between *there* and its associate (i.e., α in the example) and, specifically, from his conclusion that the associate does move but not for its own Case requirement (Lasnik, 1995: 632). Discarding 'Greed', which allows items to move only to satisfy their own needs, Lasnik (1995) proposes 'Enlightened Self Interest' which allows items to "move either to satisfy their own requirements or those of the position they move to" (Lasnik, 1995: 615).¹⁸

¹⁷ Constrained by this principle, movement takes place only to satisfy the need or greed of the moving constituent:

Move raises α only if morphological properties of α itself would not otherwise be satisfied in the derivation (Chomsky, 1995: 261 (22)).

¹⁸ Greed and Enlightened Self Interest are not mutually exclusive: rather the former principle is stricter than the latter, possibly as a consequence of parameter setting.

6.6.3.1.3. My claim

I will show that as far as bipredicational *VN-o suru* is concerned, both possibilities are warranted: inherent accusative Case can be assigned either in situ within VP or at [spec *vP*], yielding different *VN-o suru* forms. All the bipredicational *VN-o suru* forms which exhibit 'frozen phenomena' involve 'in situ Case-marking', while any bipredicational *VN-o suru* form which does not exhibit 'frozen phenomena' involves inherent Case-checking at [spec *vP*].

6.6.3.2. Two Inherent Case Positions

To substantiate my claim, I will first of all show that bipredicational *VN-o suru* is associated with two different inherent accusative Case positions. My argument is based on 'adverbial insertion' (Fujita, 1993; Ura, 1996).

6.6.3.2.1. Inherent Case at [Spec *vP*]

Ura (1996: 197) claims that time adverbials such as *kinoo* 'yesterday' in (26a) are adjoined to the outer projection of the VP-shell, based on the common assumption that a floating quantifier marks the base position of its associate (Koizumi, 1995; Miyagawa, 1989b; Sportiche, 1988).

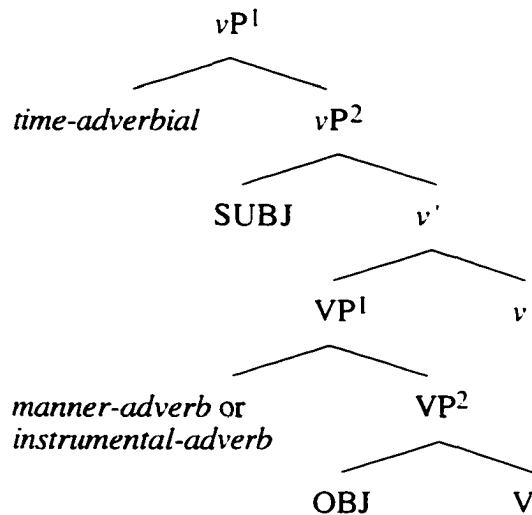
(26) (Ura, 1996: 198 (6-10))

- a. Gakusei *ga*_k [_{vP} *kinoo* [_{vP} *futa-ri*_k [_{vP} *sakana-o*]]] *kut-ta*
 students NOM yesterday two-CL fish ACC eat-PAST
 'Two students ate fish yesterday.'
- b. *Gakusei *ga*_k [_{vP} *yukkuri/naifu-de* [_{vP} *futa-ri*_k [_{vP} *sakana-o*]]] *kut-ta*
 students NOM slowly/knife-with two-CL fish ACC eat-PAST
 'Two students ate fish slowly/with a knife.'
- c. Gakusei *ga*_k [_{vP} *kinoo* [_{vP} *futa-ri*_k [_{vP} *yukkuri/naifu-de*
 students NOM yesterday two-CL slowly/knife-with
 [_{vP} *sakana-o*]]] *kut-ta*
 fish ACC eat-PAST
 'Yesterday, two students ate fish slowly/with a knife.'

Relevant to us are (26b) and (26c). The ungrammaticality of (26b) and the grammaticality of (26c) exhibit the fact that manner adverbials, such as *yukkuri* 'slowly', and

instrumentals, such as *naifu-de* 'knife-with', are adjoined to the inner projection of the VP-shell (see also Fujita, 1993), as delineated in (27).

(27) (Ura, 1996: 198 (6-11))



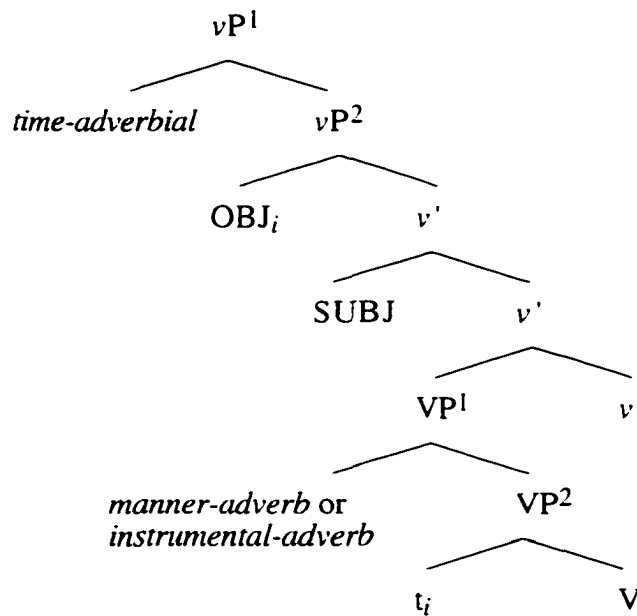
Assuming that (27) is correct, now look at (28). Those *VN-o suru* forms in (28) tolerate adverbials between their accusative NP's and *suru*. Recall my claim from Sections 4.5.3 (in Chapter 4) and 6.3.4.2 that such *VN-o suru* forms are bipredicational and involve an inherent accusative Case for the verbal noun phrase.

(28)

- a. Taroo_i ga [PRO_i eigo no BENKYOO] o **isshokenmei** suru.
 NOM English GEN study ACC diligently do
 'Taroo diligently studies English.'
- b. Taroo_i ga murabito ni [PRO_i ookami-ga kuru to no KEIKOKU] o
 NOM villagers to wolf NOM come COMP GEN warning ACC
isoide suru.
 quickly do
 'Taroo promptly warns the villagers that wolf will come.'

The facts in (28) indicate that the accusative NP's are structurally higher than manner adverbials. Hence, given (27), the position of the accusative EVENT NP's cannot be lower than the spec of the VP¹ which the manner adverbial occupies. The shortest landing site for the accusative NP ought to be the outer spec of vP².

(29)



Hence, as suggested by Lasnik (1995), even inherent accusative Case can be checked off by spec-head agreement: in (29), after V adjoins to the vP^2 head, this complex verb checks off the inherent Case of the EVENT NP which has been raised to one of its spec positions.

6.6.3.2.2. Inherent Case In situ

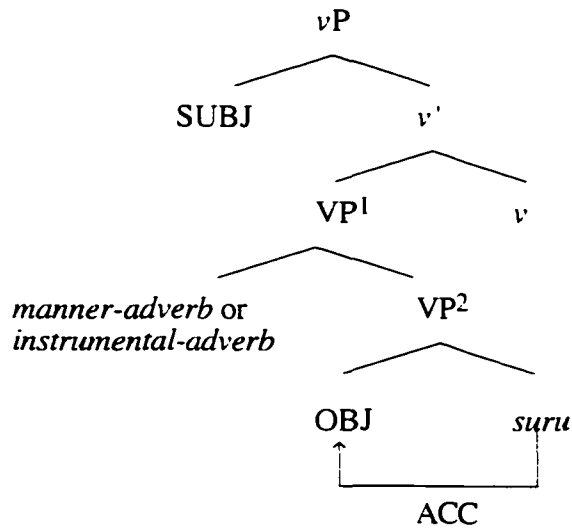
Based on (27), I will also show that an inherent Case can be assigned in situ, as suggested by Chomsky (1995). Given the position of manner adverbials established above, the grammaticality of (30a', b', and c') and the ungrammaticality of (30a, b, and c) indicate that the EVENT NP's of these *VN-o suru* forms, whose EVENT NP's contain no overt arguments, cannot be structurally higher than the [spec, VP¹] positions which the manner adverbials occupy.

(30)

- a. *Taroo_i ga Tokyo ni [PRO_i RYOKOO] o **hitoride** suru.
 NOM to travel ACC alone do
- a'. Taroo_i ga Tokyo ni **hitoride** [PRO_i RYOKOO] o suru.
 NOM to alone travel ACC do
 'Taroo travels to Tokyo by himself.'
- b. *Taroo_i ga eigo o [PRO_i BENKYOO] o **isshokenmei** suru.
 NOM English ACC study ACC diligently do
- b'. ??Taroo_i ga eigo o **isshokenmei** [PRO_i BENKYOO] o suru.
 NOM English ACC diligently study ACC do
 'Taroo diligently studies English.'
- c. *Taroo_i ga murabito ni ookami-ga kuru to [PRO_i KEIKOKU] o
 NOM villagers to wolf NOM come COMP warning ACC
isoide suru.
 quickly do
- c'. Taroo_i ga murabito ni ookami-ga kuru to **isoide**
 NOM villagers to wolf NOM come COMP quickly
 [PRO_i KEIKOKU] o suru.
 warning ACC do
 'Taroo promptly warns the villagers that wolf will come.'

To be more precise, the EVENT NP's of the *VN-o suru* forms must be within the minimal domain of the VP². The only way for the EVENT NP's to assume inherent accusative Case at this position is by means of a head-complement relation, as shown in (31).

(31)



If my argument is right, then, there are two inherent accusative Case positions involving bipredicational *VN-o suru*.

Before substantiating the above possibilities, since my accounts employ 'incorporation', I will review Dubinsky (1994), Hoshi (1994), and Saito and Hoshi (1994), who argue in the framework of Minimalism that *VN-o suru* constructions involve LF incorporation.

6.6.4. LF Incorporation

6.6.4.1. Review of Dubinsky (1994)

In his study of Japanese Light Verbs, Dubinsky (1994) opts for the view that Japanese has two types of *suru*: heavy *suru* and light *suru*. On the assumption that some lexical entries can be unspecified for the value of their N-features (cf. Burzio 1991, Franks and Schwartz 1994), Dubinsky (1994) claims that there are two types of VN's: one with an underspecified [+N] feature and the other with no specific feature, as exemplified below.

(32) (Dubinsky, 1994: 64 (6))

keikoku:	a.	[+N]	b.	∅
'warning'				

The difference in the nominal types results in a difference in form between *VN-o suru* and *VN-suru*. The combination of a VN [+N] and light *suru* results in *VN-o suru* (e.g., *KEIKOKU-o suru*) and the combination of VN[\emptyset] and light *suru* results in *VN-suru* (e.g., *KEIKOKU-suru*).¹⁹ In the case of *VN-o suru*, such as (33), its [+N] VN discharges a Theme role NP-internally.

(33) (Dubinsky, 1994: 65 (8a))

a. Taroo ga Jiroo ni [[ookami ga kuru to]-no KEIKOKU] o shita.
 NOM DAT wolf NOM come COMP GEN warn ACC did

'Taroo warned Jiroo that the wolf is coming.'

The VN further discharges the rest of the θ -roles to the NP-external satellites when the VN itself raises into the head of the VP shell and, at the same time, when the rest of the arguments adjoin to the maximal projection of the VN "such that the VN's phrasal projection no longer dominates it [i.e., NP-external argument]" (Dubinsky, 1994: 66).

The [+N] VN participates in two types of movement: its own raising to the head of the VP shell, and the adjunction of its arguments to positions where they are not governed by the VN's trace (Dubinsky, 1994: 66). Dubinsky (1994: 64) argues that the raising of the VN must be an LF operation, since otherwise problems arise with feature matching. With the underspecified VN, no feature clash arises when the VN moves.

6.6.4.2. Review of Saito and Hoshi (1994)

Hoshi (1994) and Saito and Hoshi (1994) also regard *suru* as thematically empty and all the thematic roles of *VN-o suru* as licensed by θ -assigning nouns.²⁰ On the assumption that θ -roles can be discharged in the course of a derivation (Chomsky, 1992; Larson, 1988), Saito and Hoshi (1994) propose LF incorporation: a θ -assigning noun raises and incorporates into *suru* at LF. According to this analysis, the VN *JYOTO* 'giving' in (34) first assigns its Theme role within the (accusative) NP and then raises and incorporates into *suru* to discharge its Goal and Agent roles accordingly.

¹⁹ Basically, the [+N] VN attracts accusative, while the [\emptyset] VN does not.

²⁰ I will treat Hoshi (1994) and Saito and Hoshi (1994) as a single work as far as their claims on the LVC are concerned.

(34) (from Saito & Hoshi, 1994: 9 (23))

Mary ga John ni/e [NP tochi no JYOOTO]-o shita.
 NOM to land GEN giving ACC did

'Mary gave a piece of land to John.'

To support their LF incorporation hypothesis, Saito and Hoshi (1994) primarily cite facts relevant to the double-*o* constraint.

(35) (from Saito & Hoshi, 1994: 10 (24))

a. ??Honda ga amerika de akoodo o [NP SEISAN] o shite-iru.
 NOM in ACC production ACC doing-is

'Honda is making Accords in the U.S.'

b. ??Mary ga John ni/e tochi o [NP JYOOTO] o shita.
 NOM to land ACC giving ACC did

'Mary gave a piece of land to John.'

Their claim is that "the better-than-expected status of [35] is due to the LF incorporation of the θ -role assigning noun" (Saito and Hoshi, 1994: 10). They claim that the accusative Case assigned to the VN phrase is non-structural, and is licensed by its incorporation into the verb (Saito and Hoshi, 1994: 13), a position not too different from mine. The other accusative Case, which is Structural, is assigned by the newly formed complex N-V on the assumption that the Case feature of *suru* is retained by the N-V complex (Saito and Hoshi, 1994: 22). A drawback is that Saito and Hoshi (1994) do not provide a precise mechanism for their non-structural Case assignment.

(36) (Saito and Hoshi, 1994: 28: footnote 9)

Here, the exact mechanism of 'Case licensing by incorporation' of course needs to be worked out. The cases of noun incorporation discussed in Baker (1988) involve movement from an argument NP at S-structure. Since our case had to do with incorporation of a θ -role assigning noun in LF, it is not clear that his mechanism can be applied directly.

6.6.4.3. Overt Incorporation

Although Dubinsky's (1994) and Saito and Hoshi's (1994) suggestions on incorporation are useful, one problem I find with their claims is that incorporation takes place only at LF. If their claims were right, *VN-o suru* formations would not be sensitive to phonological effect. However, the presence of frozen phenomena indicates that some

types of bipredicational *VN-o suru* are indeed sensitive to phonological effect (see the examples (30 a, b, and c)). Hence, if incorporation takes place, it can be even before Spell-Out. Following Kageyama (1991), I attribute the frozen phenomena to incorporation.²¹ Incorporation Borer (1994) attributes to the non-referentiality of NP's, arguing that they remain in VP since there is no Case motivation for them to move out of VP: any NP which remains in the VP domain is incorporated into a verb.²² This is the hypothesis I will substantiate.

6.6.5. Genitive Case

6.6.5.1. An Observational Generalization on Genitive Case

The last issue to be discussed as a prerequisite for my syntactic accounts is one observational generalization, which is tied to the grammatical properties of genitive *no*.

As is clear from (37), while DP's and CP's, which require Case-checking (cf. Chung, 1994; Dubinsky, 1994), can stay in the EVENT NP domain, PP's are never able to do so.

(37)

a. Taroo_i ga murabito ni [PRO_i ookami ga kuru to no KEIKOKU] o suru.
 NOM villagers to wolf NOM come COMP GEN warning ACC do

a'. Taroo_i ga murabito ni ookami ga kuru to [PRO_i KEIKOKU] o suru.
 NOM villagers to wolf NOM come COMP warning ACC do

a". *Taroo_i ga [PRO_i murabito e no ookami ga kuru to no
 NOM villagers to GEN wolf NOM come COMP GEN
 KEIKOKU] o suru.
 warning ACC do

'Taroo warns the villagers that a wolf will come.'

²¹ According to Kageyama (1991), frozen phenomena are manifestation of morphosyntactic word formation, which he attributes to Baker's (1988) Abstract Incorporation (see Chapter 2, Section 2.3.3.2).

²² Borer's (1994) claim is endorsed by Chomsky (1995: 337): "noun incorporation must be restricted to "non-referential NPs" (as noted by Hagit Borer)".

- b. Taroo_i ga chihoo ni [PRO_i busshi no YUSOO] o suru.
 NOM province to goods GEN transport ACC do
- b'. ??Taroo_i ga chihoo ni busshi o [PRO_i YUSOO] o suru
 NOM province to goods ACC transport ACC do
- b''. *Taroo_i ga [PRO_i chihoo e no busshi no YUSOO] o suru.
 NOM province to GEN goods GEN transport ACC do

'Taroo transports the goods to the province.'

The above situation contrasts with monopredicational *VN-o suru*, which allow PP's to occur inside their accusative EVENT DP's, as seen in (38).

(38)

- a. Taroo ga [(sono) [murabito e no ookami ga kuru to no
 NOM that villagers to GEN wolf NOM come COMP GEN
 KEIKOKU]] o suru.
 warning ACC do
 'Taroo makes (that) warning to the villagers that a wolf will come.'
- b. Taroo ga [(sono) [chihoo e no busshi no YUSOO]] o suru.
 NOM that province to GEN goods GEN transport ACC do
 'Taroo does (that) transportation of goods to the province.'

What is suggested by the above contrast is that the grammatical properties of genitive *no* differ in the case of mono- and bi-predicational *VN-o suru*. I will argue that while the genitive *no* in the referential EVENT DP is a morphological marker, the genitive *no* in the predicational EVENT NP is a Case-marker. To support this claim, I will contrast Japanese *no* with English *of*, citing Murasugi (1991) and Chomsky (1986).

6.6.5.2. Three Types of *No*

According to Murasugi (1991), there are three types of *no*: *no* as a pronoun (39), *no* as a complementizer (40), and also *no* as a genitive marker.

(39) Murasugi (1991, 56 (59))

- a. shiro *no*
 white one
 'the one which is white'

- b. Arizona kara *no*
 from one
 'the one from Arizona'

(40) (Murasugi, 1991: 93: (142))

- a. [Yamada ga atta] *no* wa Russell da
 NOM met TOP is(COP)
 'It was Russell that Yamada met.'
- b. [Yamada ga atta] *no* wa Russell ni da
 NOM met TOP with is(COP)
 'It was with Russell that Yamada met.'

As a genitive marker, the use of *no* is quite varied: possessive-marker (41); time or place marker (42); qualitative-marker (43); and argument-marker (44).

(41) (from Murasugi, 1991: 21 (1/2))

- John *no* kappu.
 GEN cup
 'John's cup'

(42) (from Murasugi, 1991: 22 (3/4))

- a. kinoo *no* koogi
 yesterday GEN lecture
 'yesterday's lecture'
- b. konetikatto *no* ichiban-ii hoteru
 Connecticut GEN best hotel
 'Connecticut's best hotel'

(43) (Murasugi, 1991: 23 (7/8/9))

- a. men *no* shatsu
 cotton GEN shirt
 'a shirt of cotton'
- b. shuukyoo *no* hito
 religion GEN person
 'a man of religion'

Hence, the obvious difference between Japanese *no* and English *of* is that while the Japanese *no* can mark PP's, the English *of* cannot, since unlike the former, the latter acts as an inherent nominal Case.

6.6.5.4. Theoretical Implications

The observational generalization in Section 6.6.5.1 and the theoretical implication in Section 6.6.5.3 can be tied together as (47).

(47)

- a. Referential EVENT DP = Morphological Genitive Marking Domain
- b. Non-referential EVENT NP = Inherent Genitive Case Assignment Domain

The EVENT DP of monopredicational *VN-o suru* is a domain of morphological *no* insertion since PP's in it can be marked by genitive. In contrast, the EVENT NP of bipredicational *VN-o suru* is a domain of nominal Case assignment, where PP's cannot be marked by genitive. This genitive *no*, from (46), is inherent (nominal) Case, whose assignment takes place hand-in-hand with θ -role assignment.²⁴

Given the generalization (47b), I assume that for bipredicational *VN-o suru* once the inherent (verbal) Case feature of EVENT NP is checked off at a [spec, *v*P], the EVENT NP functions to be a *genitive Case domain*. One result is as follows. A PP, which cannot receive Case, cannot stay in the EVENT NP domain where genitive Case must be assigned. To avoid genitive Case assignment, PP 'promotes' itself.

Employing all the issues discussed from Section 6.6.2 to Section 6.6.5 as theoretical tools, in the remainder of the chapter I will demonstrate how the various types of bipredicational *VN-o suru* formations can be accounted for.

²⁴ Since in both referential EVENT DP and non-referential EVENT NP, multiple *no* marking is allowed. Japanese requires some kinds of *no*-insertion rules, regardless of whether *no* is morphological or a Case marker.

6.6.6. Derivations Involving In Situ Marking

6.6.6.1. Introduction

In this section, I will show that we will obtain the *VN-o suru* forms which exhibit frozen phenomena (see the examples (30 a, b, and c)), if their EVENT phrases are Case-marked in situ.

Based on Borer (1994) and Chomsky (1995: 285), who attributes incorporation to the presence of a feature [affix], I assume that at the Lexicon any complex event nominal is assigned the feature, which can be either strong or weak. I assume that the difference in strength is manifested in whether the feature percolates up to the phrasal node at overt syntax (i.e. before Spell-Out) or not. The strong [affix] feature percolates up to its phrasal node: hence, in syntax, it becomes visible to *suru*. Upon seeing this feature, *suru* θ -marks and Case-marks the non-referential NP in situ.

The fact that EVENT NP is a genitive Case domain I attribute to a function of inherent accusative Case marking: the Case-marking itself transforms the EVENT NP to a genitive Case domain. Under this scenario, a PP argument, which does not require any Case, has to move out of the NP domain so that it would not be doubly Case-marked.

Further, the head of the NP associated with the feature [affix] must raise and incorporate into *suru* to eliminate the feature which has motivated the head-to-head movement.²⁵ Given the spirit of Baker's (1988) 'Government Transparency Corollary', this overt incorporation turns the nominal domain of the EVENT NP into a verbal domain.

As a result, the DP and CP arguments move out of the NP domain for Case reasons --- Structural (Abstract) Cases are not available in the VP domain where thematic roles are assigned and where no functional categories required for the Case-checking are present. This movement of DP and CP arguments out of the VN domain also constitutes argument promotion. As in the case of PP promotion, since promotion takes place before Spell-Out, Merge can project phrasal nodes to support the promoted arguments with no involvement of cost. As a result, the promoted arguments form chains, whose tail-ends are θ -marked by the head of the EVENT NP and whose head-ends are Case-marked either by the N + V

²⁵ As mentioned earlier in a footnote, given Chomsky's (1995: 251-253) Copying Theory, the head is associated with the feature [affix] despite the fact that the feature has percolated up to its phrasal node. Once the head of a non-referential NP incorporates into *suru*, the head itself would not move further, since the feature [affix] which has motivated movement is eliminated at the very stage of incorporation (cf. Chomsky, 1995: 285).

complex (as in the case of DP and CP arguments) or internally (as in the case of a PP argument). The chain formation in this instance conforms to the general characteristics of the so-called LVC: while promoted arguments receive verbal Case, they are nonetheless θ -marked by a VN.

Employing RYOKOO 'travel', BENKYOO 'study', and KEIKOKU 'warning' as examples of VN's, I will elaborate how any *VN-o suru* form which exhibits 'frozen phenomena' is derived only when its EVENT NP is Case assigned in situ.

6.6.6.2. RYOKOO-type

In the case of RYOKOO-type *VN-o suru* (48), first, thematic role assignment is performed in the following manner.

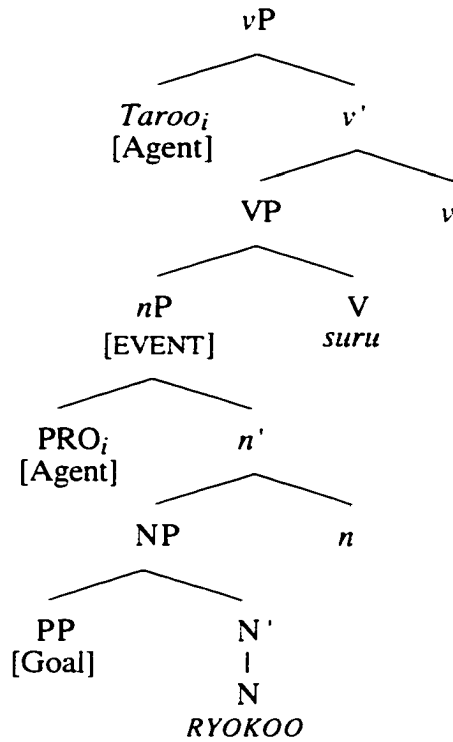
(48)

Taroo_i ga Tokyo ni [PRO_i RYOKOO] o *(hitoride) suru.
 NOM to travel ACC alone do

'Taroo travels to Tokyo (by himself).'

Since *suru* is a two-place predicate associated with Agent and EVENT arguments, it is *suru* which discharges an Agent role to the SUBJ and an EVENT role to the OBJ. Technically, the EVENT role is discharged in situ in the head-complement relation and the Agent role at [spec. *v*P] will be discharged through spec-head agreement by the *v*, thus conforming to the configurationality of thematic role assignment hypothesis (Chomsky, 1995; Hale and Keyer, 1992, 1993; Ura, 1996). As for θ -role assignment inside the EVENT NP, see (24). The tree in (49) shows the verbal and nominal predicates, *suru* and RYOKOO 'travel', and their arguments.

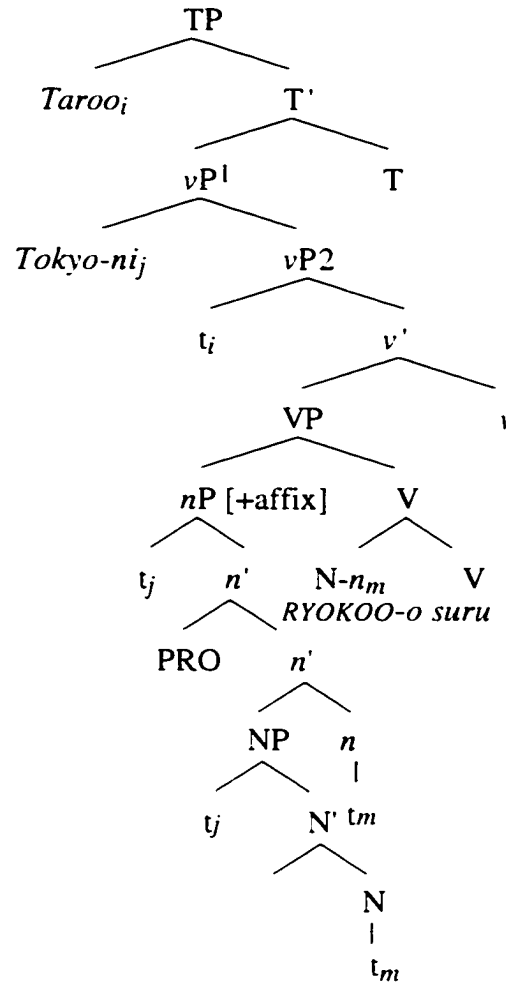
(49)



Case-assignment is performed in the following manner. As (48) is a clause, it is a phrase of category TP, headed by T(ense), as in (50). Given that T is associated with a strong nominative feature, the SUBJ *Taroo* raises into the spec of T where it is Case-checked by T.²⁶

²⁶ To be more precise, by the combination of T and *v*, once *v* raises and adjoined to T.

(50)



Under the assumption that RYOKOO 'travel' is assigned a strong [affix] feature at the Lexicon and that through percolation (i.e., copying), the feature becomes visible to *suru*, the verb θ -marks and Case-marks the EVENT NP in situ. Under the assumption that the Case-marking itself transforms the EVENT NP to a genitive Case domain, the PP argument raises to a clausal domain using an outer spec of the *nP* as an escape-hatch (cf. Kimura, 1994) so as to avoid an unwanted nominal genitive Case. The PP is supported by *vP*¹ which is adjoined to *vP*².²⁷ The head-to-head movement conditioned by the

²⁷ I assume that PP promotion is an adjunction: hence it raises to a position where no Case-checking applies.

requirement to eliminate the strong [+affix] turns the *nP* into a verbal domain in the spirit of Baker's (1988) 'Government Transparency Corollary'. As a result, PRO is null-Case-marked, conforming to Chomsky's (1995: 119-120) claim for PRO. The result is (50), which conforms to the general characterization of so-called Light Verb Construction in that arguments of VN's are θ -marked by VN's, while they assume verbal Case. The presence of overt incorporation also accounts for the frozen phenomena typical of (48).

6.6.6.3. *BENKYO*O-type

In the case of *BENKYO*O-type *VN-o suru*, if its non-referential EVENT NP is Case-marked in situ, we will have the following derivation of a double-*o* construction.

- (51)
- a. ??Taroo_i ga eigo o [PRO_i BENKYO] o *(isshokenmei) suru.
 NOM English ACC study ACC diligently do
 'Taroo (diligently) studies English.'

As for θ -role discharge, there is nothing to add other than repeating what I said in the previous section. That is, the *v* discharges Agent to the SUBJ by means of a spec-head relation and the V discharges EVENT to the OBJ by means of the head-complement relation.²⁸

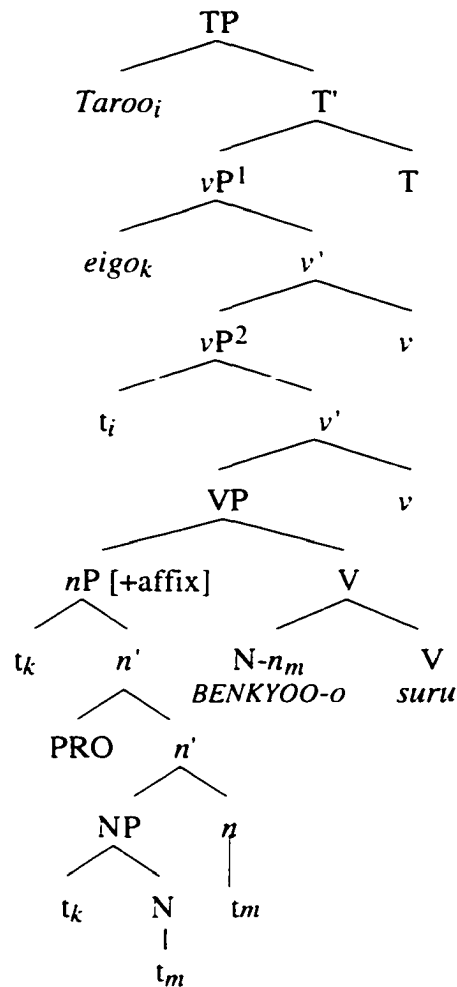
With respect to Case-assignment, once the EVENT NP is Case-marked in situ, the VN *BENKYO*O 'study' incorporates into *suru* to eliminate the associated strong [affix] --- this very incorporation conditions the EVENT NP turning into a verbal Case domain in the spirit of Baker (1988).²⁹

Since the Theme DP *eigo* 'English', which requires a verbal Case, cannot obtain it in the base VP (where there is no functional category for that purpose), it raises to the spec position of a functional node (*vP*¹) projected as part of costless Merge, as shown below.

²⁸ For the θ -role discharge inside the EVENT NP, see (23).

²⁹ Since the accusative Case assignment itself turns the EVENT NP into a nominal genitive Case domain, the NP-internal PRO and Theme arguments might temporarily be Case-marked nominally.

(52)



With respect to accusative Case checking for *eigo* 'English', *suru* is no longer associated with an accusative Case feature, since its accusative Case feature has already been 'used up' in assigning Case to the EVENT NP. However, given their verbal properties, VN's should be associated with not only θ -roles but also Case features (cf. Sells, 1990).

Given that the newly formed N-V complex in (52) inherits such a Case feature, we can assume that it will be a verbal Case feature as the head of the complex is a verb. Through this means the verbal accusative Case of the Theme DP is checked off.³⁰

³⁰ Although it is not shown in (52), the checking is performed once the N-V complex adjoins through head-to-head movements, to the head of vP¹.

Meanwhile, PRO is null-Case-marked in situ.³¹ The result is the *double-o VN-o suru* (i.e., (52)), where the promoted Theme argument forms a chain whose head-end is Case-marked by the N-V complex and whose tail-end is θ -marked by the N: a desirable consequence which conforms to the characteristics of the so-called LVC.

6.6.6.4. KEIKOKU-type

With respect to the KEIKOKU-type *VN-o suru* construction, since its promotion effect and Case-assignment can basically be accounted for by combining what we have said for RYOKOO- and BENKYOO-type *VN-o suru* constructions, I have nothing to add, other than stating my assumption based on Chung (1994) and Dubinsky (1994) that like Chamorro, Japanese requires that not only DP's but also CP's be checked for Case.

(53)

Taroo_i ga murabito ni ookami ga kuru to [PRO_i KEIKOKU] o
 NOM villagers to wolf NOM come COMP warning ACC

*(isoide) suru.
 quickly do

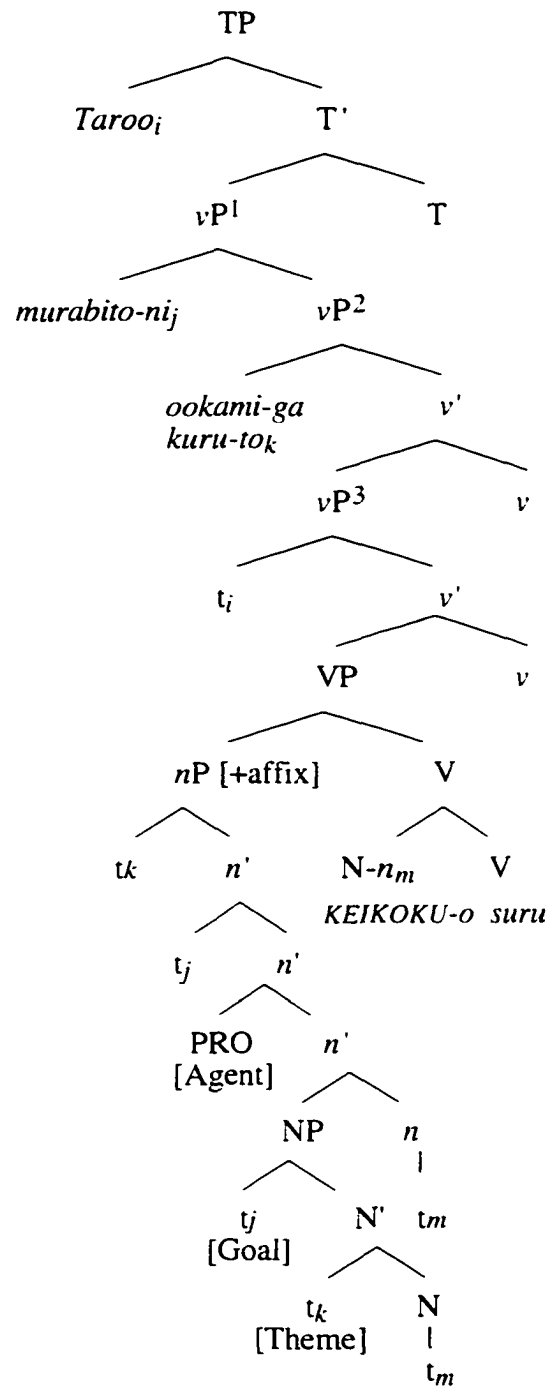
'Taroo (promptly) warns the villagers that wolf will come.'

As shown in (54), the CP argument must be promoted for a Case reason, since it cannot obtain Case in the base VP which contain no Case-checking node. While PRO is null-Case marked by the N-V complex in situ, the Case feature of the CP which has raised into the spec of vP^2 is checked off by the N-V complex once it is adjoined to the vP^2 head, as we saw earlier with the Theme argument of BENKYOO 'study'.³²

³¹ This Case-marking is done by the N-V complex prior to its adjunction to the vP^2 head.

³²The Case features for PRO and CP must be inherited to the N-V complex from the VN. Given that a PP does not require Case, there is no such Case inheritance for the PP.

(54)



In the above manner, if the non-referential EVENT NP's are Case-marked in situ, we will obtain all the *VN-o suru* forms which exhibit frozen phenomena.

6.6.7. Derivation of *VN-o Suru* Involving [spec, vP] Checking

6.6.7.1. Introduction

In this section, I will show what kinds of bipredicational *VN-o suru* forms are derived if an inherent Case feature of their EVENT NP's is checked off at [spec, vP]. What I will illustrate is that any *VN-o suru* form which does not exhibit 'frozen phenomena' must be derived under this type of Case assignment. Employing BENKYOO-, KEIKOKU- as well as RYOKOO-type VN's, I will substantiate my claim.

6.6.7.2. BENKYOO-type

The BENKYOO-type *VN-o suru* has the following derivation if its EVENT NP raises to [spec, vP] for Case reasons. The derivation itself is straightforward.³³

(55)

Taroo_i ga [PRO_i eigo no BENKYOO] o (isshookenmei) suru.
 NOM English NOM study ACC diligently do

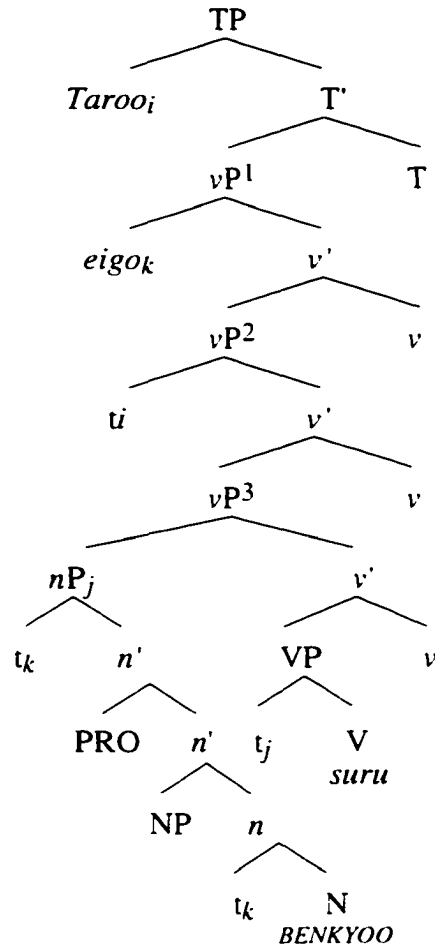
'Taroo (diligently) studies English.'

As discussed in Section 6.6.6.1, the VN of such a form is associated with a weak [affix] feature. Since the feature percolates up nodes only after Spell-Out, it is invisible to *suru* hence no 'in situ accusative Case-marking' takes place.³⁴ In search of Case-realization, the EVENT NP raises to [spec vP] and its inherent accusative Case will be checked off by the V-v complex, as shown in (56). Under the assumption that this checking turns the EVENT NP into a genitive Case domain, the PRO and DP *eigo* 'English' are nominally Case-marked by the head of the NP: while the former is null-Case marked, the latter is overtly marked by *no*.

³³ I do not repeat my account of θ -role discharge or nominative Case marking, both of which have been made clear by now.

³⁴ The weak [affix] feature will be eliminated at the LF interface level, resulting in covert incorporation, which I assume to be a kind of a complex predicate formation in the sense that both *suru* and VN contribute to the thematic realization of *VN-o suru* constructions, an idea not too different from Dubinsky's (1994) and Saito and Hoshi's (1994).

(56)



6.6.7.3. KEIKOKU-type

The KEIKOKU-type *VN-o suru* construction (57a) will have the derivation shown in (57b) if its EVENT NP raises to [spec, vP] for Case reasons.

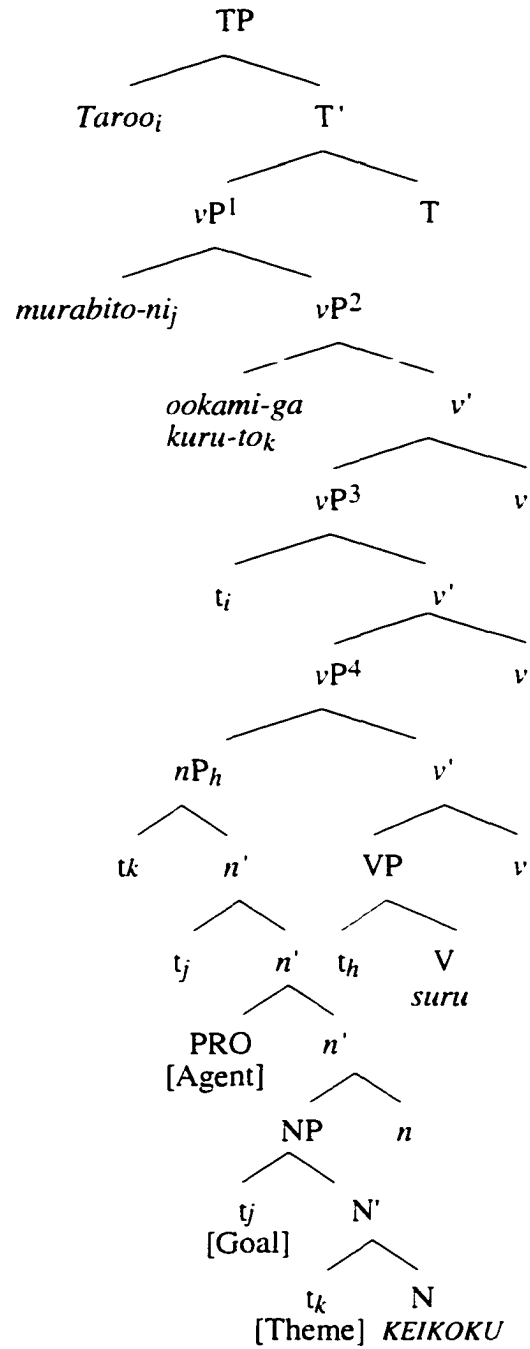
(57)

- a. *Taroo_i ga murabito ni ookami-ga kuru to (isoide)*
 NOM villagers to wolf NOM come COMP quickly

[*PRO_i KEIKOKU*] o suru.
 warning ACC do

'Taroo (promptly) warns the villagers that wolf will come.'

b.



Since the PRO and CP have no reasons to move out of the inherent nominal Case domain where they can be both θ -marked and Case-marked by the VN, they stay in the EVENT NP domain. Meanwhile the PP *murabito-ni* 'to the villagers' must be promoted NP-externally so that the PP which does not require Case would not be assigned genitive Case by the NP head.

6.6.7.4. RYOKOO-type

With respect to RYOKOO-type *VN-o suru* construction (58), if the EVENT NP raises to [spec vP], its inherent accusative Case is checked off by the V-v complex. As in the previous instances, under the assumption that this checking turns the EVENT NP into a genitive Case-domain, first of all, PRO is Case-marked as well as θ -marked by the VN. The PP *Tokyo-ni* is adjoined to a higher node so that it would not be doubly Case-marked. (58)

Taroo_i ga Tokyo ni [PRO_i RYOKOO] o suru.
 NOM to travel ACC do

'Taroo travels to Tokyo.'

One problem found with the RYOKOO-type *VN-o suru* construction is that we have two alternative derivations. The one we obtained in Section 6.6.6.2 involves 'in situ Case assignment' while the one we obtained in this section involves 'spec-head accusative Case checking'. Given that the RYOKOO-type *VN-o suru* exhibits 'frozen phenomena', the current derivation with the [spec, vP] Case-checking cannot be regarded as the right derivation: in other words, it should not be 'optimal'. In Minimalism, it is allowed for there to be more than one derivations for a given sentence which consists of a set of identical lexical items. The importance is evaluation: deciding which derivation is most optimal. Optimality is decided by 'Economy'. The Principle of Economy relevant to us is 'Least Effort' (Chomsky, 1995: 145). The derivation which requires less steps is preferred over the derivation which require more.

In contrast with the current derivation, the previous derivation (in Section 6.6.6.2) involves less steps since its EVENT NP does not move. In contrast, in the current instance, the EVENT NP raises for Case reason, and then PP is promoted. Consequently, the current derivation should be discarded as being less optimal.

6.7. Summary

At the outset of this chapter, assisted by Borer (1994), I set apart three types of accusative phrases in *VN-o suru* formation. Taking this type difference as a point of departure, I have conducted syntactic analyses of mono- and bi-predicational *VN-o suru*. Focusing mostly on bipredicational *VN-o suru*, I have shown that depending on whether inherent Case for their EVENT NP is marked in situ or at [spec vP], we obtain different types of bipredicational *VN-o suru* constructions. Those forms which exhibit frozen phenomena involve in situ Case marking while those forms which do not exhibit frozen phenomena involve [spec vP] Case checking. Using RYOKOO-, BENKYOO-, and KEIKOKU-type VN's, I have demonstrated how the peculiarities of bipredicational *VN-o suru*, i.e., frozen phenomena and argument promotion, are closely tied to this inherent accusative Case marking.

Chapter 7. Conceptual Semantic Analysis

7.1. Introduction

The aim of this chapter is to account for *VN-o suru* forms semantically in the framework of Jackendoff's (1987a, 1987b, 1990, 1991, 1992, 1993) Conceptual Semantics to supplement lexicosyntactic analyses developed in the previous chapters. However, since this chapter is intended to be a semantic exercise, it can also be regarded as an *appendix*. The reason why I adopt Jackendoff's theory of Conceptual Semantics is that it provides all the essential tools to represent *VN-o suru* constructions in a formal manner.

This chapter will account for the following issues, none of which have so far received any formal treatment. In Chapter 3, I demonstrated how crucial it is to differentiate simple event nominals from complex event nominals. In Section 7.2, I will represent these two types of nominals formally, showing that they have near identical 'function-argument structures' at the Lexical Conceptual Structure (LCS) level. The difference between them is that the LCS arguments of complex event nominals are obligatorily mapped into syntax, while those of simple event nominals are not.

In Chapter 2, I argued that *VN-o suru* forms involve only one type of *suru*: a two-place predicate which licenses an Agent and an EVENT. In Section 7.2, I will represent the thematic property of *suru* using Jackendoff's (1990) Action Tier which can, when coupled with a Thematic Tier, highly elaborate the conventional notion of thematic roles. *Suru* is represented as defining an action tier, while a simple or complex event nominal which heads the accusative phrase of *VN-o suru* forms is represented as defining a thematic tier. The conceptual structure of *VN-o suru* is represented by the composition of these two tiers. I will also show how indexation between an action tier and thematic tier can account for the control structure of the bipredicational *VN-o suru* construction, which we discussed in Chapter 5.

In Chapter 4, I showed what kind of satellites are arguments of *VN-o suru* forms and what kind of satellites are not. In Section 7.3, I will show how these two types of satellites are mapped onto syntax. The arguments will be mapped into syntax by way of

A(rgument)-Linking, while non-arguments will be mapped onto syntax by way of the Correspondence Rule Schemata.

In Chapter 4 (and Chapter 8 as well), I demonstrated how aspect plays a significant role in the formation of *VN-o suru* constructions. In Section 7.4, I will represent the aspectual properties of the (two types of) monopredicational *VN-o suru* and the (two types of) bipredicational *VN-o suru* forms in the framework of Jackendoff (1991), which provides essential tools to account for aspect.

7.2. Conceptual Structure of *VN-o suru*

7.2.1. Theoretical Background

7.2.1.1. Different Views on Argument Structure

We saw in Chapter 3 how Grimshaw (1990) differentiates simple event nominals from complex event nominals. Like many others (Rappaport and Levin, 1988, Zubizarreta, 1987 among others), Grimshaw (1990) assumes that there is an independent level of argument structure, which functions as an interface between Conceptual Structure on the one hand and syntax on the other. Accordingly, complex event nominals are assumed to be associated with argument structure and their arguments, like those of verbs, are mapped into syntax by θ -marking (except for the special treatment posited for their external arguments). In contrast, simple event nominals lack such association with argument structure, and their adjuncts¹, which correspond to LCS positions, are licensed directly by the LCS of their heads (by some undefined licensing mechanism).

Table 7.1.
Grimshaw's (1990) Account of Nominals

Satellite Phrases	Nominals	Licensing
Adjuncts	Simple Event Nominals	Direct LCS Mapping
Arguments	Complex Event Nominals	θ -marking

¹ Grimshaw (1990) calls these 'complements'. Since the term 'complement' is often used to denote 'argument', I will avoid the term.

One fundamental characteristic of Jackendoff's Conceptual Semantics is that in his framework, semantics is regarded as part of the so-called Conceptual Structure.² Furthermore, unlike Grimshaw (1990) and many others, Jackendoff does not assume argument structure as an independent component of information structure. Consequently, a possible account of the two types of nominals in his framework would differ significantly from Grimshaw's (1990) account. As suggested by Jackendoff (1990: 299: footnote 2), simple and complex event nominals do not differ from each other as far as their LCS is concerned: the difference lies in the obligatory and non-obligatory mapping of their LCS arguments into syntax and on the difference in mapping mechanisms, as summarized in Table 7.2.

Table 7.2.
Jackendoff's (1990) Account of Nominals

Satellite Phrases	Nominals	Mapping Mechanism
Adjuncts	Simple Event Nominals	Correspondence Rules
Arguments	Complex Event Nominals	Argument Linking

Further, Jackendoff's Conceptual Semantics is noted not only for its lack of argument structure as an independent level of grammar but also for its elaboration of the Conceptual Structure of predicates and of thematic roles. The following sections will look at how function-argument structure can be used for such elaboration and how such elaboration of thematic roles can be applied to *VN-o suru* constructions.

² Conceptual Structure is assumed to consist not only of semantic representations but also of other cognitive representations, such as those of vision and sound. Hence, Conceptual Structure is regarded as being part of the overall organization of the mental information structure involved with language (Jackendoff, 1990: 16). Furthermore, each structure or component of the information structure, such as phonological, syntactic, or conceptual structure, is regarded as being autonomous; and the autonomy of these components is maintained mostly by the function of two types of rules: the rules which generate the well-formed structure within a component and the rules which maintain proper mapping relations between the components.

7.2.1.2. Jackendoff's Elaboration of Thematic Roles

Jackendoff assumes that semantics is part of Conceptual Structure which contains, as its primitives, a variety of ontological categories whose representative constituents are identified by such major categorial features as [THING], [PLACE], [PATH], [EVENT], and [STATE] (Jackendoff, 1983: 50). Ontological categories are decomposed into function-argument structure, whose arguments may in turn be conceptual constituents of some category. The function-argument structure is largely defined by semantic categorial features or so-called field features (e.g., Event, Thing, Place) and basic semantic primitives (e.g., *GO*, *BE*, and *STAY*).

Jackendoff assumes a fairly transparent mapping relationship between conceptual structure and syntactic structure.

(1) (Jackendoff, 1987b: 152 (8.9))

- a. The dog ran from the door to the table.
- b. A meteor hurtled toward the earth.
- c. The hawk flew over the prairie.

For instance, for all the sentences in (1), the following is defined as their function-argument structure, expressing the concepts of physical motion of some object *X* (Theme) along some path *P*.³

(2) (Jackendoff, 1987b: 152 (8.10))

[_{Event} GO ([_{Object} *x*], [_{Path} *p*])]

³ In the same manner, for the sentences in (i), (ii) is postulated as their function-argument structure, expressing the concept of the object being located.

(i) (Jackendoff, 1987b: 153 (8.13))

- a. Max was in Africa.
- b. The cushion lay on the couch.
- c. The statue stands in the woods.

(ii) (Jackendoff, 1987b: 153 (8.14))

[_{State} BE ([_{Object} *x*], [_{Place} PLACE-FUNCTION ([_{Object} *y*])])]

Further, for those sentences (iii) which express stasis or the maintenance of a location over a period of time, (iv) is defined as their function-argument structure.

(iii) (Jackendoff, 1987b: 153 (8.15))

- a. The bacteria stayed in his body.
- b. Stanley remained in Africa.

(iv) (Jackendoff, 1987b: 154 (8.18))

[_{Event} STAY ([_{Object} *x*], [_{Place} PLACE-FUNCTION ([_{Object} *y*])])]

Hence, when the semantic primitives, such as *GO*, *BE*, and *STAY* verbs, are combined with a reasonably limited number of categorial features, such as Event, Thing, and Place, function-argument structure can represent a finite set of concepts or ontological categories.

7.2.2. LCS of Simple and Complex Event Nominals

As is clear from the above example, the function-argument structure of a clause is mostly determined by the Lexical Conceptual Structure of a predicate. The LCS of a predicate provides information not only on semantics but also on syntax in the form of the categorial feature and subcategorization frame.⁴

Taking RYOKOO/ryokoo *travel* as an instance, I will sketch out the LCS of its complex event nominal reading (3) and the LCS of its simple event nominal reading (4). Necessary elaboration will follow in the ensuing sections.

(3) RYOKOO 'Travel' As A Complex Event Nominal:

$$\left[\begin{array}{l} \text{ryokoo} \\ [N V] \\ DP_i, PP_j \\ [GO ([Thing _i], [Path TO (Place [_])]_j)] \end{array} \right]$$

(4) Ryokoo 'Travel' As A Simple Event Nominal:

$$\left[\begin{array}{l} \text{ryokoo} \\ [N] \\ [GO ([Thing _], [Path TO (Place [_])])] \end{array} \right]$$

The noticeable differences between these two types of lexical entries are as follows. First, unlike the complex event nominal whose categorial specification $[N V]$ clearly demonstrates its verbal quality, the simple event nominal is specified just as $[N]$, which shows the lack of verbal quality. Second, unlike the corresponding complex event nominal, the simple

⁴ The encoding of phonological property is consistently omitted in Jackendoff's work for the sake of simplification.

event nominal does not have a subcategorization frame.⁵ Third, the simple event nominal lacks the specification seen with the complex event nominal on how its LCS arguments should be mapped into syntax, indicated as coindexation between subcategorization frame and LCS.⁶

7.2.3. LCS of *Suru*

Having sketched out how simple and complex event nominals can be represented as LCS, I will show how the thematic property of *suru* can be represented. To do so, I will make use of Jackendoff's (1990) Action Tier.

One of the well-known features of Jackendoff's Conceptual Semantics is its elaborate treatment of thematic roles. We have just seen one such elaboration, i.e., function-argument structure. Another such elaboration is the proposal of an Action Tier. Based on the observation that an argument requires not only thematic specification but also Actor-Patient specification (Culicover and Wilkins, 1986; Talmy, 1985), Jackendoff (1990) proposes that thematic roles ought to consist of two tiers: a Thematic Tier which specifies motion and location and an Action Tier which specifies an Actor-Patient relation, as exemplified in (5).

(5) (cf. Jackendoff, 1990: 126-127 (7))

The car	hit	the tree.	
<Theme>		<Goal>	(Thematic Tier)
<Actor>		<Patient>	(Action Tier)

⁵ Unlike Jackendoff (1990), I assume the VP-internal subject hypothesis (Fukui, 1986, 1995; Kuroda, 1988; Chomsky, 1995); hence, the external argument phrase is encoded in the subcategorization frame.

⁶ The indexation in our example tells us that the THING or the argument of the predicate GO (i.e., Actor) ought to be mapped into syntax as a DP, and the PLACE or the argument of TO (i.e., Goal) ought to be mapped into syntax as a PP. This stipulative coindexation will later be replaced by A(rgument)-marking, discussed in Section 7.3.

Treating the Actor and Patient as the arguments of the function AFF ("affect"), Jackendoff elaborates the representation of an event as in (6).⁷

(6) (Jackendoff, 1990, 127 (9))⁸

$$[\text{EVENT}] \rightarrow \left[\begin{array}{c} \dots \\ \text{AFF} (< [\text{THING}] >, < [\text{THING}] >) \end{array} \right]$$

Concerning our issue of *suru*, Jackendoff (1990: 136-137) provides a useful suggestion that "we can also begin to understand the use of *give* as a light verb, as in *give X a kiss, give X a kick*. What is being preserved of the regular verbs *give* is its action tier". Adopting this suggestion, I will represent the LCS of *suru* as in (7).⁹

(7)

$$\left[\begin{array}{c} \text{suru} \\ \text{V} \\ \left[\begin{array}{c} \beta \\ \text{Event AFF}^0 (< [\text{Thing}] >, < [\text{EVENT}]^\beta >) \end{array} \right] \end{array} \right]$$

Here, the ontological category [Thing] will be filled by an Actor and the category [EVENT] will be linked to the entire thematic tier. Hence, the [EVENT] functions as a place-holder:

⁷ One minor elaboration Jackendoff introduces to the representation is the attachment of parametric values to the function AFF (cf. Jackendoff, 1990: 134):

- a. AFF⁺: the second argument is positively affected (Beneficiary)
e.g., *Bill sang a song for Mary.*
- b. AFF⁻: the second argument is negatively affected (Patient)
e.g., *My car broke on me.*
- c. AFF⁰: the reaction of letting or non-opposition
e.g., *Harry let Sam to leave.*

⁸ The place abbreviated by the dotted line is for a Thematic Tier which will also be represented as a function-argument structure of some sort.

⁹ The AFF value is fixed at '0' (see footnote 7 and Jackendoff, 1990: 136-137), since there is no Beneficiary or Patient involved with the EVENT. Essentially, the '0' value neutralizes the affectedness expressed by AFF.

and as indicated by Greek indexation,¹⁰ the actual content of the [EVENT] will be filled by the LCS of a simple event nominal or that of a complex event nominal.

7.2.4. Conceptual Structure of *VN-o Suru*

Given the LCS of *suru* and that of VN's, we are now ready to represent the Conceptual Structure (CS) of *VN-o suru*. The basic strategy is to represent the CS of *suru* as an independent action tier and to represent the CS of a VN as an independent thematic tier and to combine these two different tiers as the CS of a whole *VN-o suru* clause. I will represent the *VN-o suru* form with a complex event nominal as (8) and that with a simple event nominal as (9).

(8)

a. Taroo_i ga Tokyo ni [PRO_i RYOKOO] o suru.
 NOM to travel ACC do

'Taroo travels to Tokyo.'

b.

$$\left[\left[\begin{array}{l} \beta \\ \text{GO}([\text{TAROO}], [\text{TO}(\text{TOKYO})]) \end{array} \right] \right]$$

$$\left[\text{AFF}^0([\text{TAROO}], [\text{EVENT}]^\beta) \right]$$

(9)

a. Taroo ga [Tokyo e no ryokoo] o suru.
 NOM to GEN travel ACC do

'Taroo makes a trip to Tokyo.'

¹⁰ Jackendoff (1990) employs two types of indexation: one is internal to the Conceptual Structure and the other is external. The CS-external indexation in the Roman Alphabet is used to link CS arguments to their syntactic phrases. The CS-internal indexation in the Greek Alphabet is used to link various argument (positions) in a function-argument structure. The binder is specified by its right-upper corner position and bindee is specified by the position in a square bracket. In our example, the 'β' in the action tier is a binder and the 'β' in the thematic tier is a bindee, which corresponds to the entire function-argument structure for the thematic tier.

b.

$$\left[\begin{array}{l} \left[\begin{array}{l} \beta \\ \text{GO}([\text{TAROO}], [\text{TO} (\text{TOKYO})]) \end{array} \right] \\ \text{AFF}^0([\text{TAROO}], [\text{EVENT}]^\beta) \end{array} \right]$$

The tentative representations (8b) and (9b) are identical, since at this stage two things are still missing: (i) the mechanism to account for the control structure of the bipredicational *VN-o suru*; and (ii) the mechanism to map the LCS arguments of simple and complex event nominals onto syntax.

7.2.5. Control as Argument Binding

To account for the fact that the bipredicational *VN-o suru* is a control structure, we can depend on Jackendoff's (1990) Argument Binding, which representationally involves LCS-internal coindexation between the controller argument in the action tier and the controllee argument in the thematic tier.¹¹ An example of Obligatory Subject Control is seen in (10).

(10) (from Jackendoff 1990, 146 (56))

a. Sam tried to go away.

b.

$$\left[\begin{array}{l} \text{CAUSE}([\alpha], \left[\begin{array}{l} \text{GO}([\alpha], [\text{AWAY}]) \\ \text{AFF}([\alpha], \quad) \end{array} \right]) \\ \text{AFF}([\text{SAM}]^\alpha, \quad) \end{array} \right]$$

¹¹ Argument Binding is mediated by the latter half of the following Linking Condition.

(i) (Jackendoff, 1990: 64 (12)):

Each index linking syntactic and conceptual structure in a lexical entry must appear only once in the entry's LCS. All other θ -roles that the coindexed NP holds must be expressed by arguments bound to the indexed conceptual constituent.

In (10), the Actor in the action tier (i.e., controller *SAM*) is also an Instigator (i.e., the external argument of CAUSE in the thematic tier);¹² furthermore, the Actor *SAM* functions as the Actor of the function AFF in the thematic tier.

In applying Argument Binding to the bipredicational *VN-o suru* (11a), I will represent its CS as (11b).

(11)

a. Taroo_i ga Tokyo ni [PRO_i RYOKOO] o suru.
 NOM to travel ACC do

'Taroo travels to Tokyo.'

b.

$$\left[\left[\beta \text{ GO}([\alpha], [\text{TO} (\text{TOKYO})) \right] \right] \\ \left[\text{AFF}^0 ([\text{TAROO}]^\alpha, [\text{EVENT}]^\beta) \right]$$

In (11b), *suru* corresponds to the entire action tier while RYOKOO 'travel' corresponds to the entire thematic tier. The Actor role of *suru* is represented as the action tier's external role, and the EVENT role of *suru* is represented as the action tier's internal role which in turn corresponds to the entire thematic tier, as coindexed by β .¹³ The Actor itself is also coindexed with the external role of the thematic tier to denote the control relationship between these two arguments. Unlike (10b), the Greek indexation has no further extension because (11b) does not contain any embedded event which is CAUSED by the actor of the thematic tier.

¹² Concerning the Action Tier, Jackendoff (1990: 128) argues that the mere presentation of an argument of AFF as in (i) is ambiguous between Actor and Patient readings. Hence, (ii) is used to represent the solitary presence of an Actor, while (iii) is used to represent the solitary presence of a Patient.

(i) [AFF ([X])]
 (ii) [AFF ([X],)]
 (iii) [AFF (, [Y])]

¹³The use of 'internal' and 'external' roles is my own.

7.3. Linking

7.3.1. A(rgument)-Linking

This section discusses the issue of Linking: how can the Conceptual Structure arguments of the mono- and bi-predicational *VN-o suru* be mapped onto syntax?

7.3.1.1. Linking Mechanism

It was noted earlier that CS arguments can be mapped onto syntax either as syntactic arguments or as adjuncts; the former by A(rgument)-Linking and the latter by the Correspondence Rule Schema. Both linking mechanisms are relevant to mono- and bi-predicational *VN-o suru*. I will first discuss A(rgument)-Linking, which consists of the following steps (cf. Jackendoff, 1990, 246-282):

(12)

- (i) defining thematic roles in configurational terms;
- (ii) postulating a Thematic Hierarchy for the thematic roles;
- (iii) postulating a Syntactic Hierarchy for syntactic argument positions; and
- (iv) linking the thematic roles to the syntactic positions based on a linking principle which mediates between these two Hierarchies.

This much endeavor is required to eliminate as much stipulation as possible from A(rgument)-Linking.

First, thematic roles receive structural definitions as follows (cf. Jackendoff, 1990, 257-262)

(13)

- | | |
|--------------|--|
| Agent: | the first argument of the predicate CAUSE; |
| Theme: | the first argument of Location or Motion functions (e.g., GO, BE, STAY); |
| Goal: | the argument of TO; |
| Source: | the argument of FROM; |
| Actor: | the first argument of AFF; |
| Patient: | the second argument of AFF ⁻ ; |
| Beneficiary: | the second argument of AFF ⁺ . |

Second, these thematic roles are ordered in a hierarchical manner and in a manner which combines elements of action and thematic tiers in a single hierarchy: i.e., ordering the arguments in the action tier from left to right, followed by the arguments in the thematic tier in an order from least embedded to most deeply embedded (Jackendoff, 1990: 258). The result is (14), where (14a) is the highest thematic role and (14d) is the lowest.

(14) (Jackendoff, 1990: 258 (30))

- | | |
|------------------------------|--|
| a. [AFF (X*, <Y>)] | (Actor) |
| b. [AFF (<X>, Y*)] | (Patient (AFF ⁻) or Beneficiary (AFF ⁺)) |
| c. [Event/State F (X*, <Y>)] | (Theme) |
| d. [Path/Place F (X*)] | (Location, Source, Goal) |

(14) reiterates the hierarchical ordering of thematic roles as in (15).¹⁴

(15)

Actor > Patient/Beneficiary > Theme > Location/Source/Goal

Third, the Syntactic Hierarchy is defined as follows.

(16) (Jackendoff, 1990: 258 (31))

- | |
|----------------------------|
| a. [S NP* . . .] |
| b. [VP V NP* . . .] |
| c. [VP V . . . NP* . . .] |

That is, Subject is the highest, which is followed by Direct Object, which is followed by Oblique Object, as is reiterated in (17).

(17) Syntactic Hierarchy:

Subject > Direct Object > Oblique Object

Fourth, the actual linking of CS arguments to syntactic positions is defined as follows.

¹⁴ Various versions of a Thematic Hierarchy, which Jackendoff (1972) introduced for his account of passives and anaphoric relations, have been proposed (Bresnan and Kanerva, 1989; Carrier-Duncan, 1985; Givoň, 1984; Grimshaw, 1990; Foley and Van Valin, 1984; Kiparsky, 1987; Larson, 1988 among others). These studies differ slightly, depending on the inventory of thematic roles and on the actual ordering of thematic roles. Some studies include also such thematic roles as Experiencer (e.g., Bresnan and Kanerva, 1989; Grimshaw, 1990), Instrument (e.g., Bresnan and Kanerva, 1989), and OBLIQUES (Larson, 1988). Furthermore, while all the studies place Agent at the highest thematic role position, some studies (e.g., Jackendoff, 1972; Grimshaw (1990) place Theme lowest, and some others (e.g., Kiparsky, 1987; Givoň, 1984) place Location lowest. The use of a Thematic Hierarchy for Linking is a common practice (Carrier-Duncan, 1985) and LFG is especially noted for its extensive use of Thematic Hierarchy to link a(rgument)-structure with f(-unction) structure (Alsina, 1993; Bresnan, 1994 among others).

(18) (cf. Jackendoff, 1990: 265 (46))

A(rgument)-Linking:

- a. Order the A-marked constituents in the verb's LCS according to the thematic hierarchy;
- b. Order the NP-constituents in the syntactic structure according to the syntactic hierarchy;
- c. Optionally coindex APs, PPs, and Ss freely to A-marked constituents in the LCS;
- d. Coindex the first through n th NPs with the remaining A-marked constituents in the thematic order, choosing coindexations from among the possibilities in the network.

The principle defined as in (19) then determines which position in a bound complex of conceptual constituents is marked 'A', a marker of argumenthood.

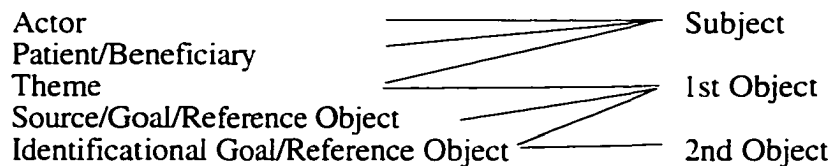
(19) (cf. Jackendoff, 1990: 249 (10))

Dominant θ -Role Principle:

The dominant θ -role in a bound complex of θ -roles in the LCS of a verb is that role that is highest in the thematic hierarchy.

What (19) says is that, as far as linking is concerned, CS-internal arguments coindexed with a single Greek index are regarded as a single argument. Further, A(rgument)-Linking in (18) is reiterated as the Network in (20) which illustrates which LCS arguments are mapped into which syntactic positions.

(20) (Jackendoff, 1990: 261 (36))



7.3.1.2. Application of A(rgument)-Linking

I will apply the above linking mechanism to the mono- and bi-predicational *VN-o suru*. To do so, I will first represent the CS of the monopredicational *VN-o suru* as follows.

(21)

a. Taroo ga [Tokyo e no RYOKOO] o suru.
 NOM to GEN travel ACC do

'Taroo makes a trip to Tokyo.'

b.

$$\left[\begin{array}{l} [\beta \text{GO} ([\text{UNDERGOER}], [\text{TO} ([\text{TOKYO}])))] \\ \text{AFF}^0 ([\text{ThingTAROO}]_A, [\text{EVENT}]_A^\beta) \end{array} \right]$$

In (21b), the Actor and EVENT arguments in the action tier are both A-marked, since *suru* licenses these two arguments and since the A-marking confirms to the Dominant θ -Role Principle. In this monopredicational structure, the Actor of *VN-o suru* is not coindexed with the thematic tier's external argument, which has UNDERGOER as its thematic content. The significance of the designation UNDERGOER will become clear in Section 7.3.2.2.3 on the Correspondence Rule Schema. Meanwhile the EVENT argument in the action tier is CS-internally coindexed with the entire thematic tier; hence in terms of linking, the EVENT argument and the whole Thematic Tier are regarded as a single argument.

Based then on the Linking Network, the thematically higher Actor is linked to a subject position and the thematically lower EVENT is linked to an object position. As the CS representation of the monopredicational *VN-o suru*, (21b) is adequate and no further A-marking is required because, given that the VN is a simple event nominal, any satellites associated with the VN cannot function as syntactic arguments. If it is necessary to map a satellite such as the argument of TO (e.g., *Tokyo*) into syntax, it has to be realized as a syntactic adjunct (cf. Jackendoff, 1990: 299: footnote 2). The means to map these adjuncts to syntax are the Correspondence Rule Schema, which we will discuss later in Section 7.3.2.

In the case of bipredicational *VN-o suru*, there is no difference in CS-representation from the monopredicational *VN-o suru* as far as the Action Tier is concerned: both Actor and EVENT arguments are A-marked, as seen in (22b).

(22)

a. Taroo_i ga Tokyo ni [PRO_i RYOKOO] o suru.
 NOM to travel ACC do

'Taroo travels to Tokyo.'

$$b. \left[\begin{array}{l} [{}^\beta \text{GO} ([\alpha], [\text{TO} ([\text{TOKYO}])])] \\ \text{AFF}^0 ([\text{TAROO}]_A^\alpha, [\text{EVENT}]_A^\beta) \end{array} \right]$$

Further, based on the Linking Network, these two arguments will be linked to the subject and objects positions, as with the monopredicational *VN-o suru*.

As far as conceptual structure is concerned, there are two differences between mono- and bi-predicational *VN-o suru*. The first difference is that since bipredicational *VN-o suru* is a control structure, its external role in the action tier binds the external role of the thematic tier. The second difference is that the CS arguments in the thematic tier of the bipredicational *VN-o suru* correspond to the *arguments* of its predicational VN; hence, the CS arguments should be mapped into syntax as arguments rather than as adjuncts. I assume that all the arguments which belong to the VN are mapped into the accusative NP domain. In other words, 'argument promotion' is a syntactic matter as I amply demonstrated in Chapter 6. To show that the NP-internal satellites are nothing but VN's arguments, I will mark them with "a", as in (23), to differentiate these from A-marked arguments on the one hand and the satellites of simple event nominals on the other.

(23)

$$\left[\begin{array}{l} [{}^\beta \text{GO} ([\alpha]_a, [\text{TO} ([\text{TOKYO}]_a)])] \\ \text{AFF}^0 ([\text{TAROO}]_A^\alpha, [\text{EVENT}]_A^\beta) \end{array} \right]$$

Hence, as far as (23) is concerned, the Actor is linked to a subject position, the EVENT is linked to an object position, and the external argument of the VN is linked to the NP-internal PRO and the Goal argument is linked to the NP-internal oblique object position, as shown in (24).¹⁵

¹⁵ As for NP-internal mapping, the following may be adequate for our purposes.

The Thematic Hierarchy is defined as (i):

- (i) Actor > Theme > Location/Source/Goal

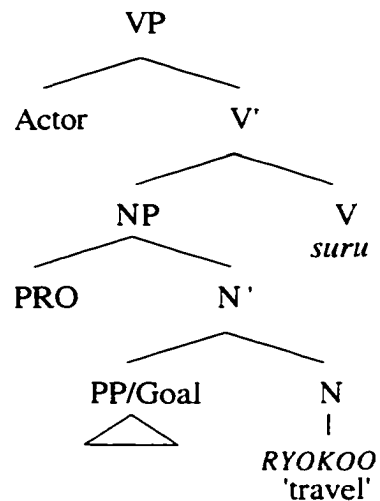
The Syntactic Hierarchy is defined as (ii):

- (ii) a. [NP DP* . . .]
 b. [NP . . . DP* . . .]
 c. [NP . . . PP* . . .]

The mapping is done as (iii):

a. Actor	————	[NP DP* . . .]
b. Theme	————	[NP . . . DP* . . .]
c. Location/Source/Goal	————	[NP . . . PP* . . .]

(24)



The tree representation is in its simplest form, as syntactic operations later in the derivation yield the results discussed in Chapter 6 (Section 6.6.6.2).

7.3.2. Correspondence Rules For Linking Non-arguments

This section will show how the Correspondence Rule Schema can be used to map the satellites of non-thematic VN's onto syntax. First, I will discuss what a Correspondence Rule Schema is. I will then apply it to the satellites of the monopredicational *VN-o suru*. Prior to the actual application, I will discuss two more types of satellites which are good candidates for the Correspondence Rule Schema.

7.3.2.1. What Is the Correspondence Rule Approach?

Unlike pure modifiers like those in (25) whose licensing has nothing to do with heads, there are various satellites (26) whose argument status is unclear.

(25)¹⁶

- a. Mary ate a mango *on Tuesday*.
- b. Bill read the paper *in his room*.
- c. Jim went home *quickly*.

(26)

- a. Bill sang a song *for Mary*.
- b. Bill sold a book to Harry *for Mary*.
- c. We buttered the bread *with cheap margarine*.
- d. John bottles the wine *in tall green bottles*.
- e. Bill belched *his way out of the restaurant*.
- f. Harry moaned *his way down the road*.

For the satellite phrases in (26), the Restrictive Modification Schema (Jackendoff, 1990: 153) is irrelevant since the satellites are not modifiers, and so is A(argument)-linking which concerns itself strictly with arguments. Jackendoff's (1990) basic strategy in accounting

¹⁶These modifiers are licensed by the so-called Restrictive Modification Schema comprising of Restrictive Modifier Rules (Jackendoff 1990, 55-58). ('Schema' ought to comprise of a (limited) number of 'rules'.)
 (i) *Restrictive Modification Schema* (Jackendoff 1990, 56 (17)):

$$[\text{Entity}_1] \rightarrow \begin{bmatrix} X \\ [\text{Entity}_2] \end{bmatrix}$$

(ii) *Restrictive Modifier Rule* (Jackendoff 1990, 56 (18)):

If YP is daughter of X" in XP,
 and the conceptual structure of YP is [C_Y],
 then the conceptual structure of XP is of the form

$$\begin{bmatrix} \dots \\ [C_Y] \end{bmatrix}$$

With *John went home at 6:00* as an example, we can see how this rule works. First, the CS of *John went home* is defined as (iii).

(iii) (Jackendoff 1990, 57 (20))

[Event GO ([Thing JOHN], [Path TO ([Place HOME]])])]

Second, the CS of the PP *at 6:00* is defined as (iv).

(iv) (Jackendoff 1990, 57 (21))

[Place AT Temp ([Time 6:00])]

Since the PP is a daughter of V", the Restrictive Modifier Rule applies to the PP, incorporating the reading of the PP into (iii). The result is (v).

(v) (Jackendoff 1990, 57 (23))

$$\begin{bmatrix} \text{GO} ([\text{Thing JOHN}], [\text{Path TO} ([\text{Place HOME}])]) \\ \text{Event} [\text{Place AT Temp} ([\text{Time 6:00}])] \end{bmatrix}$$

for these argument-like phrases is to treat them as CS arguments which are mapped into syntax as adjuncts.¹⁷ He proposes to use Correspondence Rules, a sort of reinterpretation rules which mediate thematic mismatches between syntax and semantics. How this approach works can be shown by using (26c) as an example.

In English, there is a class of denominal verbs of which the root noun stands for an incorporated Theme (e.g., *butter*, *powder*, and *water*).

(27)

- a. Bill *buttered* the bread.
- b. Mary *powdered* her face.
- c. Jim *watered* the front yard.

For instance, the lexical entry of *butter* can be constructed as (28) where the Theme (BUTTER), a non-indexed implicit argument, is completely incorporated into the reading of the verb.

(28) (from Jackendoff, 1990: 164 (14))¹⁸

$$\left[\begin{array}{l} \text{butter} \\ [\text{v N}] \\ \text{--- NP}_j \\ [\text{CAUSE} ([\]_i, [\text{INCHOATIVE} ([\text{BE} ([\text{BUTTER}], [\text{ON}_d [\]_j)])])]) \end{array} \right]$$

Interestingly, the denominal verb may take a *with-phrase* which is something akin to a Theme, as in (29).

¹⁷ Concerning the issue of arguments vs. adjuncts, what Jackendoff (1990) suggests is that the popular treatments of arguments are defective in two ways. First, such treatments are not good at decomposing thematic roles into smaller semantic elements, failing to utilize the content of the thematic roles fully. Second, the popular treatments of arguments have no mechanisms for licensing such satellite phrases as those we have just looked at. Because such approaches assume that argument structure is totally visible to syntax, any arguments which are present in the argument structure have necessarily to be mapped into syntax, being unable to account for the nature of the satellite phrases whose argument status is ambiguous.

¹⁸ The indices *i* and *j* indicate that the LCS arguments which occupy the positions which they mark will be mapped into syntax as a subject and an object, accordingly. (Obviously, Jackendoff does not assume that subject is licensed by a predicate.) Further, INCHOATIVE is regarded as a function which maps a state into an event (Jackendoff, 1990: 92); and the subscript 'd' of 'ON_d' encodes the notion of 'distributive location'.

(29) (Jackendoff, 1990: 164 (15))

We buttered the bread *with cheap margarine/with soft, creamy unsalted butter*.

In order to integrate the reading of the *with*-phrase into that of the whole sentence, Jackendoff (1990) proposes such correspondence rules as (30).

(30) (Jackendoff, 1990: 161 (8))

With-Theme Adjunct Rule:

In a sentence containing *with* NP in the VP, if the Theme position is not indexed in the verb's lexical entry, then the object of *with* can be interpreted as Theme.

Since (29) meets the structural description of the rule (30), the incorporated Theme BUTTER is *fused* with the reading of the *with*-phrase.¹⁹ As a result, the object of the *with*-phrase functions as Theme even though it is not directly mapped into syntax as an argument.

7.3.2.2. Three Candidates For The Correspondence Rule Approach

I can think of three types of satellites of VN's which are good candidates for the Correspondence Rule Approach: (i) incorporated arguments of thematic VN's; (ii) implicit arguments of thematic VN's; and (iii) satellites of non-thematic VN's.

7.3.2.2.1. Incorporated Arguments

In Chapter 1 (Section 1.3.2.2), we saw that such VN's as SAKKYOKU 'composition of music' and SAKUSHI 'composition of poem' behave syntactically as one-place predicates.

(31)

a. Taroo ga SAKKYOKU-shi-ta.
NOM song-writing-do-PAST

'Taroo wrote a song.'

¹⁹ *Fusion* is required to incorporate the semantic content of BUTTER with that of the adjunct phrase. The semantic content of an adjunct are not allowed to simply replace that of the implicit argument. If it were, we would not be able to rule out such semantically incongruous sentences as follows (Jackendoff, 1990: 165 (18a):

#We buttered the bread *with pineapple juice*.

b. Taroo ga SAKUSHI-shi-ta.
 NOM poem-writing-do-PAST

'Taroo wrote a poem.'

Their status as one-place predicates can be demonstrated by the fact that the introduction of an object phrase will create grammatical incongruity, as seen in (32).

(32)

a. ???Taroo ga **kyoku o** SAKKYOKU-shi-ta.
 NOM song ACC song-writing-do-PAST

'Taroo wrote a song.'

b. ???Taroo ga **shi o** SAKUSHI-shi-ta.
 NOM poem ACC poem-writing-do-PAST

'Taroo wrote a poem.'

When, however, there is a need to increase the degree of specificity of the incorporated argument, an accusative phrase can be added to the otherwise one-place predicate construction (Jacobsen, 1982, 1991), as seen in (33).

(33)

a. Taroo ga **kono kyoku o** SAKKYOKU-shi-ta.
 NOM this song ACC song-writing-do-PAST

'Taroo wrote this song.'

b. Taroo ga **sono yuumeina shi o** SAKUSHI-shi-ta.
 NOM that famous poem ACC poem-writing-do-PAST

'Taroo wrote that famous poem.'

These VN's are analogous to such English denominal verbs as BUTTER in associating with incorporated arguments, as exemplified in (34), where the non-indexed SONG functions as an incorporated argument.

(34)

$$\left[\begin{array}{l} \text{sakkyoku} \\ [N \ V] \\ DP_i \text{ ---} \\ [\text{CAUSE} ([\]_i, [\text{INCHOATIVE} ([\text{BE} ([\text{SONG}])])])]) \end{array} \right]$$

Hence, devising such a correspondence rule as (35), we can map their incorporated arguments into syntax, without necessarily arguing against the one-place predicate status of the VN's.

(35)

In a sentence containing DP-*o* in the VP, if the Theme position is not indexed in the VN's lexical entry, then the *o*-marked object can be interpreted as Theme.

7.3.2.2.2. Implicit Arguments

Another instance of thematically ambiguous satellites is implicit arguments licensed by such VN's as BENKYOO 'study' and KENKYUU 'research'. For instance, the treatment of the valency of BENKYOO is inconsistent. Miyagawa (1989a) and Uda (1992, 1994) treat BENKYOO as a one-place predicate, while Uchida and Nakayama (1993) treat it as a two-place predicate; and nobody seems to have provided any evidence for their valency. In fact, this ambiguity in valency seems to involve many PROCESS verbs, which do not affect their Theme arguments in any decisive manner (cf. Tenny, 1994). In previous chapters, I have consistently treated such VN's as BENKYOO 'study' as two-place predicates. However, it is possible to regard their Themes as implicit arguments. Upon this assumption, for instance, BENKYOO 'study' is a two-place predicate as far as its LCS is concerned, while it is a one-place predicate as far as its syntactic subcategorization is concerned. This assumption is expressed as (36).

(36)

$$\left[\begin{array}{l} \text{benkyoo} \\ [\text{v N}] \\ \text{DP}_i \text{ ---} \\ [\text{CAUSE} ([]_i^\alpha, [\text{GO} ([\text{KNOWLEDGE}], [\text{TO} ([\text{BRAIN OF} (\alpha))])])]) \end{array} \right]$$

The LCS Theme argument will then be mapped into syntax, based on the correspondence rule (35).

(37)

Taroo ga eigo o BENKYOO-suru.
 NOM English ACC study-do

'Taroo studies English.'

That is, since (37) meets the structural description of the correspondence rule, the incorporated Theme KNOWLEDGE in (36) is *fused* with the reading of the accusative-marked phrase *eigo* 'English'. As a result, the accusative-marked phrase can function as a Theme phrase even though it is not directly mapped into syntax as an argument.

7.3.2.2.3. Satellites of Simple Event Nominals

The third candidate for the application of the Correspondence Rule Schema is the satellites of simple event nominals. Their satellites may for instance be realized as (38).

(38)

a. Taroo ga [**Tokyo e no** (sono) ryokoo] o shi-ta.
 NOM to GEN (that) travel ACC do-PAST

'Taroo made (that) trip to Tokyo.'

b. Taroo ga [**Hanako to no** (sono) aiseki] o shi-ta.
 NOM with GEN (that) t.-sharing ACC do-PAST

'(lit.) Taroo did (that) table-sharing with Hanako.'

As discussed in Chapter 3 (Section 3.3.3.3), unlike complex event VN's, simple event VN's can be modified by such demonstratives as *sono* 'that', which assures that the VN's are functioning as simple event nominals with adjunct satellites. Since such satellites as *Tokyo-e(to)* and *Hanako-to(with)* are not pure modifiers but LCS-related, they should be licensed not by the Modification Rule Schema but by the Correspondence Rule Schema. As a rule which maps these satellites into syntax, I will posit (39) for (38).

(39)

In a VN phrase which contains a phrase marked with such directional postpositions as *-e* or such cocomitant postposition as *-to*, if the Theme position of such Oblique Function as TO and WITH is not indexed in the VN's lexical entry, then the postposition-marked phrase can be interpreted as an Oblique CS argument.

(40)

$$\left[\begin{array}{l} [\beta \text{ GO } ([\text{UNDERGOER}], (\text{TO } [\text{TOKYO}]))] \\ \text{AFF}^0 ([\text{TAROO}]_A, [\text{EVENT}]_A^\beta) \end{array} \right]$$

- (41)
- $$\left[\begin{array}{l} [\beta \text{INCHOATIVE (BE [(BE [UNDERGOER], (WITH [HANAKO])), \\ \text{(AT [TABLE])}])}] \\ \text{AFF}^0 \text{ ([TAROO]}_A, \text{ [EVENT]}_A^\beta) \end{array} \right]$$

Since (38a and b) meet the structural description of the correspondence rule (39), the argument of TO or WITH is *fused* with the reading of the CS argument of the corresponding P. As a result, the PP can function as an oblique CS argument (e.g., Goal or Cocomitant) phrase even though the CS argument of TO or WITH is not directly mapped into the NP domain as a syntactic argument.

Further, I assume that, as seen in (42), the LCS argument UNDERGOER may be mapped into syntax with such Agent-like satellites as *zibun(-zishin)* 'self(-own)'. This mapping would be regulated by the correspondence rule.

- (42)
- Taroo ga [(sono) [*zibun(-zishin)* no ryokoo]] o shi-ta.
 NOM that self-own GEN research ACC do-PAST
 '(lit.) Taroo did (that) self's travel.'

As actual rules for mapping this LCS argument onto syntax, I will posit (43).

- (43)
- In a VN-phrase containing an anaphoric phrase²⁰, if the external argument position is not indexed in the VN's lexical entry, then the anaphoric phrase can be interpreted as a CS Agent argument.

Since (42) meets the structural description of the correspondence rule (43), the external argument UNDERGOER is *fused* with the reading of the anaphor. As a result, the anaphor can be interpreted as a CS Agent argument even though it is not directly mapped into syntax as an argument.

In sum, the Correspondence Rule Schema assists us to map not only the incorporated and implicit arguments of complex event VN's but also the satellites of simple event VN's onto syntax.

²⁰ If *zibun(-zishin)* is interpreted as possessor, which is an unmarked reading, then what we need for mapping is not the correspondence rule but a restrictive modification rule (cf. Jackendoff, 1990: 56).

7.3.2.3. A Comment on the Distinction between Argument and Adjunct

The above treatment of satellites whose argument-hood is ambiguous illustrates my basic stance on the issue of the distinction between argument and adjunct. That is, I do not adhere to the received view that it is possible to make a *dichotic* distinction between argument and adjunct (cf. Davidson, 1967; Dowty, 1982; Parsons, 1985; Carlson, 1984; McConnell-Ginet, 1982; Zwicky, 1993). The received view generally employs such criteria as optionality,²¹ subcategorization,²² and entailment²³ as tests for distinguishing these two types of entities from each other. A dichotic distinction, however, cannot capture the true nature of the satellites we have seen in this section: i.e., these satellites have properties of being arguments as far as their semantic properties are concerned but adjuncts as far as their mapping into syntax is concerned.

Following Jackendoff (1990), I assume that satellites can be of three types: (a) arguments, (b) modifiers, and (c) adjuncts (i.e., implicit or incorporated arguments involving the Correspondence Rule Schema). Not only in this chapter but throughout this study, I assume that the above classification of satellites is a valid hypothesis. And this assumption is present even in Chapter 3 where I isolate VN's simple nominal readings from their complex nominal readings. This endeavor is motivated by my basic view that once this distinction is made, the argument- or adjunct-hood of VN satellites become clear under Grimshaw's (1990) claim that the satellites of complex event nominals are arguments whereas those of simple event nominals are adjuncts (see Section 3.2.2 in Chapter 3). The main aim of this section was to reiterate my view that the satellites of simple event nominals have properties of CS arguments and these are best treated as adjuncts syntactically.

²¹ The optionality test assumes that adjuncts are always omissible, while arguments are not.

²² The subcategorization test is exemplified by Dowty's (1982: 90) following comment: "one cannot add a direct object or an indirect object to just any verb, but only to one that is subcategorized for an object. One cannot say **John caught a fish to Mary*, or **An hour elapsed John*, because *catch* and *elapse* are not that sort of verb."

²³ The entailment test assumes that a syntactically absent argument is implied by virtue of the verb's meaning: e.g., *John ate* entails *John ate something*.

7.4. Aspectual Accounts of *VN-o Suru*

7.4.1. Introduction

Since aspect plays a significant role in the formation of *VN-o suru* constructions (cf. Chapter 4), in this section, I will formally characterize the aspectual properties of the (two types of) monopredicational *VN-o suru* and the (two types of) bipredicational *VN-o suru*. To do so, first of all, I will minimally introduce Jackendoff's (1991) machinery devised to account for aspect:²⁴ (i) a pair of binary features which encode substance and individuality; (ii) functions which alter the values of these features; (iii) a pair of features which encode dimensionality and directionality; and (iv) two functions which define boundaries.²⁵ The pair of binary features assists us to encode whether the events denoted by components of *VN-o suru* formation are bounded or not; the value altering functions assist us to account for telic shift; and the rest of the machinery assists us to define the aspectual types of predicates. As a bundle, the machinery can capture the difference in telicity among mono- and bi-predicational *VN-o suru*.

7.4.2. Basic Machinery: Jackendoff (1991)

Jackendoff (1991) devises a pair of binary features [+/-bounded] and [+/-internal structure] which can be applied to Materials as well as to Situations. Essentially, the feature [+/- bounded] describes whether an entity has a boundary; the feature [+/-internal structure] describes whether an entity has individual elements as its members. (44) illustrates how the four possible combinations of these two features can express four different types of nominals: individuals (+b, -i), groups (+b, +i), substances (-b, -i) and aggregates (-b, +i).

(44) (Jackendoff, 1991: 20 (11))

+b, -i: individuals	(<i>a pig</i>)
+b, +i: groups	(<i>a committee</i>)
-b, -i: substances	(<i>water</i>)
-b, +i: aggregates	(<i>buses, cattle</i>)

²⁴ For the sake of simplification, I will not adopt Jackendoff (1996) which basically adds an extra layer of time-interval structure on the aspectual structure which Jackendoff (1991) proposes.

²⁵ Jackendoff's (1991) machinery is intended to capture the cross-categorical generalization across nominals (i.e., Materials and Space) and verbals (i.e., Events).

In exactly the same manner, the four possible combinations of features can express four different types of Situations: closed events (+b, -i), bounded iterative events (+b, +i), unbounded homogeneous processes (-b, -i), and unbounded iterative processes (-b, +i), as seen in (45).

(45)

+b, -i: closed events	<i>(John ran to the store)</i>
+b, +i: bounded iterative events	<i>(The light flashed until dawn)</i>
-b, -i: unbounded homogeneous processes	<i>(John slept)</i>
-b, +i: unbounded iterative processes	<i>(The light flashed continuously)</i>

Jackendoff (1991) postulates six so-called 'including' and 'extracting' functions, as in (46), which "map one combination of the features 'b' and 'i' into another, expressing different relations of parts to wholes" (Jackendoff, 1991: 29).

(46) (from Jackendoff, 1991: 29 (34))

Including Functions: PL (plural)	COMP (composed of)	CONT (containing)
Extracting Functions: ELT (element of)	GR (grinding)	PART (part of)

To exemplify how feature values can be altered, I will cite the function PL(ural). In the verbal system, PL iterates events.²⁶ For instance, when *The light flashed* is modified

²⁶ In the nominal system, the function PL, which is regularly expressed by a plural morpheme, takes an individual (e.g., *a dog*) as its argument and maps it into an aggregate (e.g., *dogs*) (Jackendoff, 1991: 21 (12a and c)):

$$\begin{array}{l}
 \text{a.} \\
 \left[\begin{array}{c} +b, -i \\ \text{Mat DOG} \end{array} \right] = \text{a dog} \\
 \text{b.} \\
 \left[\begin{array}{c} -b, +i \\ \text{PL} \left(\left[\begin{array}{c} +b, -i \\ \text{Mat DOG} \end{array} \right] \right) \\ \text{Mat} \end{array} \right] = \text{dogs}
 \end{array}$$

by *continuously*, the initial closed event (+b, -i) is mapped into an unbounded iterative process (-b, +i), as seen in (47).

(47) (Jackendoff, 1991: 22 (15))

$$\left[\begin{array}{l} -b, +i \\ \text{PL} \left(\left[\begin{array}{l} +b, -i \\ \text{Event LIGHT FLASHED} \end{array} \right] \right) \\ \text{Event / Process} \end{array} \right]$$

Besides bounded and internal structure features, the other notations which are relevant to the cross categorial generalization are *dimensionality* and *directionality*. In the

verbal system. 'dimensionality' basically differentiates Accomplishments from Achievements²⁷ and 'directionality' isolates States from the rest of the aspectual types.^{28/29}

Lastly, Jackendoff (1991: 34) devises two boundary setting functions: BD and BDBY. Essentially, the function BD encodes the end of an event (BD⁺). The function BDBY⁺ takes a Goal or a culminative event as its argument.

7.4.3. The Vendler Classes

Based on the above bundle of machinery, Jackendoff (1991) recaptures Vendler's (1957) four types of verbal classes as follows. As in (48), STATES are regarded as undirected situations ([-DIR]) which may or may not be bounded; thus, they are freely +/-

²⁷ 'Dimensionality' is a 4-valued feature 'DIM_nD', whose *n* value ranges from 0 to 3. In the nominal system, for instance, *a road*, *a river* and *a ribbon* "can be schematized as a line (the primary dimension) elaborated by a linear cross-section (the secondary dimension), yielding a surface" (Jackendoff, 1991: 29). Since the primary dimension of these Materials may be bounded or unbounded and since their secondary dimension is bounded, the dimensionality of these objects can be schematized as below --- the value in an embedded square bracket is for the secondary dimension (from Jackendoff, 1991: 29 (35)):

$$\text{road, river, ribbon} = \begin{bmatrix} + / - \text{b.} \quad - \text{i} \\ \text{DIM 1D} \\ \begin{bmatrix} +\text{b.} \quad - \text{i} \\ \text{DIM 1D} \end{bmatrix} \\ \text{Mat} \end{bmatrix}$$

²⁸ 'Directionality' is a 1-dimensional axis which may or may not have a direction or orientation. In the nominal system, for instance, while a line lacks an intrinsic direction, a vector and an arrow do have such directions. To differentiate these two types of 1-dimensional objects, Jackendoff (1991) represents a vector and an arrow as [DIM 1d DIR] but an ordinary line as [DIM 1d].

²⁹ Assisted by 'dimensionality' and 'directionality', Jackendoff (1991) contrasts Places, Paths, States, and Events as below, which are all self-explanatory (Jackendoff, 1991: 31 (38)):

$$\begin{aligned} \text{a. [PLACE]} &= \begin{bmatrix} \text{SPACE} \\ -\text{DIR} \end{bmatrix} \\ \text{b. [PATH]} &= \begin{bmatrix} \text{SPACE} \\ \text{DIM 1d DIR} \end{bmatrix} \\ \text{c. [STATE]} &= \begin{bmatrix} \text{SITUATION} \\ -\text{DIR} \end{bmatrix} \\ \text{d. [EVENT]} &= \begin{bmatrix} \text{SITUATION} \\ \text{DIR} \end{bmatrix} \end{aligned}$$

b. However, since STATES cannot be intermittent or associated with internal structure of any kind, they are associated with [-i].

(48) (Jackendoff, 1991: 39 (52))

$$\text{State} = \begin{bmatrix} -i \\ [-\text{DIR}] \\ \text{Sit} \end{bmatrix}$$

ACTIVITIES are simply unbounded (-b) directed ([DIR]) situations.

(49) (Jackendoff, 1991: 39 (53))

$$\text{Activity} = \begin{bmatrix} -b \\ [\text{DIR}] \\ \text{Sit} \end{bmatrix}$$

ACCOMPLISHMENTS are directed ([DIR]) situations (e.g., *John ran to the store*) which are bounded (+b) by a final boundary (BDBY⁺) (i.e., *the store* in the e.g.). Since ACCOMPLISHMENTS take place over a (specific) period of time, they are regarded to be one dimensional ([DIM 1d]).

(50) (Jackendoff, 1991: 39 (54))

$$\text{Accomplishment} = \begin{bmatrix} +b \\ [\text{DIM 1d DIR}] \\ \text{BDBY}^+ ([\]) \\ \text{Sit} \end{bmatrix}$$

Since ACHIEVEMENTS are closed events (+b, -i) which culminate (BD⁺) in some larger event (e.g., *arrive* and *die*), they are fundamentally 0-dimensional ([DIM 0]). However, the optional epsilon expansion (+ε) denotes the possibility of having "a little temporal window into which we can sneak a progressive" (Jackendoff, 1991: 39).

(51) (Jackendoff, 1991: 39 (55))

$$\text{Achievement} = \left[\begin{array}{c} +b. -i \\ \left[\text{DIM } 0(+\epsilon)d \text{ DIR} \right] \\ \left[\text{BD}^+ ([\]) \right] \\ \text{Sit} \end{array} \right]$$

7.4.4. Formal Accounts

7.4.4.1. Introduction

This section will apply the above bundle of machinery to represent mono- and bi-predicational *VN-o suru* in a formal fashion. As demonstrated in Chapter 4, both mono- and bi-predicational *VN-o suru* can assume telic and atelic readings.

In the case of the telic monopredicational *VN-o suru*, the bounded reading of the accusative DP conditions the whole *VN-o suru* to assume a telic reading, as in (52), parallel to the English *John ate the apple* where the object functions to define a 'measured event' (Tenny, 1987, 1992, 1994).³⁰

(52)

Taroo ga (i-sshuu-kande) [Tokyo e no (sono) ryokoo] o shi-ta.
 NOM one-week-in TO GEN that travel ACC do-PAST
 'Taroo made (that) trip to Tokyo (in a week).'

In the case of the atelic monopredicational *VN-o suru*, the accusative DP assumes a mass noun reading due to the absence of a modifier, hence, conditioning the atelic reading of the predicate. This unbounded reading in turn conditions the atelic reading of the *VN-o suru* in the same sense as the atelicity associated with *John drank milk*. Or, alternatively, atelicity stems from the pluralization of the accusative DP, as in (53), parallel to *John peeled apples for/*in an hour*.

³⁰ As discussed in Chapter 4, Japanese nouns can receive definite or indefinite interpretations in the absence of a determiner, leading to systematic ambiguity.

(53)

Taroo ga (ichi-nen-kan) [[Tokyo e no ryokoo]] o ikudomo shi-ta.
 NOM one-year-for to GEN travel ACC manytimes do-PAST
 'Taroo made numerous trips to Tokyo (for a year).'

In the case of the (type C) atelic bipredicational *VN-o suru*, since its accusative NP is non-referential and also unbounded (due to its non-count noun reading), the NP fails to measure an event. Hence, the whole *VN-o suru* assumes an atelic reading. And even if the *VN-o suru* is associated with a Goal phrase, if that Goal phrase functions merely as an 'unbounded path' (cf. Filip, 1993: 72), the whole *VN-o suru* would remain an atelic construction, as is clear from (54), with a durational *for*-phrase.

(54)

Taroo_i ga (i-sshuu-kan) Tokyo ni [PRO_i RYOKOO] o shi-ta.
 NOM one-week-for towards travel ACC do-PAST
 'Taroo traveled towards Tokyo for a week.'

Lastly, in the case of the (type D) telic bipredicational *VN-o suru*, either a promoted Theme phrase or a promoted Goal phrase functions as a temporal terminus of an event, hence, conditioning a telic reading of the *VN-o suru*. The possibility is clear from the grammaticality of (55) with its telic modifier *i-shuu-kande* 'in a week'.

(55)

Taroo_i ga (i-sshuu-kande) Tokyo ni [PRO_i RYOKOO] o shi-ta.
 NOM one-week-in to travel ACC do-PAST
 'Taroo traveled to Tokyo in a week.'

Simplifying our discussion by using these four examples, the following sections will illustrate the Conceptual Structure representations which these four different types of *VN-o suru* forms would assume in Jackendoff's system.

7.4.4.2. Monopredicational *VN-o Suru*

7.4.4.2.1. Telic Form

First of all, I will represent the aspectual property of *suru* as (56).

(56)

$$\left[\begin{array}{l} -b, -i \\ [(DIM \text{Id}) \text{DIR}] \\ \text{suru} \end{array} \right]$$

The feature value '(-b, -i)' indicates that *suru* is an atelic PROCESS predicate, which is directional ([DIR]) and may acquire one-dimensionality in time ([DIM 1d]).³¹

Second, given that simple event nominals can express individualized events, I will represent their singular form as follows, using *ryokoo* 'travel' as an example.

(57)

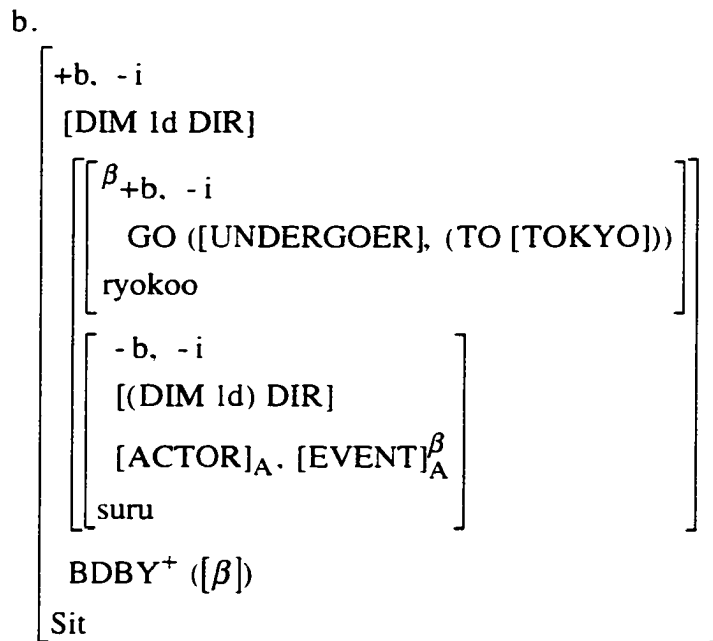
$$\left[\begin{array}{l} +b, -i \\ [\text{DIM } 1d \text{ DIR}] \\ (\text{ichi-})\text{ryokoo} \end{array} \right]$$

Ryokoo, which is singular in such forms as (*ichi-*)*ryokoo* '(one-)travel' or (*sono*) *ryokoo* '(that) travel', is marked as [+b, -i]: an individual (e.g., *a pig*) (Jackendoff, 1991: 20 (11)). *Ryokoo* is treated as a single one-dimensional ([DIM 1d]) directional ([DIR]) event which is temporally delimited (+b). Given then that the singular simple event nominal can denote a measured entity like *trail* in *John walked the trail (in an hour)*, I will represent the CS of (58a) as (58b).

(58)

- a. Taroo ga (i-sshuu-kande) [Tokyo e no (sono) ryokoo] o shi-ta.
 NOM one-week-in to GEN that travel ACC do-PAST
 'Taroo made (that) trip to Tokyo (in a week).'

³¹ Unlike Jackendoff's specification (-b) for an Activity (see (49)), my definition of *suru* contains a feature specification (-b, -i). I assume that (-i) is required since an Activity does not consist of 'internal members' (i.e., temporal stages). Further, [(DIM 1d)] is added to [DIR] to accommodate the possible compatibility of *suru* with ACCOMPLISHMENT VN's (see Chapter 4, Section 4.6.3) which have [DIM 1d DIR] as part of their aspectual specification. Further, [DIR] should accommodate *suru*'s incompatibility with STATIVE VN's ([-DIR]); and either '(-b, -i)' or '[DIM 1d]' can accommodate *suru*'s incompatibility with ACHIEVEMENT VN's, which are bounded event ([+b, -i]) with almost ((+ε)) no-dimensionality ([DIM 0]).



In (58b), the argument of TO should be mapped into the domain of the accusative DP by the Correspondence Rule Schema discussed in Section 7.3.2, while the arguments of *suru* will be mapped into syntax as subject and object by A(rgument)-Linking as discussed in Section 7.3.1. Further, the telic reading of (58a) is represented by the boundary setting function BDBY⁺, whose argument β is coindexed with the entire thematic tier, a single closed event (+b, -i). Although *suru* is an atelic PROCESS (-b, -i) verb, since the function BDBY⁺ takes the closed event β as its argument, the whole *VN-o suru* is bounded (+b, -i). Since the function of BDBY⁺ is tantamount to mapping an unbounded event (-b, +i) into an individuated event (+b, -i), the whole clause will assume the aspectual specification: (+b, -i) and [DIM 1d DIR].³²

³² Since the directed (DIR) event takes place over a period of time, it is regarded as one-dimensional ([DIM 1d]).

7.4.4.2.2. Atelic Form

Taking just the atelic monopredicational *VN-o suru* which involves plurality, I will illustrate how its CS representation looks.

(59)

Taroo ga (ichi-nen-kan) [Tokyo e no ryokoo] o ikudomo shi-ta.
 NOM one-year-for to GEN travel ACC manytimes do-PAST

'Taroo made numerous trips to Tokyo (for a year).'

First, using the function PL, the plural form of *ryokoo* 'travel' can be represented as (60).

(60)³³

$$\left[\begin{array}{l} -b, +i \\ \text{PL} \left(\begin{array}{l} +b, -i \\ \text{[DIM 1d DIR]} \\ \text{ryokoo} \end{array} \right), \text{[IKUDOMO]} \\ \text{Sit} \end{array} \right]$$

What this PL function does is map an individual (+b, -i) event into an aggregate (-b, +i) of events, by taking the individual event and a numeral quantifier, *ikudomo* 'many times', as its arguments. Given that the accusative DP of the monopredicational *VN-o suru* is pluralized, the DP fails to bound an event. As a result, the entire *VN-o suru* assumes an atelic (-b) reading, as represented in (61).

³³ Under the assumption that *ikudomo* 'many times' originates in the DP, (60) faithfully represents the CS of the string in (i).

(i) [DP Tokyo e no **ryokoo**] o **ikudomo**
 to GEN travel ACC manytimes
 'numerous trips to Tokyo'

(61)

$$\left[\begin{array}{l}
 -b, +i \\
 [\text{DIM } 1d \text{ DIR}] \\
 \text{ELT} \left[\begin{array}{l}
 -b, +i \\
 [\text{DIM } 1d \text{ DIR}] \\
 \text{PL} \left[\begin{array}{l}
 \beta + b, -i \\
 [\text{DIM } 1d \text{ DIR}] \\
 (\text{GO}[\text{UNDERGOER}], [\text{TO} ([\text{TOKYO}])) \\
 \text{ryokoo}
 \end{array} \right], [\text{IKUDOMO}] \\
 \end{array} \right] \\
 \left[\begin{array}{l}
 -b, -i \\
 [(\text{DIM } 1d) \text{ DIR}] \\
 [\text{ACTOR}]_A, [\text{EVENT}]_A^\beta \\
 \text{suru}
 \end{array} \right] \\
 \text{Sit}
 \end{array} \right]$$

Due to the 'figurative information flow' from the thematic tier of *ryokoo* to the action tier of *suru*, the thematic tier's aspectual specification overrides the action tier's aspectual specification. I capture this 'overriding' by the use of the extracting function ELT 'element' which can map an unbounded event into individuated (iterative) events:³⁴ hence, the whole clause assumes the unbounded iterable process reading (-b, +i).

7.4.4.3. Bipredicational VN-o Suru

7.4.4.3.1. Atelic Form

As for the CS representation of the atelic bipredicational *VN-o suru* (62a), I will represent it as in (62b).

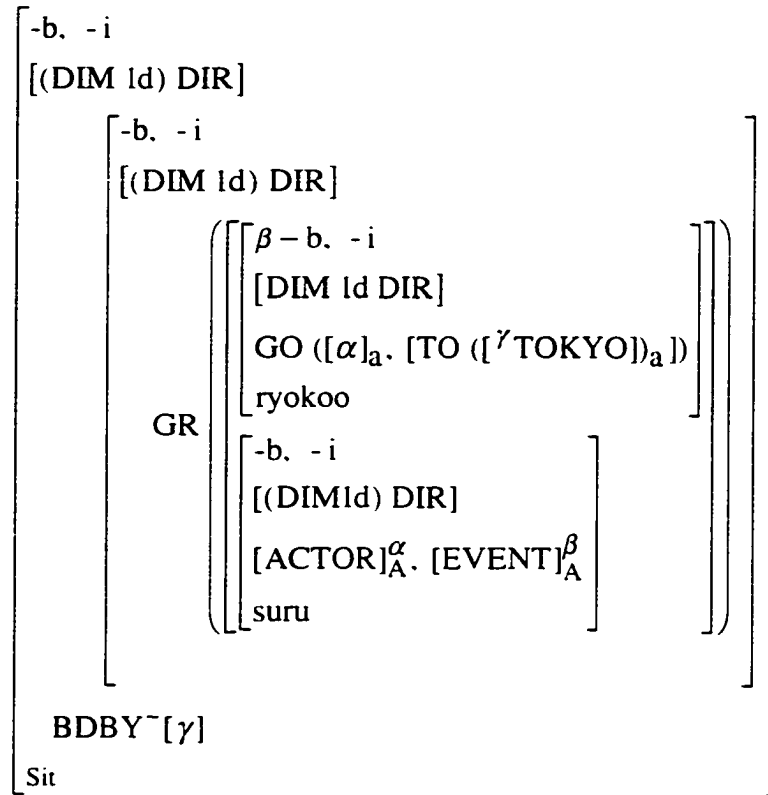
³⁴ In the nominal system, ELT ('element of') can for instance map *water* (substance) into *a drop of water* (individual) (Jackendoff, 1991: 22-23).

(62)

a. Taroo_i ga (i-sshuu-kan) Tokyo ni [PRO_i RYOKOO] o shi-ta.
 NOM one-week-for towards travel ACC do-PAST

'Taroo traveled towards Tokyo for a week.'

b.



In (62b), the argument of *suru* will be mapped into the syntactic subject and object positions by virtue of A(rgument)-Linking, while a-marked VN arguments will be mapped into the domain of the accusative NP, being realized as PRO and a Goal PP. I assume that, as discussed in Chapter 6, the 'promotion' of the Goal PP is a syntactic matter. Although argument promotion is a syntactic matter, the argument promotion *effect* should be visible to Conceptual Structure given its semantic nature. To this end, the function [BDBY] is placed in the clausal domain, and its argument (i.e., TOKYO) is coindexed with the argument of TO. In (62a) the predicate is modified by *i-sshuu-kan* 'for a week', indicating that the event is viewed as atelic. The reading is derived whereby *Tokyo-ni(to)* is understood as defining an unbounded path (Filip, 1993). To express this unbounded path

effect. I set the value of BDBY at '~' instead of the normal value of '+'. Since the function of BDBY~ is tantamount to mapping an otherwise unbounded event (-b, -i) into another unbounded (-b, -i) event, the whole clause assumes an atelic reading.³⁵

7.4.4.3.2. Telic Form

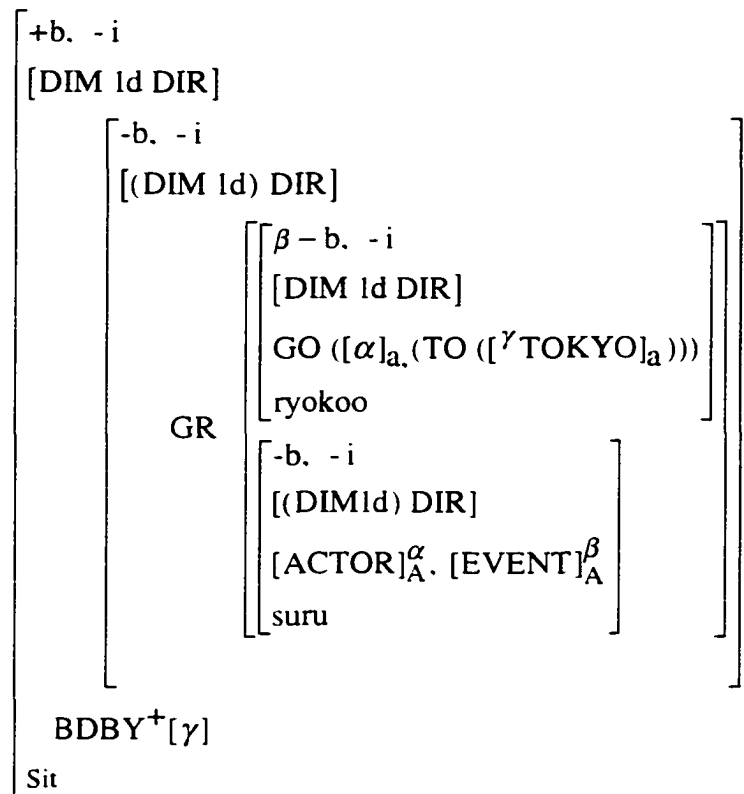
I will represent (63b) as the CS of the bipredicational *VN-o suru* (63a).

(63)

a. Taroo_i ga (i-sshuu-kande) Tokyo ni [PRO_i RYOKOO] o shi-ta.
 NOM one-week-in to travel ACC do-PAST

'Taroo traveled to Tokyo in a week.'

b.



³⁵ The atelic specification of the combination of the thematic and action tiers is derived by the function GR 'grinding' which should be able to map an unbounded event into another unbounded event. In the nominal system, GR maps its argument (e.g., pig) into substance (meat, i.e., pork) (Jackendoff, 1991: 26-27).

The only significant difference in CS representation between the previous atelic bipredicational *VN-o suru* and the current telic bipredicational *VN-o suru* is that in the current case, the function BDBY takes '+' as its value. Since its argument TOKYO functions as a 'bounded path', BDBY⁺ maps an unbounded event (-b, -i) into a bounded event (+b, -i). Consequently, the whole clause assumes a telic reading.

7.5. Summary and Remarks

In this chapter, I show how Jackendoff's Conceptual Semantics can assist us in representing all the essential features of *VN-o suru* constructions. Jackendoff's proposal concerning Action and Thematic Tiers is adopted to represent the thematic properties of *suru* and that of VN's respectively. In accordance with my single *suru* hypothesis, *suru* is represented as an Action Tier and its two arguments are mapped into syntax by means of A(argument)-Linking. The thematic tier is used to represent lexical properties of VN's.

In chapter 3, I show that any VN is isomorphic between its simple and complex event nominal readings. I capture this isomorphism as the identical argument-function-structure in their thematic tier representations. However, I also capture the difference between the two readings as the difference in mapping of their satellites: obligatory mapping for complex event nominals by means of A-Linking and non-obligatory mapping for simple event nominals by means of the Correspondence Rule Schema.

I also point out the usefulness of the Correspondence Rule Schema in dealing with the ambiguity associated with the argument-hood of VN satellites. The argument-hood of satellites of such PROCESS predicates as BENKYOO 'study' and KENKYUU 'research' is notoriously ambiguous. Also, the argument-hood of some PP's, such as Cocomitant of AISEKI 'table-sharing', is debatable (cf. Kajihara, 1991a). My suggestion is to treat these satellites as implicit or incorporated arguments. This treatment captures the ambiguous nature of the VN satellites in LCS terms with no recourse to a rigid two-way classification of grouping them either as pure modifiers or as pure arguments, a classification that fails to reflect the thematic nature of these satellites.³⁶

In Chapter 5, I show that the presence/absence of control structure differentiates between mono- and bi-predicational *VN-o suru* forms. As for control structure, one may

³⁶ Concerning the Correspondence approach, one problem I see with it is the unconstrained power given to creating correspondence rules. We can write a correspondence rule for any type of adjunct-like argument. This is obviously undesirable.

wonder whether encoding it in Conceptual Structure is redundant, since control can be captured in the syntactic behaviour of PRO. However, if the claim that control is sensitive to semantic properties of predicates (cf. Jackendoff, 1972; Nishigauchi, 1984) is valid, its encoding in Conceptual Structure terms should be justified.

In sum, this chapter shows how Jackendoff's Conceptual Semantics can formalize *VN-o suru* formation based on the mono- vs. bi-predicational and telic vs. atelic distinctions.

Chapter 8. The Unaccusative Hypothesis

8.1. Introduction

This chapter deals exclusively with the bipredicational *VN-o suru* construction involving *intransitive* complex event nominals. The aim is to examine the grammatical properties that determine which intransitive VN's are compatible with *VN-o suru* forms. This issue was originally raised by Miyagawa (1989a) and Tsujimura (1989, 1990), who independently claim that unaccusative VN's such as MEICHUU 'hitting (a target)' and TOOCHAKU 'arrival' cannot head the accusative NP of a *VN-o suru* construction, as in (1).

(1)

- a. *?Ya ga mato ni MEICHUU o suru.
 arrow NOM target to hit ACC do
 'An arrow hits the target.'
- b. *?Densha ga eki ni TOOCHAKU o suru.
 train NOM station to arrival ACC do
 'A train arrives at the station.'

According to both Miyagawa and Tsujimura, the ungrammaticality of these examples follows from a failure of Case assignment. As unaccusative predicates, the VN's do not assign an external role, making accusative Case assignment impossible according to Burzio's (1986) Generalization.

The claim I am going to advance is that it is not unaccusativity *per se* which is the determining factor. Besides unaccusativity, there is an aspectual constraint: the accusative NP of a *VN-o suru* construction must aspectually denote a PROCESS. The interaction of the aspectual constraint and unaccusativity determines the grammaticality of intransitive *VN-o suru* forms. Hence, the grammaticality of these forms is not dichotic as Miyagawa (1989a) and Tsujimura (1990) predict but *gradient* in nature.

This chapter, which is rather independent of the previous chapters, is organized as follows. In the rest of this Section, I introduce the Unaccusative Hypothesis and approaches to it. In Section 8.2, in reviewing previous works on unaccusativity and *VN-o*

suru formation (Grimshaw and Mester, 1988; Miyagawa, 1989a; and Tsujimura, 1990), I will examine the claim that the ability of intransitive VN's to head the accusative NP of *VN-o suru* forms depends on Burzio's (1986) generalization. In doing so, I will also examine the validity of their unaccusativity diagnostics. In Sections 8.3 and 8.4, I extend this examination to other unaccusative diagnostics, hence advancing the claim that in Japanese *ni*-causative and the semantic notion associated with it (self-control) function as reliable diagnostics. In Section 8.5, examining the aspectual constraint on *VN-o suru* formation within Zaenen's (1993) model of unaccusativity, I account for the gradient grammaticality observed with intransitive *VN-o suru* forms through the types of mechanisms developed in Optimality Theory (cf. McCarthy and Prince, 1993, 1994, 1995).

8.1.1. What is the Unaccusative Hypothesis?

The work of Perlmutter (1978) introduces the hypothesis that intransitive verbs can be classified into two types: unergative and unaccusative. The most well accepted generalization is that while the subject of unergatives shows exclusively subject properties, the subject of unaccusatives shows some properties of objects. Syntactically, therefore, "[u]naccusatives behave in some ways transitively rather than intransitively, closely resembling passive verbs, which are often analyzed as involving movement of an underlying direct object NP into surface subject position" (Grimshaw, 1987: 244). On this view, unergative predicates take a D-structure subject while unaccusative predicates take a D-structure object, as schematized in (2).

(2)

- a. Unergative verb: NP [_{VP} V]
- b. Unaccusative verb: ___ [_{VP} V NP]

The above difference has also been described in terms of argument structure. Unergative predicates are associated with external arguments, which assume an Agentive quality, whereas unaccusative predicates are associated with internal arguments, which assume a Theme- or Patient-like quality, as enumerated below.

(3) (Perlmutter, 1978: 162)

unergative: predicates describing willed or volitional acts (e.g., play, talk, work); manner-of-speaking verbs (e.g., mumble, shout, whisper); sounds made by animals (e.g., bark, chirp, oink); certain involuntary bodily processes (e.g., cry, sleep, vomit).

unaccusative: predicates expressed by adjectives in English (e.g., cool, hot, smart); predicates whose "nuclear term" is a patient (e.g., float, glide, shake); predicates of existing and happening (e.g., exist, happen, arise); non-voluntary emission of stimuli that impinge on the senses (e.g., glitter, smell, shine); aspectual predicates (e.g., begin, continue, stop); duratives (e.g., last, remain, survive).

A further characterization may well be that unlike an unergative predicate, "an unaccusative predicate is unable to take an object with accusative case (or in GB terms, it is unable to assign Structural Case to its object)" (Levin and Rappaport Hovav, 1995: 3).¹

8.1.2. Two Types of Approaches

There are two different approaches to the Unaccusative Hypothesis: syntactic approaches (Baker 1983; Delancey 1985; C. Rosen, 1984 among others) and semantic approaches (Levin and Rappaport, 1989; Levin and Rappaport Hovav, 1995; Van Valin, 1990; Zaenen 1993 among others). To show where I stand in terms of the approaches, I will briefly review C. Rosen (1984) as a prototypical syntactic approach and Levin and Rappaport Hovav (1995) as an instance of a semantic approach.

Rosen (1984) is well known for her strong opposition to any semantic approach, based on the following three reasons: (i) there is not even a single semantic property which is common to all unaccusative verbs cross-linguistically; (ii) intransitive predicates with similar meanings within and across languages cannot be grouped into just one type of intransitive predicates; and, (iii) some intransitives show variable behaviour and thus must be classified as both unaccusative and unergative. The validity of her claim aside, Rosen (1984) assumes, in common with many others taking a syntactic approach, that, regardless of their semantic class, all unaccusative verbs share such syntactic properties as the selection of an internal argument and the lack of an external argument.

In contrast, such semantic approaches as Levin and Rappaport Hovav's (1995) tend to assume that "unaccusativity is not a unified phenomenon, and a single verb can test as

¹ Cognate Object constructions (cf. Massam, 1990), such as those in (i), indicate the possibility that, although they are one-place predicates, unergatives are capable of assigning accusative Case (cf. Burzio, 1986).

- (i) a. John laughed a nervous laugh.
- b. Mary smiled a sweet smile.

These verbs contrast with unaccusatives in this.

- (ii) a. *They sparkled a million dollar sparkle.
- b. *They floated a long float down from the sky.

'unaccusative' according to one diagnostic, and as 'unergative' according to another diagnostic" (Levin and Rappaport Hovav, 1995: 16). Furthermore, according to Levin and Rappaport Hovav (1995), one semantic diagnostic does not necessarily set a clear boundary between unergatives and unaccusatives. For instance, the Resultative construction is compatible not only with unaccusatives but also with unergatives, when these unergatives are accompanied by non-subcategorized objects (e.g., *fake reflexive object*²); further, there are unaccusatives which are not compatible with resultatives: e.g., inherently directed verb³ and stative verbs.

My approach in this chapter is basically semantic. Like Levin and Rappaport Hovav (1995), I opt for the view that unaccusativity is determined in semantic terms. Like Rosen (1984), however, I opt for the view that it is possible for a given diagnostic to isolate the two types of intransitives from each other.⁴ To develop my semantic approach, I will be guided by the generalization that unergative predicates are associated with external arguments which assume Agent-like property, whereas unaccusative predicates are associated with arguments having Theme- or Patient-like properties (cf. Perlmutter, 1978).

² An example is as follows (Levin and Rappaport Hovav, 1995: 35 (2/3)).

- a. *Dora shouted hoarse.
- b. Dora shouted herself hoarse.

³ An example is *Willa arrived breathless*, where the postverbal phrase *breathless* functions as a depictive phrase rather than a resultative phrase (Levin and Rappaport Hovav, 1995: 58 (58)).

⁴ This kind of semantic approach is nothing unique. For instance, according to Van Valin (1990), unaccusativity can be accounted for by the notion of macrorole Actor vs. macrorole Undergoer.

8.2. Unaccusativity and *VN-o suru*: Previous Studies

8.2.1. Introduction

Having provided some theoretical background on unaccusativity, in this section I will review three previous studies on intransitive *VN-o suru*.

Grimshaw and Mester (1988) claim that unaccusatives VN's, such as DARAKU 'corruption', can head the accusative NP of *VN-o suru*. This claim is, however, mostly driven by theoretical motivation and appears to have little empirical ground. As demonstrated by Miyagawa (1989a) and Tsujimura (1990), unaccusative VN's tend to fail to head the accusative NP of *VN-o suru*. Hence, unaccusative VN's are allowed with *VN-suru* forms but not with *VN-o suru* forms, as in (4).

(4) (Miyagawa, 1989a: 664 (27))

- a. TANJOO 'birth'
TANJOO-suru/?* TANJOO-o suru
- b. KAITOO 'thaw'
KAITOO-suru/?*KAITOO-o suru
- c. JOOHATSU 'evaporation'
JOOHATSU-suru/?*JOOHATSU-o suru
- d. TOOCHAKU 'arrival'
TOOCHAKU-suru/?*TOOCHAKU-o suru
- e. RYUUKOO 'popularity'
RYUUKOO-suru/?*RYUUKOO-o suru

Both Miyagawa (1989a) and Tsujimura (1990) attribute this observational generalization to Burzio's (1986) Generalization: accusative Case is assigned iff a verb assigns an external role. Under the assumption that unaccusative VN's do not assign an external role, marking of accusative Case become impossible.

Even though Miyagawa's (1989a) and Tsujimura's (1990) claim is empirically more plausible than Grimshaw and Mester's (1988), their claim based on Burzio's (1986) Generalization also fails to account for why the grammaticality of various intransitive *VN-o suru* forms is gradient rather than dichotic, as seen in (5).

(5)⁵

- a. Taroo ga **TAISOO-(o)** shi-ta.
NOM exercise (ACC) do-PAST
'Taroo exercised.'
- b. Heishitachi ga **KIKAN-(??o)** shi-ta.
soldiers NOM return-(ACC) do-PAST
'The soldiers returned.'
- c. Kurage ga **FUYUU-(??o)** shi-ta.
jellyfish NOM float-(ACC) do-PAST
'A jellyfish floated.'
- d. Kopii ga **KAKUDAI-(*?o)** shi-ta.
copy NOM enlargement-(ACC) do-PAST
'The copy has enlarged.'
- e. Kodomo ga **SHIBOO-(*o)** shi-ta.
child NOM death-(ACC) do-PAST
'The child has died.'
- f. Obake ga **SONZAI-(**o)** shi-ta.
ghost NOM existence-(ACC) do-PAST
'A ghost existed.'

In the rest of the section, I will demonstrate three things. First, Grimshaw and Mester (1988) are wrong to suggest that unaccusative VN's straightforwardly undergo Transfer to yield grammatical *VN-o suru* forms. Second, Miyagawa (1989a) and Tsujimura (1990) are both basically correct in saying that unaccusative VN's are impossible in the *VN-o suru* construction. I, however, express my doubt on their support for Transfer and Burzio's (1986) Generalization. Third, both Miyagawa (1989a, b) and Tsujimura (1990) provide independent tests for unaccusative VN's to back up their empirical claims against Grimshaw and Mester (1988). I show that both of their tests are suspect.

⁵ These grammaticality judgments may also be reduced to the three levels: acceptable (i.e., no marking), (slightly or highly) marginal (i.e., '??' and '*?'), and (totally) unacceptable (i.e., '**' and '*').

8.2.2. Grimshaw and Mester (1988)

Concerning the issue of unaccusativity, Grimshaw and Mester (1988: 220, footnote 3) suggest that Transfer takes place for unaccusative VN's but not for unergative VN's. To understand their suggestion, one has to understand the significance of the following constraints on Transfer.

(6) (Grimshaw and Mester, 1988: 215)

- (i) At least one argument apart from the subject must be outside the [accusative] NP; [and]
- (ii) The subject must always be outside the NP.

Why such constraints are proposed has already been discussed in Chapter 2 (Section 2.2.1). Briefly, an open position must be transferred from the VN to *suru*, to ensure that the accusative NP headed by the VN is appropriately licensed. (This trade-off seems to me to be stipulative.) Since, being lexically suppressed (Grimshaw, 1990), the subjects of nominals are not regarded as open positions, an argument apart from the subject must be transferred.

As far as unaccusativity is concerned, the logical consequence of the above argument is clear. There can be no Transfer with an unergative nominal because it has only a lexically suppressed external argument and has no internal argument with which to satisfy the open-position requirement. Then, how can Grimshaw and Mester (1988) account for such sentences as (7) which have an unergative VN as the head of an object NP?

(7) (Grimshaw and Mester, 1988: 220)

- | | |
|--------------------|---------------------------|
| a. SEPPUKU-o suru | 'commit <i>harakiri</i> ' |
| b. UNDOO-o suru | 'exercise' |
| c. SEIKATSU-o suru | 'make a living' |
| d. SHIGOTO-o suru | 'work' |
| e. JISATSU-o suru | 'commit suicide' |

Their claim is that the *suru* of an unergative VN is not *light suru* but *heavy suru*, whose property is defined as: (i) imposing the thematic requirement of Agent, and (ii) taking as an object a θ -opaque NP which does not lend its arguments to *suru*. Thus, Transfer is irrelevant.

In contrast, in the case of the unaccusative VN, its internal argument satisfies the open-position requirement. Thus, Transfer should take place; and the VN is case-marked, as in (8).

(8)

- a. DARAKU (Theme) 'become corrupt'
- b. *suru* () <acc>
- c. DARAKU () + *suru* (Theme) <acc>

Grimshaw and Mester (1988: 220, footnote 3) are, however, not totally sure about their treatment of unaccusatives, since they say that such intransitive *VN-o suru* forms as *daraku-o suru* 'be morally ruined', *fuhai-o suru* 'become rotten' and *bimboo-o suru* 'become poor', may either be fixed expressions or unaccusative constructions. If the latter is the case, then, "their single argument would be internal rather than external and might be unsuppressed and thus transferable".

8.2.2.1. Miyagawa's (1988) and Tsujimura's (1990) Criticism

Miyagawa (1989a), as well as Tsujimura (1990), point out that unaccusative VN's, such as SHOOSHIN 'promotion' in (9), may not bear structural Case. To be grammatical, this nominal in (9a) must be lexically incorporated into *suru*, as in (9b).

(9) (Tsujimura, 1990: 278)

- a. ??John wa buchoo ni SHOOSHIN o shi-ta.
 TOP section-chief to promotion ACC do-PAST
 'John obtained a promotion to section chief.'
- b. John wa buchoo ni SHOOSHIN-shi-ta.
 TOP section-chief to promotion-do-PAST
 'John obtained a promotion to section chief.'

To rule out (9a), both Miyagawa (1989a and b) and Tsujimura (1990) employ Burzio's (1986) generalization. They argue that SHOOSHIN 'promotion', as an unaccusative predicate, has no external role to transfer to the empty argument slot of *suru*. *Suru* then fails to assign Case to the accusative NP due to Burzio's generalization: Case is assigned iff a verb assigns an external role. In consequence, the unaccusative VN cannot occur in the form *VN-o-suru*.

We find, then, an empirical conflict. Based on the Transfer Hypothesis, Grimshaw and Mester (1988) make a suggestion that unaccusative VN's are allowed to head the accusative NP of *VN-o suru*. In contrast, employing Burzio's (1986) generalization, both Miyagawa (1989a and b) and Tsujimura (1990) argue that no unaccusative VN's are allowed to head the accusative NP of *VN-o suru*. I treat this conflict in the following sections.

8.2.3. Miyagawa (1989a)

In this section, I review Miyagawa (1989a) and point out a few problems with the work. I argue that his employment of Transfer (Grimshaw and Mester, 1988) and Burzio's (1986) generalization are problematic mainly because Burzio's (1986) generalization would lead to strict ungrammaticality judgments for the unaccusative *VN-o suru* constructions, which is empirically problematic. I will also argue that his unaccusative diagnostic, Numeral Quantifier Floating (NQF), is not reliable.

8.2.3.1. Numeral Quantifier Floating and *VN-o suru*

Miyagawa (1989a) argues that NQF can be employed as an unaccusativity diagnostic.⁶ To illustrate his claim, Miyagawa (1989a) takes SEIKOO 'success' as a case

⁶ Miyagawa's (1989a and b) account of Numeral Quantifier Floating (NQF) depends on the notion of mutual c-command (i.e., the sister relationship), which can be illustrated in the following manner. In (i), the head of a NQ (i.e., the NP *kodomo* 'children') and the NQ which consists of a numeral and a classifier (i.e., *3-nin*) are two separate phrases which must c-command each other.

(i) (Miyagawa, 1989a: 666 (4))

a. *Kodomo ga 3-nin warat-ta.*
 children NOM -CLS(person) laugh-PAST
 'Three children laughed.'

a'. [_{IP} NP 3-nin [_{VP} . . .]]

The same argumentation applies to (ii).

(ii) (Miyagawa, 1989a: 666 (5))

b. *Hanako ga hon o 2-satu kat-ta.*
 NOM book ACC -CLS(volume) buy-PAST
 'Hanako bought two books.'

b'. [_{IP} NP [_{VP} [_{V'} NP 2-satu . . .]]]

As long as this c-command condition is respected, the NQ or its associated noun can be scrambled. Hence, in (iii), although the NP's and the NQ's are separated far apart, the mutual c-command condition is still retained: in (iiia), between the trace of the NP and its NQ; and in (iiib), between the NP and the trace of its NQ.

(iii) (Miyagawa, 1989a: 661 (8))

a. *Hon-o_i Hanako ga t_j 2-satsu kat-ta.*
 book ACC NOM -CLS(volume) buy-PAST
 'Hanako bought two (volumes of) books.'

and argues that the status of this VN is ambiguous: it can be either unaccusative or unergative, depending on whether its *suru* forms allow NQF or not. His argument, which is rather confusing due to its circularity, goes as follows.

(10) (Miyagawa, 1989a: 666 (35a/36a))

- a. Kodomo_i ga [vp sono jikken ni t_i 2-ri SEIKOO-shi-ta].
 children NOM that experiment at -CLS(person) success-do-PAST
 'Two children succeeded at that experiment.'
- b. ?2-ri_i sono jikken ni kodomo ga t_i SEIKOO-shi-ta.
 -CLS(human) that experiment at children NOM success-do-PAST
 'Two children succeeded at that experiment.'

In the incorporated *VN-suru* form in (10), the VP-internal NQ can modify the subject NP, as in (10a): or the subject-oriented NQ can be scrambled away, as in (10b). In both instances, given the assumption that the unaccusative subject originates underlyingly in object position, a mutual c-command condition is retained: in (10a), between *2-ri* and the trace of *kodomo* 'children'; and in (10b), between the trace of *2-ri* and the trace of *kodomo* 'children'. Consequently, SEIKOO 'success' in (10) ought to be unaccusative due to the combination of the following matters: (i) these sentences are grammatical; (ii) respecting Burzio's (1986) generalization, incorporated SEIKOO 'success' does not take accusative

- b. 2-satsu_i Hanako ga hon o t_i kat-ta.
 -CLS(volume) NOM book ACC buy-PAST
 'Hanako bought two (volumes of) books.'

Assuming that there is no downward movement of *3-nin* '-person' in (iva) and that scrambling cannot apply to the subject NP, as in (ivb) (cf. Saito, 1985), the c-command condition can account for the ill-formedness of these sentences in (iva) and (ivc). That is, the NQ in (iiia) cannot c-command its NP which is in the subject position. Also in (ivc), the NP (i.e., *tomodachi* 'friend') within the subject NP fails to c-command its NQ (i.e., *3-nin*).

(iv) (Miyagawa, 1989a: 661 (9-11))

- a. *Gakusei ga [vp hon o 3-nin kat-ta]
 students NOM book ACC -CLS(person) buy-PAST
 'Three students bought books.'
- b. *Gakusei-ga_i . . . hon-oj . . . [[IP t_i 3-nin [vp t_j kat-ta]].
 students NOM book ACC -CLS(person) buy-PAST
 'Three students bought books.'
- c. *[NP Tomodachi no ie] ga 3-nin yake-ta.
 friends GEN house NOM -CLS(person) burn-PAST
 'The house(s) of three friends burned down.'

As pointed out by L. Saxon, the above scenario may not work if we assume the VP-internal subject hypothesis and Scrambling within VP.

Case; and (iii) the assumption of unaccusativity, that the subject originates in underlyingly object position, works well with the analysis of NQF in terms of mutual c-command.

The situation is different in the non-incorporated *VN-o suru* in (11) where SEIKOO 'success' is marked by accusative Case.

(11) (from Miyagawa, 1989a: 666-7 (35b/36b))

- a. ?**Kodomo_i ga* [_{VP} *sono jikken ni t_i 2-ri* SEIKOO o shi-ta].
 children NOM that experiment at -CLS(person) success ACC do-PAST

'Two children succeeded at that experiment.'

- b. **2-ri_i sono jikken ni kodomo ga t_i* SEIKOO o shi-ta.
 -CLS(person) that experiment at children NOM success ACC do-PAST

'Two children succeeded at that experiment.'

When SEIKOO 'success' is marked by accusative Case, the grammaticality of the sentences deteriorates. According to Miyagawa (1989a), this deterioration indicates that the accusative-marked SEIKOO 'success' is unergative. That is, if SEIKOO in *VN-o suru* were unaccusative, the mutual c-command condition would hold between the NQ (*2-ri*) and the trace of a supposedly moved head *kodomo* 'children' in (11a) and between the trace of *kodomo* 'children' and the trace of *2-ri* in (11b). However, under the assumption that SEIKOO 'success' in (11) is an unergative predicate whose subject is not part of a chain with a trace, we can account for why both sentences in (11) are ungrammatical. Hence, SEIKOO 'success' in (11) is unergative.

8.2.3.2. Problems with Miyagawa (1989a)

The first problem with Miyagawa (1989a) is the circularity observed with his argumentation. Miyagawa (1989a) argues that SEIKOO 'success' in *VN-suru* is unaccusative since NQF is allowed, while SEIKOO in *VN-o suru* is unergative since NQF is not allowed. The second, more significant problem with Miyagawa (1989a) has to do with the grammaticality of *VN-o suru*. As we have seen in (5), the grammaticality judgment of intransitive *VN-o suru* is not dichotic, but rather gradient. Such a scale of grammaticality judgments cannot be accounted for by Burzio's (1986) generalization, which assumes that grammaticality is dichotic.

8.2.3.3. NQF is an Unreliable Unaccusative Diagnostic

The third problem is the validity of Numeral Quantifier Floating as an unaccusative diagnostic due to the subtlety involved in grammatical judgments. The NQF is basically sensitive to the subject-object asymmetry: generally NQF is possible with objects but not with subjects (see among others, Fukushima, 1991; Miyagawa, 1989b; Kawashima, 1994). For example, in (12) where GAKUSHUU 'study' is used transitively, ungrammaticality will result when NQF involves the subject, but this is not true with the object, as we see in (13). And grammaticality judgments in these instances are clear.

(12)

- a. *?Kodomo ga toshokan-de eigo o 3-nin GAKUSHUU-shi-a.
children NOM library-at English ACC -CLS(person) study-do-PAST
'Three children studied English at the library.'
- b. *?3-nin toshokan-de kodomo ga eigo o GAKUSHUU-shi-ta.
-CLS(person) library-at children NOM English ACC study-do-PAST
'Three children studied English at the library.'

(13)

- c. 3-satsu kodomo ga toshokan-de hon o GAKUSHUU-shi-ta.
-CLS(volume) children NOM library-at book ACC study-do-PAST
'Children studied three (volumes of) books at the library.'
- d. Hon o kodomo ga toshokan-de 3-satsu GAKUSHUU-shita.
books ACC children NOM library-at -CLS(volume) study-do-PAST
'Children studied three (volumes of) books at the library.'

However, when no object is present, as in the case of intransitive VN's (14), it is really hard to judge whether given sentences are grammatical or not.

(14)

i. Unergative:

- a. ?Josei ga jimusho no ik-kaku de 3-nin KYUUKUKEI-shi-teir-u.
women NOM office GEN one-corner at -CLS(person) rest-do-PROG-PRES
'Three women are having a rest at one corner of the office.'
- b. ?3-nin jimusho no ik-kaku de josei ga KYUUKUKEI-shi-teir-u.
-CLS(person) office GEN one-corner at women NOM rest-do-PROG-PRES
'Three women are having a rest at one corner of the office.'

ii. Unaccusative:

- a. ?Josei ga jimusho no ik-kaku de 3-nin SOTTOO-shi-teir-u.
 women NOM office GEN one-corner at -CLS(person) faint-do-STATE-PRES
 'Three women have fainted at one corner of the office.'
- b. ?3-nin jimusho no ik-kaku de josei ga SOTTOO-shi-teir-u.
 -CLS(person) office GEN one-corner at women NOM faint-do-STATE-PRES
 'Three women have fainted at one corner of the office.'

In the above instances, it is almost impossible to make any clear distinction in grammaticality between the so-called unaccusative and unergative VN. Given this problem of grammaticality judgment, it is not a wise choice to bring NQF, a subject-object asymmetry test, into intransitive predicates. Arguments based on this test lack persuasive power. Hence, NQF may not be able to be adopted as a diagnostic of unaccusativity. Miyagawa's (1989a) account for intransitive *VN-o suru* forms based on Transfer, Burzio's (1986) generalization and NQF is therefore problematic.

8.2.4. Tsujimura (1990)

Tsujimura (1990) claims, as Miyagawa (1998a) does, that only unergative VN's can head the accusative NP of *VN-o suru* forms, a restriction due to Burzio's (1986) generalization. She uses the resultative construction as a diagnostic for unaccusativity, but I will suggest that this diagnostic fails due to the interaction between unaccusativity and telicity.

On the assumption that a result phrase can only be an attribute of the object of a verb, as expressed by Simpson (1983: 146)

(15)

"The controller of resultative attributes must be an OBJECT, whether that OBJECT is a surface OBJECT, as in transitive verbs, or an underlying OBJECT, as in passive and intransitive verbs of the Unaccusative [= Ergative] class ..."

it follows that the subjects of unergative verbs cannot have resultative attributes predicated of them, as in (16), but those of unaccusative predicates can, as in (17).

(16) (Simpson, 1983: 145)

- a. *I danced *tired*.
- b. *I laughed *tired*.
- c. *I jogged *tired*.
- d. *I walked *tired*.
- e. *I worked *tired*.

(17) (Simpson, 1983: 143)

- a. The ice-cream froze *solid*.
- b. The butter melted to *a liquid*.
- c. The vase broke into *little pieces*.

Tsujimura (1990) applies Simpson's (1983) generalization to Japanese VN's and argues that there is a sharp contrast between the sentences in (18) and (19). In (18), the adjectives are grammatically predicated of the subjects as resultatives, while those in (19) are not.

(18) (from Tsujimura, 1990: 284)

- a. Taroo wa **otona-ni/ ookiku** SEICHOO-shi-ta.
 TOP adult to/ big growth-do-PAST
 'Taroo grew (into an adult /big person).'
- b. Fune ga **suichuu hukaku** CHINBOTSU-shi-ta.
 ship NOM in water deep submersion -do-PAST
 'The ship submerged (deep in the water).'

(19) (Tsujimura, 1990: 284)⁷

a. *John ga **kutakutani** SANPO-shi-ta.
 NOM exhausted walk-do-PAST

'Taroo walked exhausted.'

b. *Mary ga **kanashiku** BISHOO-shi-ta.
 NOM sad smile-do-PAST

'Mary smiled sad.'

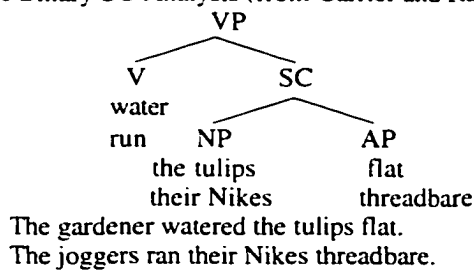
The above contrast leads her to claim that the VN's in (18) are unaccusative and those in (19) are unergative. Based on this distinction, Tsujimura (1990) develops the same argument as Miyagawa (1989a), claiming that it is due to Burzio's (1986) generalization that the unergative VN's can take the *VN-o suru* form, as in (20), while the unaccusative VN's cannot, as in (21).

⁷ In fact, the *-marking is misleading in the sense that these sentences can take these secondary predicates as depictives. Given the depictive readings, these sentences are all grammatical.

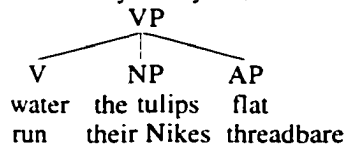
The main difference between resultatives and depictives is that result phrases are predicates whereas depictive phrases are adjuncts. Thus, in depictives, the depictive phrase is present in addition to the elements projected by the verb. Hence, regardless of whether the depictive phrase is present, the action of the verb is still the same: e.g., *Ben cut the bread (hot)* (Rapoport, 1993: 168). In contrast, since the result phrase is crucial in the interpretation of the action described by the verb, the result phrase may receive a theta-role from the verb, or alternatively the verb and result phrase may form a complex predicate.

As for the structural representation of resultatives, the literature provides basically two types of structural analyses: those in which the postverbal NP and the result phrase form a small clause (SC), as in (i) and those in which they do not (ii):

(i) The Binary SC Analysis (from Carrier and Randall, 1992: 175: (5)) :



(ii) The Ternary Analysis (from Carrier and Randall, 1992: 176: (7)):



Whichever analysis is chosen, one thing is consistent: the postverbal NP and the result phrase are in a sister relationship.

(20) (cf. Tsujimura, 1990: 284)

a. John ga SANPO o shi-ta.
NOM walk ACC do-PAST

'John walked.'

b. Mary ga BISHOO o shi-ta.
NOM smile ACC do-PAST

'Mary smiled.'

(21) (cf. Tsujimura, 1990: 285)

a. *Taroo wa SEICHOO o shi-ta.
TOP growth ACC do-PAST

'Taroo grew.'

b. *Fune ga CHINBOTSU o shi-ta.
ship NOM submersion ACC do-PAST

'The ship submerged.'

8.2.4.1. Problems with Tsujimura (1990)

Concerning Tsujimura's (1990) employment of Burzio's (1986) generalization, the same criticisms as those addressed to Miyagawa (1989a) can apply. That is, Burzio's (1986) generalization is nothing but a stipulation or observational generalization, lacking any explanatory value (Grimshaw, 1987). Also, the grammaticality of intransitive *VN-o suru* is gradient rather than dichotic. Such patterns of grammaticality judgments cannot be accounted for with Burzio's (1986) generalization.

8.2.4.1.1. Validity of Tsujimura's (1990) Unaccusative Diagnostic

The second problem for Tsujimura (1990) has to do with her ignoring of an aspectual constraint imposed on resultatives. Although Tsujimura (1990) develops her argument based on Simpson (1983), she misses one very important feature of resultatives which Simpson (1983) discusses in her paper. That is, the resultative construction is sensitive to aspect. The importance of aspectual constraints can be demonstrated by my examples in (22), where resultative phrases cannot be predicated of the subjects of the putative unaccusative VN's if their aspectual type is ACTIVITY.

(22)

- i. HOOSAN(-suru) 'radiate/diffuse'
 ??Hikari ga **masshironi** HOOSAN-shi-ta.
 light NOM white-ly radiation-do-PAST
 'The light radiated white.'
- ii. SHINDOO(-suru) 'tremble'
 ??Ie ga **pechankoni** SHINDOO-shi-ta.
 house NOM flattened trembling-do-PAST
 'The house trembled flattened.'
- iii. FUYUU(-suru) 'float'
 ??Kurage ga **hiagatte** FUYUU-shi-ta.
 jellyfish NOM sun-dried float-do-PAST
 'A jellyfish floated sun-dried.'

The indication of (22) is clear. Tsujimura's (1990) argument which ignores the aspectual constraint on resultatives does not provide an accurate picture of intransitive VN's and *VN-o suru*.

8.3. Unaccusative Diagnostics?

In this section, I will show that Resultatives as well as Indirect Passive (Dubinsky, 1989) do not function as unaccusative diagnostics.

8.3.1. Resultatives as Unaccusative Diagnostic?

Resultatives cannot be a reliable diagnostic. Reviewing previous studies on resultatives, Levin and Rappaport Hovav (1995: 34) claim that "[t]he basic insight that emerges from work on the resultative construction is that a resultative phrase may be predicated of the immediately postverbal NP, but may not be predicated of a subject or of an oblique complement. We call this generalization the *Direct Object Restriction*". This generalization can be maintained under the assumption that resultative phrases can be predicated not only of the underlying objects of unaccusatives but also of the non-subcategorized objects of unergative predicates: those with fake reflexives (23a), non-

subcategorized objects of other types (24a), and those with inalienably possessed NP's (25a).⁸

(23) (Levin and Rappaport Hovav, 1995: 35 (2/3))

- a. Dora shouted herself hoarse.
- b. *Dora shouted hoarse.

(24) (Levin and Rappaport Hovav, 1995: 36 (6a/7b))

- a. You may sleep it [=the unborn baby] quiet again.
- b. *You may sleep it.

(25) (Levin and Rappaport Hovav, 1995: 36-37 (8a/9a))

- a. Sylvester cried his eyes out.
- b. *Sylvester cried his eyes.

What is clear from these examples is that resultatives themselves do not function in any direct manner to isolate unaccusatives from unergatives, the reason being that resultative phrases can be predicated not only of the underlying object of unaccusatives but also of the non-subcategorized objects of unergatives.

Furthermore, resultatives are incompatible with certain types of unaccusatives: to be specific, Stative Verbs (26) and Verbs of Inherently Directed Motion (27).

(26) (Levin and Rappaport Hovav, 1995: 61 (66))

- a. *The Loch Ness monster appeared famous.⁹
- b. *The POWs survived into frustration.

(27) (Levin and Rappaport Hovav, 1995: 58 (58))

Willa arrived breathless.

Resultatives are incompatible with any stative predicates, regardless of their adicity (cf. Hoekstra, 1992). Resultatives are incompatible with verbs of inherently directed motion possibly, as Tenny (1987: 190) claims, because "[t]here may be at most one 'delimiting'

⁸ The status of being non-subcategorized objects is clearly demonstrated by the ungrammaticality of the (b) sentences in (23), (24) and (25).

⁹ This sentence cannot mean that the *Loch Ness* became *famous* as a result of its appearance. Also the sentence (27) cannot mean that *Willa* became *breathless* as a result of arriving.

associated with a verb phrase". On the assumption that verbs of inherently directed motion are lexically delimited, these verbs would not be able to take a second syntactically encoded delimiter which specifies a change of state.

Consequently, resultatives are unable to function as an unaccusative diagnostic, unless we consider enumerating all the possible exceptions and account for why such exceptions exist.

8.3.1.1. Resultatives and Telicity

I will cite another reason why resultatives cannot function as unaccusative diagnostic. It seems to be that resultatives are sensitive to an interaction between unaccusativity and telicity. Concerning the aspectual specification of unaccusatives, for instance, Simpson (1983) claims that resultatives are compatible only with verbs of change of state.

(28) (Simpson, 1983: 143)

- a. The ice-cream froze *solid*.
- a'. I froze the ice-cream *solid*.
- b. I melted the butter *to a liquid*.
- b'. The butter melted *to a liquid*.

There is, however, a claim polar opposite to Simpson's (1993) that resultatives are compatible only with Activity verbs (29) but incompatible with Accomplishment or Achievement verbs (30) (cf. Dowty, 1979; Pustejovsky, 1992; Tenny, 1987, 1992, 1994; Van Valin, 1990).

(29) (Rapoport, 1993: 170 (12))

- a. I laughed my head off.
- b. I talked myself sick.

(30) (Rapoport, 1993: 171 (15))

- a. *I lit the match smoky/hot/black.
- b. *I hit three people unconscious/upset.
- c. *I caught the dog unhappy/tame.

What I call the Atelic Hypothesis above is phrased by Levin and Rappaport Hovav (1995: 50) this way: "[t]he resultative construction differs from lexically simple accomplishments

in that both the activity and the result state are lexically specified, each by a different predicate: the former by the verb and the latter by the resultative XP. For example, in *Terry wiped the table clean*, the verb *wipe* specifies the activity and the AP *clean* specified the result state".

Although the Atelic Hypothesis seems to contradict what I call Simpson's (1983) Telic Hypothesis, the fact is that these two do not. Judging from (28), Simpson's (1983) claim applies to unaccusatives; whereas, judging from (29), the Atelic Hypothesis applies to unergatives. In other words, resultatives are compatible with *atelic unergatives* as well as with *telic unaccusatives*. Given this generalization, resultatives themselves cannot isolate unaccusatives from other intransitives since, as far as intransitive predicates are concerned, resultatives are sensitive to the interaction between unaccusativity and telicity.

8.3.2. Indirect Passive: Dubinsky's (1989a) Suggestion

Before arguing in the next section that the Japanese *ni*-causative and the semantic notion associated with it, self-control, function as reliable diagnostics, I will examine one more unaccusative diagnostic: indirect passives (Dubinsky, 1989a; Marantz, 1984; Washio, 1990).

In discussing the Light Verb Construction with respect to unaccusativity, Dubinsky (1989a) claims that unaccusative VN's exhibit the following three syntactic characteristics: (i) inability to take an accusative case; (ii) ability of their surface subjects to be construed with a non-adjacent numeral quantifier; and, (iii) incompatibility with the indirect passive. As already seen, Dubinsky's (1989a) first point is discussed by both Miyagawa (1989a) and Tsujimura (1990), and his second point is extensively discussed by Miyagawa (1989a and b). So these two points are nothing new to us. The interesting suggestion Dubinsky (1989a) makes is that unaccusative VN's are incompatible with Indirect Passive, as seen in (31).¹⁰

¹⁰ It is customary to divide Japanese passives into (at least) two types: a direct passive and an indirect passive (Kitagawa, 1986; Kuno, 1973; Shibatani, 1985; S. Rosen, 1989b, 1990; Terada, 1990; Uda, 1992, 1994). The former is equivalent to English passives while the latter does not find direct correspondent forms in English (though it is somewhat closer to the *get*-passive in English). The prime characteristic of an indirect passive is that it can occur not only with transitive verbs but also with intransitive verbs. By subcategorizing the matrix subject, the passive morpheme increases the valency of the embedded verb by one. This subject then assumes an obligatory connotation of adversative effect.

(31) (from Dubinsky, 1989a: 108 (35/36))

- a. *Hanako ga konyaku-yubiwa ni HUNSHITSU-s-are-ta. [Unaccusative]
 NOM engaging-ring by lose-do-PASS-PAST
 'The engagement ring got lost on Hanako.'
- b. Tanaka ga tsuma ni KIKOKU-s-are-ta. [Unergative]
 NOM wife by return.home do-PASS-PAST
 'Tanaka's wife went back (to Japan) on him.'

8.3.2.1. Problem with Indirect Passive

Dubinsky's (1989a) claim is further supported by the following examples (32) where an indirect passive is incompatible with putative unaccusative VN's.

(32)

- a. HASON(-suru) 'break'
 *Taroo ga kabin ni HASON-s-are-ta.
 NOM vase by break-do-PASS-PAST
 '(lit.) The vase broke on Taroo.'
- b. GYOOKO(-suru) 'solidify'
 *Taroo ga koori ni GYOOKO-s-are-ta.
 NOM ice by solidification-do-PASS-PAST
 '(lit.) The ice solidified on Taroo.'

Importantly, however, there are also putative unaccusative *VN-suru* which *can* take indirect passive, as seen in (33).

(33)

- a. SHIBOO(-suru) 'die'
 Taroo ga kodomo ni SHIBOO-s-are-ta.
 NOM children by death-do-PASS-PAST
 'The child died on Taroo.'
- b. SOTTOO(-suru) 'faint'
 Isha ga kanja ni SOTTOO-s-are-ta
 doctor NOM patient by faint-do-PASS-PAST
 'The patient fainted on the doctor.'

Given the grammaticality of (33), we cannot claim that the indirect passive can function as a syntactic diagnostic of unaccusativity. By looking at the following instances, we can

understand what accounts for the apparent contradictory behaviour of putative unaccusative predicates.

(34)

- i. JOOHATSU(-suru) 'evaporate'
- a. *Hanako ga gasorin ni JOOHATSU-s-are-ta.
 NOM gasoline by vaporization-do-PASS-PAST
 'Gasoline evaporated on Hanako.'
- b. Hanako ga otto ni totsuzen riyuu mo naku
 NOM husband by suddenly reason without
 JOOHATSU-s-are-ta.
 evaporation-do-PASS-PAST
 '(Her) husband evaporated (i.e., disappeared) suddenly without any reason on Hanako.'
- ii. KOOCHOKU(-suru) 'stiffen'
- c. *Taroo ga shitai ni KOOCHOKU-s-are-ta.
 NOM corpse by stiffening-do-PASS-PAST
 'The corpse stiffened on Taroo.'
- d. Taroo ga zibun o mite odoroiita Hanako ni i-ttoki
 NOM self ACC seeing surprised by one-moment
 no aida KOOCHOKU-s-are-ta.
 GEN during stiff-do-PASS-PAST
 'Seeing him for a second, Hanako stiffened on Taroo.'

In the above examples, the logical subject of the base verbs for the indirect passives in both (34a and c) sentences are inanimate, while those in both (34 b and d) sentences are animate. The fact that these sentences with the embedded inanimate subjects are ungrammatical while those with the embedded animate subjects are grammatical suggests that Animacy rather than unaccusativity determines whether intransitives can or cannot assume indirect passive forms.

This claim is also agreeable with the fact that indirect passives are compatible with putative unergatives (35a, b, and c) since, their *ni*-marked logical subjects cannot be other than animate (35a', b', and c'), given their agentive quality.

(35)

- a. Taroo ga Hanako ni SANPO-s-are-ta.
 NOM by stroll-do-PASS-PAST
 'Hanako strolled on Taroo.'
- a'. *Taroo ga ishi ni SANPO-s-are-ta.
 NOM stone by stroll-do-PASS-PAST
 'A stone strolled on Taroo.'
- b. Taroo ga Hanako ni YOFUKASHI-s-are-ta.
 NOM by stay-late-do-PASS-PAST
 'Hanako stayed late at night on Taroo.'
- b'. *Taroo ga ningyoo ni YOFUKASHI-s-are-ta.
 NOM doll by stay-late-do-PASS-PAST
 'The doll stayed late at night on Taroo.'
- c. Taroo ga Hanako ni GAISHUTSU-s-are-ta.
 NOM by going-out-do-PASS-PAST
 'Hanako went out on Taroo.'
- c'. *Taroo ga kuruma ni GAISHUTSU-s-are-ta.
 NOM car by going-out-do-PASS-PAST
 'The car went out on Taroo.'

Although the notion of animacy may not be appealing, the above series of examples suggest that animacy is an essential semantic criterion for the possibility of an indirect passive or, at least, that the indirect passive cannot be a simple unaccusative diagnostic.

8.4. Search for Unaccusative Diagnostics

So far we have rejected the previous claims that Numeral Classifier Floating, Resultatives, and Indirect Passives can function as simple unaccusative diagnostics. Since we cannot set the issue of unaccusativity and intransitive *VN-o suru* properly without discovering a reliable unaccusative diagnostic, in this section I will provide my proposal: in Japanese, the so-called *ni*-causative and the semantic notion associated with it, self-control, function as reliable unaccusative diagnostics.

8.4.1. *Ni*-causative and Self-Control

8.4.1.1. Two Types of Causatives

As is well known, Japanese has two types of causatives: an *o*-causative and a *ni*-causative; in the *o*-causative, the causee nominal is marked by the accusative *o* and in the *ni*-causative, the causee is marked by the dative *ni* (see Uda, 1992 and 1994 for a recent treatment, and references cited therein). This distinction is observed in the causative construction with intransitive predicates, as in (36).

(36)

a. Taroo ga Tokyo ni SHUCCHOO-shi-ta.
 NOM to b.-trip-do-PAST

'Taroo made a business trip to Tokyo.'

b. Bucho ga Taroo-o Tokyo ni SHUCCHOO-s-ase-ta.
 s.-chief NOM ACC to b.-trip-do-CAUS-PAST

'The section chief made Taroo make a business trip to Tokyo.'

c. Bucho ga Taroo-ni Tokyo ni SHUCCHOO-s-ase-ta.
 s.-chief NOM DAT to b.-trip-do-CAU-PAST

'The section chief let Taroo make a business trip to Tokyo.'

It is widely accepted that there is a difference in meaning between the *o*-causative and the *ni*-causative. The *o*-causative (36b) assumes a coercive reading because its causer ignores the intention of the causee while the *ni*-causative (36c) assumes a non-coercive reading because its causer respects the causee's intention in carrying out a caused event. The syntactic distinction between these two types of causatives cannot, however, be extended to transitive clauses, since the distinction in case-marking is obliterated by the Double *o* Constraint (Harada, 1973; Poser 1989), which does not allow the occurrence of two accusative-marked objects in a single clause, as in (37).¹¹

(37)

a. Taroo ga eigo o BENKYOO-shi-ta.
 NOM English ACC study-do-PAST

'Taroo studied English.'

¹¹ The ungrammaticality of (37c) indicates that these two accusatives are structural Case, hence, violating the double *o* constraint (cf. Chapter 6, Section 6.3.4.2).

- b. Sensei ga Taroo ni eigo o BENKYOO-s-ase-ta.
 teacher NOM DAT English ACC study-do-CAUS-PAST
 'The teacher made/let Taroo study English.'
- c. * Sensei ga Taroo o eigo o BENKYOO-s-ase-ta.
 teacher NOM ACC English ACC study-do-CAUS-PAST
 'The teacher made Taroo study English.'

8.4.1.2. My Proposal: *Ni*-Causative as Unaccusative Diagnostic

Concerning intransitive predicates, the distinction between the *o*- and *ni*-causatives tells us only half of the story. It is not true that every intransitive predicate can participate in both types of causatives: some intransitive predicates do so, as in (38), while others do not, as in (39).

(38) Intransitives which can assume both *o*- and *ni*- causatives:

- a. SANPO(-suru) 'take a walk'
 Taroo ga Hanako o/ni SANPO-s-ase-ta.
 NOM ACC/DAT walk-do-CAUS-PAST
 'Taroo made/let Hanako go for a walk.'
- b. KIKOKU(-suru) 'return to the country'
 Taroo ga Hanako o/ni KIKOKU-s-ase-ta.
 NOM ACC/DAT return-do-CAUS-PAST
 'Taroo made/let Hanako return to the country.'
- c. JISATSU(-suru) 'commit suicide'
 Taroo ga Hanako o/ni JISATSU-s-ase-ta.
 NOM ACC/DAT suicide-do-CAUS-PAST
 'Taroo made/let Hanako commit suicide.'
- d. TAISOO(-suru) 'exercise'
 Taroo ga Hanako o/ni TAISOO-s-ase-ta.
 NOM ACC/DAT exercise-do-CAUS-PAST
 'Taroo made/let Hanako exercise.'
- e. KYUUSOKU(-suru) 'have a rest'
 Taroo ga Hanako o/ni KYUUSOKU-s-ase-ta.
 NOM ACC/DAT rest-do-CAUS-PAST
 'Taroo made/let Hanako have a rest.'

(39) Intransitives which cannot assume a *ni*-causative.

a. KOOCHOKU(-suru) 'stiffen'

Taroo ga shitai o/*ni KOOCHOKU-sase-ta.
NOM corpse ACC/DAT stiffen-do-CAUS-PAST

'Taroo made/*let the corpse stiffen.'

b. SHIBOO(-suru) 'die'

Taroo ga kodomo o/*ni SHIBOO-s-ase-ta.
NOM child ACC/DAT death-do-CAUS-PAST

'Taroo made/*let the child die.'

c. GASHI(-suru) 'die of hunger'

Taroo ga kodomo o/*ni GASHI-s-ase-ta.
NOM child ACC/DAT hunger-death-do-CAUS-PAST

'Taroo made/*let the child die of hunger.'

d. SOTTOO(-suru) 'faint'

Isha ga kanja o/*ni SOTTOO-s-ase-ta.
doctor NOM patient ACC/DAT faint-do-CAUS-PAST

'The doctor made/*let the patient faint.'

e. ENSUTO(-suru) 'stalling'

Taroo ga jidoosha o/*ni ENSUTO-s-ase-ta.
NOM car ACC/DAT stall-do-CAUS-PAST

'Taroo made/*let the car stall.'

As is clear, the intransitive predicates in (39) are not able to assume a *ni*-causative. The claim I am going to advance is that the intransitive predicates exemplified in (38) are unergative while those exemplified in (39) are unaccusative.¹²

¹² The following lists several more examples.

(i) Unergative:

a. BISHOO(-suru)	'smile'
b. DOOI(-suru)	'agree'
c. KASSEN(-suru)	'battle'
d. MEISOO(-suru)	'meditate'
e. SUIEI(-suru)	'swim'

8.4.1.3. Semantic Motivation: Self Controllability

There seems to be semantic motivation of why the intransitives exemplified in (38), which I regard to be unergative, can take both *ni*-causative and *o*-causative while those in (39), which I regard to be unaccusative, cannot take the *ni*-causative.¹³ It is Harada (1973) who first noticed that the *ni*-causative is possible only when the causee yields control over the caused event. This position was also defended by Tonoike (1978) who claims that the difference between the *o*-causative and the *ni*-causative can be captured by the notion of Self-Controllability or Protagonist Control. For instance, the following test of mine with *jiriki-de* 'by one's own exertion' can demonstrate the presence and absence of such self-

(ii) Unaccusative:

a. DARAKU(-suru)	'corrupt'
b. FUHAI(-suru)	'rot'
c. HARETSU(-suru)	'explode'
d. SEICHO(-suru)	'grow up'
e. SHOOMETSU(-suru)	'burn up'

¹³ Besides the semantic motivation, there might be a syntactic motivation why *ni*-causative are incompatible with putative unaccusatives. Some researchers, such as Terada (1990) and Uda (1994), claim that the *ni*-causative is biclausal. This might provide syntactic motivation as to why unaccusatives cannot participate in the *ni*-causative construction. The reasoning is as follows. Since the *ni*-causative is biclausal, it can be best described as a control structure.

(i) *Ni*-causative:

NP	ga	NP _i	ni	[PRO _i	VP]	sase
		NOM		DAT		CAUS

Assuming that the *ni*-causative is a control structure, it must contain an empty controlled subject, which ought to be PRO. PRO generally functions as a controlled null subject. Given this generalization, we can understand why unaccusatives cannot be embedded as complements to the *ni*-causative. That is, assuming that the subject of unaccusatives originates in object position (Perlmutter (1978) among others), PRO would not be postulated as their subject. Hence, syntactically, any intransitive predicate which is incompatible with the *ni*-causative ought to be unaccusative. Further, on the assumption that the *o*-causative is mono-clausal (Terada, 1990; Uda, 1994), unaccusatives in this content is not so limited; hence, they are compatible with the *o*-causative. As pointed out by L. Saxon, a problem with this reasoning is, however, the presence of such passive examples as those below from English where PRO originates in object position.

(ii) (Jaeggli, 1986: 616)

- a. John wants [PRO to be loved by everyone].
- b. Bill tried [PRO to be introduced to Mary]
- c. John persuaded Bill [PRO to be arrested by the KGB].

(iii) I wanted to fade/die/rot/evaporate/explode.

Further, citing (iii), T. Hukari also points out that "if unaccusative syntactic structure provided an explanation for the ungrammaticality of the relevant *ni*-causatives, it would have to be based on the assumption that the unaccusative structure is salient at the point in the derivation where the *ni*-causative is somehow 'licensed'". Due to the above empirical problems, I will not further pursue the syntactic account of why unaccusatives are not compatible with *ni*-causatives, but leave it to future research.

controllability in the two types of intransitives. As seen in (40), intransitives which are compatible with both *o-* and *ni-*causative are also compatible with the self-control phrase.

(40) Unergatives:

- i. KIKOKU(-suru) 'return to the home country'
 - a. Taroo wa Hanako o/ni KIKOKU-s-ase-ta.
 TOP ACC/DAT return do-CAUS-PAST
 'Taroo made/let Hanako return to (her) home country.'
 - b. Hanako wa *ji-riki-de* KIKOKU-shi-ta.
 TOP self-power-with return-do-PAST
 'Hanako returned to (her) home country by (her) own exertion.'
- ii. JISATSU(-suru) 'commit suicide'
 - a. Taroo wa Hanako o/ni JISATSU-s-ase-ta.
 TOP ACC/DAT suicide-do-CAUS-PAST
 'Taroo made/let Hanako commit suicide.'
 - b. Hanako wa *ji-riki-de* JISATSU-shi-ta.
 TOP self-power-with suicide-do-PAST
 'Hanako committed suicide by (her) own exertion.'

In contrast, intransitives which cannot assume the *ni-*causative are incompatible also with the self-control phrase, as seen in (41).

(41) Unaccusatives:

- i. SHIBOO(-suru) 'die'
 - a. Taroo ga kodomo o/*ni SHIBOO-s-ase-ta.
 NOM child ACC/DAT death-do-CAUS-PAST
 'Taroo made/*let (his) child die.'
 - b. *Kodomo ga *ji-riki-de* SHIBOO-shita.
 NOM self-power-with death-do-PAST
 'The child died by (his) own exertion.'

ii. SOTTOO(-suru) 'faint'

- a. Isha ga kanja o/*ni SOTTOO-s-ase-ta
 doctor NOM patient ACC/DAT faint-do-CAUS-PAST

'The doctor made/*let the patient faint.'

- b. *Kanja ga ji-riki-de SOTTOO-shi-ta.
 TOP self-power-with recovery-do-PAST

'The patient fainted by (her) own exertion.'

Based on the above contrast in grammaticality, I would like to advance the claim that the semantic notion of self-controllability or self-control is the quintessential lexical semantic property of unaccusativity. That is, if the subject of an intransitive predicate is endowed with self-control, then the predicate ought to be unergative. If the subject of an intransitive predicate lacks self-control, then the predicate ought to be unaccusative. Since the *ni*-causative is closely tied to this semantic notion of self control, the *ni*-causative can function as a syntactic diagnostic for unaccusativity in Japanese.¹⁴ To put it the other way around, since the semantic notion of self control is closely tied to the *ni*-causative, this property of self control ought to be regarded as the real reason why the *ni*-causative can function to differentiate two types of intransitives from each other.

My claim that the semantic notion of self-control is the quintessential criterion for unaccusativity is supported also by previous works. As clearly stated in Perlmutter (1978) and Kishimoto (1996), one way of characterizing unaccusativity is the presence or absence of Volition, which is semantically close to the notion of self-control.¹⁵ Further, related to the above, the subjects of unaccusatives are thematically defined as Theme/Patient, which lacks any quality of Agent/Actor whose indispensable feature is [+Self Control].

Furthermore, my notion of self-control is similar to Smith's (1970) notion of *internal controller*, even though my notion of self-control is narrower in scope than Levin

¹⁴ I limit my claim on self-control only to intransitive predicates and will not extend it to (di)transitive predicates.

¹⁵ The difference between self-control and volition is that volition necessarily requires an animate subject, while self-control may take a non-animate subject. For instance, a volitional phrase such as *isshookkenmei-ni* 'with all one's might' and a self-control phrase such as *jiyuu-jizai-ni* 'in a self maneuvering manner' do not have the same distribution.

Jidoosha ga jiyuu-jizai-ni/*isshookkenmei-ni SHISSOO-shi-ta.
 car NOM free-maneuvering-ly/desperate-ly run-do-PAST
 'The car ran in a self-maneuvering-manner /*desperately.'

and Rappaport Hovav's (1995) notion of *internally caused eventuality*. Importantly, however, both studies regard control as a reliable unaccusative diagnostic.

In discussing the 'causative alternation' (cf. also B. Levin, 1993), Smith (1970) claims that the alternating verbs, such as *break* and *open*, are associated with 'external control' in that their eventualities are under the control of some external cause, while such external cause may be expressed as subject. In contrast, the non-alternating verbs, such as *laugh*, *play*, and *speak* are associated with 'internal control' in that their eventualities are under the control of the person engaging in these, and such "control cannot be relinquished to an external controller" (Smith 1970: 107).

Levin and Rappaport Hovav (1995: 91) agree in spirit with Smith (1970). However, they employ a slightly different notion: *internally* and *externally caused* eventualities. For instance, their classification of verbs of internal causation include such non-agentive verbs as *blush* and *tremble* and such 'verbs of emission'¹⁶ as *flash* and *smell*. Hence, Levin and Rappaport Hovav's (1995) notion of 'internal causation' is somewhat less restrictive than Smith's (1970) notion of internal control as well as my notion of self-control. Importantly, however, my claim accords with Perlmutter's (1978), Kishimoto's (1996), and Smith's (1970) and, to a certain extent, with Levin and Rappaport Hovav's (1995). Hence, the claim that the notion of control can be employed as an unaccusative diagnostic is motivated not only empirically but also theoretically.

To sum up, I claim that the *ni*-causative functions as a syntactic diagnostic of unaccusativity in Japanese and the semantic notion associated with it, i.e., self-control, functions as its semantic diagnostic. Unergatives are compatible with the *ni*-causative and the semantic notion of self control associated with it. In contrast, unaccusatives are incompatible with the *ni*-causative and lack the notion of self-control.

¹⁶ Defining the verbs of emission as "[n]on-voluntary emission of stimuli that impinge on the senses". Perlmutter (1978: 163) classifies these verbs as unaccusative.

8.5. Application of Zaenen's (1993) Unaccusativity Model

Having arrived at a pair of syntactic and semantic diagnostics for unaccusativity, in the remaining section of the chapter I will examine whether the fact that certain intransitives are compatible with *VN-o suru* is sensitive to unaccusativity or not. Unlike the claims advanced by Grimshaw and Mester (1988), Miyagawa (1989a), and Tsujimura (1990), my investigation will show that the compatibility is constrained not only by unaccusativity but also by the aspectual property of the intransitive VN's. That is, to head the accusative NP of bipredicational *VN-o suru*, a given intransitive should be unergative, and should also be a PROCESS aspectually. If a given intransitive lacks both of these properties, it fails to head the accusative NP of *VN-o suru*. If a given intransitive lacks one of these properties, then its compatibility with *VN-o suru* is marginal. To set the above interaction of unaccusativity and aspect into a proper framework, I will employ Zaenen's (1993) model of unaccusativity, which is based on the two binary features: [+/- control] and [+/- telic]. Furthermore, to tabulate the gradient grammaticality, I will also set the interaction of the unaccusative and aspectual constraints into a specific framework whose idea of ranking and interaction of constraints originates from Optimality Theory (cf. McCarthy and Prince, 1993, 1994, 1995).

8.5.1. Zaenen's Model and Its Application to *VN-o suru*

In discussing unaccusativity in Dutch, Zaenen (1993) presupposes that the mapping between syntax and semantics is by and large transparent. Another presupposition she makes is that the unaccusative/unergative distinction has two pretheoretical characteristics: (i) it is a lexical distinction; and (ii) it is captured by the subject-object symmetry in that the subjects of unaccusative verbs behave in similar ways to the objects of transitive verbs (Zaenen, 1993: 129). The lexical properties of intransitive arguments are defined in the framework of Dowty's (1991) Proto Role Theory: the subjects of unergatives have more Proto Agent properties than the subjects of unaccusatives and the subjects of unaccusatives have more Proto Patient properties. The subject-object asymmetry is captured by LFG's two computational features: -o (non-object) and -r (unrestricted), which mediate the mapping between A(rgument)-Structure and G(rammatical)F(unction)'s (cf. Bresnan and

Kanerva, 1989).¹⁷ Further, to characterize intransitive predicates and to demonstrate which syntactic phenomena in Dutch are sensitive to which semantic properties, Zaenen (1993: 132 (9)) employs two semantic notions, Control and Aspect, as in Table 8.1.¹⁸

Table 8.1.
Zaenen's (1993) Unaccusative Model

	B: Atelic Activities States	-B: Telic Accomplishments Achievements
A +Control	telefoneren 'phone'	aankomen 'arrive'
-A -Control	stinken 'stink'	sterven 'die'

Similarly, I will classify Japanese VN's based on [+/- CONTROL] and [+/- TELIC]. In so doing, however, I elaborate on Zaenen's (1993) model as Table 8.2.¹⁹

¹⁷ Zaenen (1993: 153) claims that "an unaccusative participant is a participant that is intrinsically marked -r; an unergative participant is a participant that is intrinsically marked -o." These two are translatable into GB's and Minimalism's notion of internal and external arguments.

¹⁸ One of the main conclusions she draws is that "one can isolate a class of intransitive verbs that one could call unaccusatives. They are characterized semantically by the fact that their Aktionsart is telic" (Zaenen, 1993: 141).

¹⁹ The '*' in the two slots in Table 8.2 indicates the non-existence of instances. There should not be any VN which is endowed with self-control while assuming a 'State' or 'Achievement' as its Aktionsart.

Table 8.2.
Application of Zaenen's (1993) Model to VN's

	-TELIC		+TELIC	
	Activity [+PROCESS]	State [+STATE]	Accomplish. [+PROCESS] ([+STATE])	Achievement ([+PROCESS]) [+STATE]
Unergative (+CONTROL)	TAISOO 'exercise'	*	KIKAN 'return'	*
Unaccusative (-CONTROL)	FUYUU 'float'	SONZAI 'existence'	KAKUDAI 'enlargement'	SHIBOO 'death'

I tie [+CONTROL] to unergative predicates and [-CONTROL] to unaccusative predicates. Also, I divide [-TELIC] predicates into Activities and States and [+TELIC] predicates into Accomplishments and Achievements.

These four aspectual types of Vendler (1957)'s are defined, as in (42), by two features [PROCESS] and [STATE] according to my hypothesis which is loosely based on Pustejovsky (1992).²⁰

(42)

- | | |
|--------------------|------------------------|
| a. Activities | [+PROCESS] |
| b. States | [+STATE] |
| c. Accomplishments | [+PROCESS], ([+STATE]) |
| d. Achievements | ([+PROCESS]), [+STATE] |

In accounting for the Event Structure of predicates, phrases, and sentences, Pustejovsky (1992) postulates a representational model which consists of three different templates: a *S*(tate)-template, *P*(rocess)-template, and *T*(ransition)-template which consists

²⁰ The following is the feature system suggested by L. Saxon, where P stands for PROCESS and T stands for TELIC. Her representation may be more faithful to Vendler's (1957) classification of aspect than mine.

Activity	State	Accomplishment	Achievement.
+P	-P	+P	-P
-T	-T	+T	+T

For our purpose, however, the choice of features would not make any significant difference.

of a P-node denoting a process and an S-node denoting change of a state. Examples of these templates are listed from (43) to (46).

(43) State: (Pustejovsky, 1992: 57)

a. The door is closed.

b. Event Structure:

$$\begin{array}{c} S \\ | \\ e \end{array}$$

LCS': [closed(the-door)]

(44) Process: (Pustejovsky, 1992: 59)

a. Mary pushed the cart.

b. ES:

$$\begin{array}{c} P \\ \wedge \\ e_1 \dots e_n \end{array}$$

LCS': [act(*m*, the-cart) & move(the-cart)]²¹

Since Accomplishments and Achievements are comprised essentially of the subevents of PROCESS and STATE, they can be represented by the *T*(ransition)-template consisting of two event nodes.

(45) Transition (Accomplishment): (Pustejovsky, 1992: 60)

a. Mary built a house.

b. ES:

$$\begin{array}{c} T \\ \wedge \\ P \quad S \end{array}$$

LCS': [act(*m*, *y*) & ¬house(*y*)] [house(*y*)]

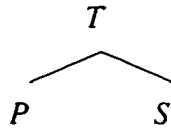
In (45), *m*(Mary) acted on *y* and this action brought '¬house(*y*)' into the state of 'house(*y*)'.

²¹ The notation "&" signifies the simultaneity of the two co-joined events: Mary's action on the cart and the movement of the cart.

(46) Transition (Achievement): (Pustejovsky, 1992: 60)

a. Mary died.

b. ES:



LCS': [¬dead(*m*)] [dead(*m*)]

In (46), the (instantaneous) 'process' of Mary's dying brought about the state of her death ([dead(*m*)]).²²

If Pustejovsky's (1992) unary and binary representation of the four aspectual types constitute a valid hypothesis, so would my feature representation in (44). In my feature system, Activities and States are self-explanatory. While Activities and States are represented by their corresponding single features, both Accomplishments and Achievements are represented by two features: [+PROCESS] and [+STATE]. Departing from Pustejovsky (1992), who does not distinguish Accomplishments from Achievements clearly (cf. Bach, 1986; Kenny: 1963; Mourelatos, 1978, 1981; Tenny, 1994, among others: see also Yang (1995) for an excellent summary on this issue), I will differentiate these two, using the notion of primary and secondary features. In the case of Accomplishments, their resulting states are not necessarily part of their aspectual entailments (Yang, 1995). Hence, I regard the resultant STATE as a secondary feature, which is enclosed in a parenthesis. In the case of Achievements, on the other hand, the associated process which bring about the resultant state is secondary: hence the feature PROCESS is enclosed by a parenthesis.

²² As pointed out by L. Saxon, the binary tree in (46) looks strange since [¬dead(*m*)] is a state, but it is dominated by P. I interpret [¬dead(*m*)] as corresponding to a brief moment of process which brings about (Mary's) death. If we interpret [¬dead(*m*)] as a state of her being alive, *Mary died* may necessary mean the change (of nano-second) from being alive to being dead. Even as instantaneous as death may be, it involves a process (of a limited period) which brings about the state of being dead. The idea is tantamount to Jackendoff's (1991) employment of an epsilon expansion (+ε) which denotes the possibility of having "a little temporal window into which we can sneak a progressive" (Jackendoff, 1991: 39). Hence, the basic idea that even Achievements can be represented by the binary nodes of PROCESS and STATE should stand.

8.5.2. Differences in Grammaticality

Table 8.3, a modified version of Zaenen's (1993) proposal, demonstrates intransitive VNs' compatibility with *VN-o suru* formation.

Table 8.3.
Application of Zaenen's (1993) Model to *VN-o suru*

		-TELIC		+TELIC	
	Activity [+PROCESS]	State [+STATE]	Accomplish. [+PROCESS] ([+STATE])	Achievement ([+PROCESS]) [+STATE]	
	VN-o suru		??VN-o suru		
Unergative (+CONTROL)	TAISOO 'exercise'	*	KIKAN 'return'	*	
	??VN-o suru	**VN-o suru	*?VN-o suru	*VN-o suru	
Unaccusative (-CONTROL)	FUYUU 'float'	SONZAI 'existence'	GYOOKO 'solidifying'	SHIBOO 'death'	

As far as grammaticality is concerned, there are basically three classes, as shown in (47).²³
(47)

(I) Grammatical:

(i) Unergative Activity:

Kodomo ga (ji-riki-de) ichi-ji-kan/*ichi-ji-kande TAISOO(-o) shi-ta.
child NOM self-power-with one-hour-for/one-hour-in exercise(-ACC) do-PAST

'The child exercised (for/*in an hour) (by his own exertion).'

²³ In all the following examples, the self-control phrase *jiriki-de* 'by one's own exertion' is used for marking the judgment of unaccusativity. The *for-* and *in-*phrases are used for the judgment of telicity. The adverbial *-chuu* '-during' clause is used to differentiate an Accomplishment from an Achievement.

(II) Ungrammatical:

(i) Unaccusative State:

Obake ga (*ji-riki-de) (juu-nen-kan/*juu-nen-kande) SONZAI(**-o) shi-teir-u.
ghost NOM self-power-with ten-year-for/ten-year-in existence(-ACC) do-STAT-PRES
'There has been a ghost (for/*in ten years) (*by his own exertion).'

(ii) Unaccusative Achievement:

(*Hanako ga SHIBOO-chuu.) Taroo mo (*ji-riki-de)
NOM death-during too self-power-with
(ichi-ji-kande/*ichi-ji-kan) SHIBOO(*-o) shi-ta.
one-hour-in/one-hour-for death(-ACC) do-PAST

(*While Hanako was dying,) Taroo too died (in/*for an hour) (*by his own exertion).'

(III) Marginal:

(i) Unergative Accomplishment:

(Soochoo ga KIKAN-chuu.) heishitachi mo kichi ni (ji-riki-de)
s.-major NOM return-during soldiers also base to self-power-with
(ichi-ji-kande/*ichi-ji-kan) KIKAN(-??o) shi-ta.
one-hour-in/one-hour-for return(-ACC) do-PAST

(While a sergeant major is returning,) the soldiers too returned to the base
(in/*for an hour) (by their own exertion).'

(ii) Unaccusative Activity:

Kurage ga (*ji-riki-de) (ichi-ji-kan/*ichi-ji-kande) FUYUU(-??o) shi-ta.
jellyfish NOM self-power-with one-hour-for/one-hour-in float(-ACC) do-PAST
'The jellyfish floated (for/*in a hour) (*by its own exertion).'

(iii) Unaccusative Accomplishment:

(Koori ga GYOOKO-chuu.) zerachin mo (*ji-riki-de)
ice NOM solidification-during gelatin also self-power-with
(ichi-ji-kande/*ichi-ji-kan) GYOOKO(-*?o) shi-ta.
one-hour-in/one-hour-for solidification(-ACC) do-PAST

(While the ice was solidifying,) the gelatin too solidified (in/*for an hour)
(*by its own exertion).'

This presence of different degrees of grammaticality deviates from the underlying assumption made by Miyagawa (1989a) and Tsujimura (1990). Due to their employment of Burzio's (1986) generalization on the presence or absence of accusative Case, their prediction on the grammaticality of intransitive *VN-o suru* is dichotic, failing to recognize the presence of such gradient grammaticality involving intransitive *VN-o suru*. In the following sections, I will attempt to account for what causes such gradient grammaticality.

8.5.3. No Single Feature Responsible for Grammaticality Differences

Given the above grammaticality judgments, there seems to be no single feature which would account for the grammatical differences in (47). First, the feature [+/-TELIC] in the Table 8.3 is not relevant to the grammaticality of *VN-o suru*. If it were, we would not be able to account for the difference in grammaticality between atelic Activity VN's and atelic State VN's: while the former (48a) is compatible with *VN-o suru*, the latter (48b) is not.

(48)

- a. Taroo ga (ji-riki-de) ichi-ji-kan/*ichi-ji-kande SANPO(-o) shi-ta.
 NOM self-power-with one-hour-for/one-hour-in stroll(-ACC) do-PAST

'Taroo strolled (for/*in an hour) (by his own exertion).'

- b. Kaseijin ga chikyuu ni (*ji-riki-de) (juu-nen-kan/*juu-nen-kande)
 Martian NOM earth on self-power-with ten-year-for/ten-year-in

SONZAI(-**o) shi-teir-u.
 existence(-ACC) do-STAT-PRES

'The Martian has existed on the earth (for/*in ten years) (*by their own exertion).'

Second, the feature [+STATE] is incompatible with *VN-o suru* as in the case of unaccusative States and Achievements, and it is very marginal with unaccusative Accomplishments. However, it cannot account for why unergative Accomplishments ([+PROCESS], ([+STATE])) are marginally compatible with *VN-o suru*, as (49).

(49)

(Hanako ga HENSOO-chuu,) Taroo mo kaeru ni (ji-riki-de)
 NOM disguise-during also frog to self-power-with

(ichi-ji-kande/*ichi-ji-kan) HENSOO(-??o) shi-ta.
 one-hour-in/one-hour-for disguise(-ACC) do-PAST

'(While Hanako was disguising,) Taroo too disguised himself as a frog (in/*for an hour) (by his own exertion).'

Third, the feature [+PROCESS] *per se* does not account for the grammatical differences in (47): specifically, it cannot explain why the unergative Activity (50a) is perfectly acceptable but the unaccusative Activity (50b) is marginal.

(50)

a. Kodomo ga (ji-riki-de) (ichi-ji-kan/*ichi-ji-kande)
 child NOM self-power-with one-hour-for/one-hour-in

KYOOSOO(-o) shi-ta.
 competition(-ACC) do-PAST

'The child competed (for/*in an hour) (by his own exertion).'

b. Ie ga (*?ji-riki-de) (ichi-ji-kan/*ichi-ji-kande) SHINDOO(-??o) shi-ta.
 house NOM self-power-with one-hour-for/one-hour-in vibration(-ACC) do-PAST

'The house vibrated (for/*in a hour) (*by its own exertion).'

Fourth, the feature [+CONTROL] (i.e., [Unergative]) *per se* cannot explain the difference in grammaticality in (47): and it cannot explain why there is a difference in grammaticality between the unergative Activity (51a) and the unergative Accomplishment (51b).

(51)

a. Taroo ga (ji-riki-de) (ichi-ji-kan/*ichi-ji-kande) HIKOO(-o) shi-ta.
 NOM self-power-with one-hour-for/one-hour-in fly(-ACC) do-PAST

'Taroo flew (for/*in an hour) (by his own exertion).'

b. (Hanako ga SHOOSHIN-chuu) Taroo mo (jiriki-de)
 NOM promotion-during also self-power-with

(ichi-nen-kande/*ichi-nen-kan) buchoo ni SHOOSHIN(-??o) shi-ta.
 one-year-in/one-year-for s.-chief to promotion (-ACC) do-PAST

'(While Hanako was being promoted) Taroo was also promoted to a section chief (in/*for a year) (by his own exertion).'

Fifth, the feature [-CONTROL] (i.e., [Unaccusative]) *per se* cannot explain the difference in grammaticality in (47), and it cannot even account for the differences in grammaticality between an unaccusative Activity (52a), which is marginal, and the other unaccusatives: States (52b) and Achievements (52c), which are unacceptable, and Accomplishments (52d), which are highly marginal.

(52)

a. Unaccusative Activity:

Kaori ga (*ji-riki-de) (ichi-ji-kan/*ichi-ji-kande)
 fragrance NOM self-power-with one-hour-for/one-hour-in

HOOSAN(-??o) shi-teir-u
 permeation(-ACC) do-PROG-PRES

'The fragrance permeates (for/*in a hour) (*by its own exertion).'

b. Unaccusative State:

Bookun ga sekai ni (*ji-riki-de) (juu-nen-kan/*juu-nen-kande)
 tyrant NOM world in self-power-with ten-year-for/ten-year-in

JITSUZAI(-**o) shite-iru.
 existence(-ACC) do-STAT

'The tyrant has existed in the world (for/*in ten years) (*by his own exertion).'

c. Unaccusative Achievement:

(*Hanako ga DEKISHI-chuu.) Taroo mo (*ji-riki-de)
 NOM drawn-death-during too self-power-with

(ichi-ji-kande/*ichi-ji-kan) SHOOSHI(*-o) shi-ta.
 one-hour-in/one-hour-for burn-death(-ACC) do-PAST

'(*While Hanako was drowning to death,) Taroo was also burned to death (in/*for an hour) (*by his own exertion).'

d. Unaccusative Accomplishment:

(Kuro-kopii ga KAKUDAI-chuu.) shiro-kopii mo (*ji-riki-de)
 black-copy NOM enlargement-during while-copy too self-power-with

(ni-fun-kande/*ni-fun-kan) KAKUDAI(*?-o) shi-ta.
 two-minute-in/two-minute-for enlargement (-ACC) do-PAST

'(While the black copy had enlarged itself,) the white copy too enlarged itself (in/*for two minutes) (*by its own exertion).'

All the above data suggest that the differences in grammaticality in (47) are the results of not a single constraint but the interactions of at least two constraints.

8.5.4. The Interaction between Unaccusativity and Aspect

My proposal is that there are two constraints at play in the compatibility of VN's with *VN-o suru*, resulting in the gradient grammaticality shown in (47). The two constraints are [+CONTROL] (i.e., [Unergative]) and [+PROCESS]. As we have already learnt in Chapter 4, *suru* is intrinsically associated with [+PROCESS] as its aspectual feature. Also, I have shown in Section 8.4.1.3 that [+CONTROL] sets apart unergatives from unaccusatives. I will show that the combination of these two features can account for the differences in grammaticality in (47).

First, if a given VN is associated with both features, it would be perfectly compatible with *VN-o suru*, as in (53).

(53) Unergative Activity ([+CONTROL], [+PROCESS]):

Kodomo ga (ji-riki-de) (ichi-ji-kan/*ichi-ji-kande)
 child NOM self-power-with one-hour-for/one-hour-in

UNDOO(-o) shi-ta.
 exercise(-ACC) do-PAST

'The child exercised (for/*in an hour) (by his own exertion).'

Hence, that unergative Activity VN's are allowed to head the accusative NP of *VN-o suru* accounts for the grammaticality of (47/I).

Second, if a given VN is associated with neither of the features, then the VN would be incompatible with *VN-o suru*, resulting in the ungrammaticality of (47/II).

(54)

a. Unaccusative State ([-CONTROL], [+STATE]):

Kissaten ga machi-kado ni (*ji-riki-de) (juu-nen-kan/*juu-nen-kande)
 coffee-shop NOM town-corner at self-power-with ten-year-for/ten-year-in

SHOZAI(-**o) shi-teir-u.
 location(-ACC) do-STAT-PRES

'The coffee shop has been at the corner (for/*in ten years) (*by its own exertion).'

b. Unaccusative Achievement ([-CONTROL], ([+PROCESS]), [+STATE]):

(*Hanako ga SHOOSHI-chuu.) Taroo mo (*ji-riki-de)
 NOM burn-death-during too self-power-with
 (ichi-ji-kande/*ichi-ji-kan) GASHI(*-o) shi-ta.
 one-hour-in/one-hour-for starvation-death(-ACC) do-PAST

'(*While Hanako was burning to death,) Taroo also died of starvation (in/*for an hour) (*by his own exertion).'

Third, if a given VN is associated with at least one of the features, it would be marginally compatible with *VN-o suru*, resulting in the grammaticality in (47/III), which is either slightly marginal or highly marginal.

(55)

a. Unaccusative Activity ([-CONTROL], [+PROCESS]):

Hikari ga (*ji-riki-de) (ichi-ji-kan/*ichi-ji-kande)
 light NOM self-power-with one-hour-for/one-hour-in
 KAKUSAN(-??o) shi-teir-u
 diffusion (-ACC)do-PROG-PRES

'The light diffuses (for/*in a hour) (*by its own exertion).'

b. Unergative Accomplishment ([+CONTROL], [+PROCESS], ([+STATE]))

(Soochoo ga KIKAN-chuu.) heishitachi mo kichi ni (ji-riki-de)
 s.-major NOM return-during soldiers also base to self-power-with
 (ichi-ji-kande/*ichi-ji-kan) KIKAN(-??o) shi-ta.
 one-hour-in/one-hour-for return(-ACC) do-PAST

'(While a sergeant major is returning,) the soldiers too returned to the base (in/*for an hour) (by their own exertion).'

c. Unaccusative Achievement ([-CONTROL], ([+PROCESS]), [+STATE]):

(Sakana ga HUHAI-chuu.) niku mo (*ji-riki-de)
 fish NOM rot-during meat too self-power-with
 (ichi-nichi-kande/*ichi-nichi-kan) HUHAI(*?-o) shi-ta.
 one-day-in/one-day-for rot(-ACC) do-PAST

'(While the fish was rotting) the meat too rotted (in/*for one day) (*by its own exertion).'

In the above manner, the interaction of two constraints, i.e., control and process, accounts for whether given intransitive VN's are compatible or not with *VN-o suru*.

8.5.5. An Account Based on Optimality Theory

For the sake of better illustration of the gradient grammaticality of intransitive *VN-o suru*, I will present the Tableau 8.4. My intention is to tabulate the gradient grammaticality based on the idea of the ranking and interaction of a few constraints, an idea which originates in Optimality Theory (cf. McCarthy and Prince, 1993, 1994, 1995). In the case of Optimality Theory, only the optimal form is chosen as a grammatical form. In my tableau, the ranking of constraints and evaluation of constraints will exhibit different degrees of grammaticality. As constraints, I chose the following three: [-STATE], [+PROCESS], and [+CONTROL].²⁴

Table 8.4.²⁵
Grammaticality of Intransitive *VN-o suru* Forms

Unergatives				
	Activity	State	Accomplish.	Achievement
-STATE			(*)	
+PROCESS				
+CONTROL				
Unaccusatives				
-STATE		*	(*)	*
+PROCESS		*		(*)
+CONTROL	*	*	*	*

Given that aspect and unaccusativity are part of Universal Grammar (UG), I assume that the features listed in the tableau are part of UG. Further, I assume that the aspectual constraints are stronger than the unaccusativity constraint; and the negative [STATE] constraint is stronger than the positive [PROCESS] constraint.

²⁴ What these constraints mean should be self-explanatory.

²⁵ The shading is to express irrelevancy.

As for the degrees of optimality or grammaticality, I will enumerate the *VN-o suru* forms: from the optimal to the least optimal ones.

First, the *VN-o suru* forms with Unergative Activity VN's are optimal since they do not violate any of the constraints.

Second, Unergative Accomplishment VN's are compatible with *VN-o suru* formation to a high degree, since they violate only the [-STATE] constraint in a secondary manner, given that the secondary feature, ([+STATE]), is a part of the feature specification of Accomplishment VN's (cf. (42)).

Third, Unaccusative Activity VN's may also be compatible with *VN-o suru* formation to a high degree, since they violate only the lowest-ranking constraint (i.e., [+CONTROL]).

Fourth, the compatibility of Unaccusative Accomplishment VN's is questionable since they violate the [+CONTROL] constraint as well as the highest-ranking constraint (i.e., [-STATE]) --- although the [-STATE] constraint is violated in a non-primary manner.

Fifth, the Unaccusative Achievement VN's are incompatible with *VN-o suru* formation, since they violate the [-STATE] and [+CONTROL] constraints in a primary manner and the [+PROCESS] constraint in a non-primary manner.

Lastly, the Unaccusative State VN's are outrightly rejected since they violate every constraint.

If the above tabulation is correct, then the following examples, repeated from (5), show the pattern of intransitive *VN-o suru* with varying degrees of grammaticality as predicted by my proposal. The validity of this account of course rests on the reader's judgment. I am confident that this account is empirically sound.

(56)

- a. Taroo ga TAISOO-(o) shi-ta.
NOM exercise-(ACC) do-PAST
'Taroo exercised.'
- b. Heishitachi ga KIKAN-(??o) shi-ta.
soldiers NOM return-(ACC) do-PAST
'The soldiers returned.'
- c. Kurage ga FUYUU-(??o) shi-ta.
jellyfish NOM float-(ACC) do-PAST
'A jellyfish floated.'

- d. *Kopii ga KAKUDAI-(*?o) shi-ta.*
 copy NOM enlargement-(ACC) do-PAST
 'The copy has enlarged.'
- e. *Kodomo ga SHIBOO-(*o) shi-ta.*
 child NOM death-(ACC) do-PAST
 'The child has died.'
- f. *Obake ga SONZAI(**o) shi-ta.*
 ghost NOM existence-(ACC) do-PAST
 'A ghost existed.'

Hence, in this section, based on Zaenen's (1993) model of unaccusativity and Optimality Theory's notions of ranking and evaluation of constraints, I have accounted for the gradient grammaticality associated with intransitive *VN-o suru* forms.

8.6. Final Remarks

In this chapter, I have first shown that the works of Miyagawa (1989a) and Tsujimura (1990) are problematic due to their unreliable criteria for unaccusativity and by the fact that their accounts based on Burzio's (1986) Generalization fail to provide an accurate picture of *VN-o suru* formation. Even if their unaccusative diagnostics were reliable, they would still not be able to account for why some of the unaccusative VN's are compatible with *VN-o suru* formation and some of the unergative VN's are not. Further, their account based on Burzio's (1986) Generalization provides only a two-way judgment in grammaticality: whether a given VN is totally compatible or totally incompatible with *VN-o suru* forms. As is clear from many of the examples I employ, the compatibility is gradient. To draw a more accurate picture, based on my own unaccusativity tests (i.e., *ni-causative* and *self-controllability*), I have differentiated unaccusatives from unergatives and have shown that the compatibility of intransitive VN's with *VN-o suru* formation has to do with two constraints: unaccusativity and aspect.

Chapter 9. Summary

9.1. Introduction

Although the previous chapters all deal with *VN-o suru* forms, each chapter is designed to be rather independent. In this last chapter, by way of clarifying where I stand with respect to the issues raised by previous studies, I will provide some linking. At the very end of the chapter, I will also discuss the theoretical issues this study leaves unanswered.

The previous studies which I reviewed in Chapter 2 focus on the weight of *suru* in characterizing *VN-o suru* formation. Based on the idea that *suru* can function as a light verb, one group of previous studies divides *VN-o suru* formation into the light verb construction and the heavy verb construction. Opposed to this idea, the other group argues that all *VN-o suru* forms are heavy verb constructions. Regardless of the difference in their claims, these studies attempt to characterize *VN-o suru* focusing mostly on the lexical property of *suru*.

My approach is different. My focus is on the accusative phrase. My claim is that there is only one type of *suru* involving *VN-o suru* formation: in this sense, my stance is similar to the second group. However, my study divides *VN-o suru* forms into two types: mono- and bi-predicational *VN-o suru* forms. In this sense, my stance is similar to the first group. My fundamental claim is that neither approach taken by the previous studies is as well-motivated as they argue for.

9.2. Comparison with the Previous Studies

9.2.1. Weight of *Suru*

Concerning the weight of *suru*, the basic problem with the first group, i.e., the light *suru* hypotheses, is that their division between light and heavy *suru* constructions is either empirically ill-motivated or unnecessary. There are three sub-theories: the totally empty hypothesis, the external argument only hypothesis, and the binding and place-holder hypothesis. The idea that *suru* is utterly insignificant thematically (Grimshaw and Mester, 1988; Sells, 1990; Yamamoto, 1992) cannot be maintained, given the presence of the

Agent constraint (1) and the aspectual constraint (2) which we discussed in Chapters 1, 2, 4, 7 and 8.

(1) Agent Requirement: (Terada, 1990: 108 (12 and 13))

a. Takashi ga atarashii mondai no SHISA o shi-ta.
 NOM new problem GEN suggestion ACC do-PAST

'Takashi suggested a new problem.'

b. *Kono deetaa ga atarashii mondai no SHISA o shite iru.
 this data NOM new problem GEN suggestion ACC do PROG [sic. STAT]

'This data suggests a new problem.'

(2) Aspectual Constraint

(i) ACCOMPLISHMENT/ACHIEVEMENT VN's:

TAIHO (*o) suru	'arrest'
SATSUGAI (*?o) suru	'murder'
HAKAI (*?o) suru	'destroy'

(ii) STATE VN's:

RIKAI (*o) suru	'understand'
AIYOO (*o) suru	'patronize'
ENRYO (*o) suru	'be modest'

If *suru* were totally 'light', the presence of such constraints would remain unexplainable.

Also, the idea that *suru* licenses only an external argument (cf. Kageyama, 1991) cannot be maintained, given that *suru* in *VN-o suru* forms is not an intransitive verb. Hence, the above two hypotheses lack empirical support.

The idea that the external argument of a light *suru* predicate involves binding while its internal argument can be represented as a place-holder (Isoda, 1991; Matsumoto, 1992) has a strong similarity to my proposal.

(3)

<SUBJ(Agent), XCOMP>

For instance, postulating (3) as the lexical entry of a light *suru* predicate, Matsumoto (1992) claims that the SUBJ (Agent) of the light *suru* predicate and the missing subject (PRO) of an XCOMP establish a control relationship, while the thematic content of the XCOMP is supplied by a VN.

There are, however, two significant differences between this approach and mine: (i) my approach places a crucial importance on whether the place-holder is linked to a thematic nominal or to a non-thematic nominal; (ii) I, therefore, do away with the unnecessary distinction between light *suru* and heavy *suru*. My postulation of a single type of *suru* is conceptually simpler, hence, more desirable.

A problem associated with my approach, however, is the massive ambiguity involved with Japanese nominals. To deal with this ambiguity, I showed in Chapter 3 how VN's can be differentiated between their simple event nominal readings and complex event nominal readings. Further, in Chapter 4 I discriminated the mono-predicational *VN-o suru*, which involves a simple event nominal, from the bi-predicational *VN-o suru*, which involves a complex event nominal. Throughout this work, I defend the position that this two-way division of *VN-o suru* forms is intrinsic and essential.

Given my claim that *suru* is a two-place predicate licensing an Agent and an EVENT, my approach is a type of heavy *suru* hypothesis. However, my heavy *suru* hypothesis differs from the other heavy *suru* hypotheses (Hasegawa, 1991; Kajihara, 1991; Uchida and Nakayama, 1993) in one significant aspect. As the internal argument of *suru*, I employ an EVENT, which functions as a place-holder.

(4)

Suru: <Agent, EVENT>

There is a significant advantage in this approach. By way of examining whether the EVENT is linked to a simple event nominal or to a complex event nominal, I can identify what forms of *VN-o suru* will show the peculiarities of the so-called LVC (i.e., bi-predicational *VN-o suru*) and what forms will not (i.e., mono-predicational *VN-o suru*). The other heavy *suru* hypotheses are not endowed with such predictability. In fact, none of the heavy *suru* hypotheses even attempt, for instance, to account for the frozen phenomena.

In sum, as far as the weight of *suru* is concerned, my proposal is optimal in that its postulation of just one type of *suru* is conceptually simple; despite such simplicity, my study can account for the peculiarity of the so-called LVC.

9.2.2. The Thematic Array of *VN-o Suru*

The mirror image of the issue of the weight of *suru* is the observational generalization that the thematic array of a clause seems to faithfully reflect the argument

structure of the VN which heads the accusative phrase, as is implied in the following instances of the so-called LVC.

- (5)
- a. Taroo ga Tokyo ni ryokoo o suru. [Agent, Goal]
 NOM to travel ACC do
 'Taroo travels to Tokyo.'
 a'. ryokoo <Agent, Goal>
- b. Taroo ga Hanako to aiseki o suru. [Agent, Cocomitant]
 NOM with t.-sharing ACC do
 'Taroo shares a table with Hanako.'
 b'. aiseki <Agent, Cocomitant>
- c. Taroo ga murabito ni ookami ga kuru to [Agent, Goal, Theme]
 NOM villagers to wolf NOM come COMP
 keikoku o suru.
 warning ACC do
 'Taroo warns the villagers that the wolf will come.'
 c'. keikoku <Agent, Goal, Theme>

The above instances may look different from the following instances of the so-called heavy *suru* construction, which consists of an Agent and an activity in which the Agent engages.

- (6)
- a. Taroo ga gorufu o suru.
 NOM golf ACC do
 'Taroo plays golf.'
- b. Taroo ga tenisu o suru.
 NOM tennis ACC do
 'Taroo plays tennis.'
- c. Taroo ga kaimono o suru.
 NOM shopping ACC do
 '(lit.) Taroo does shopping.'

The basic claim of this work is that the above observational difference stems not from the weight of *suru* but from the thematic property of the VN which heads the accusative phrase. As for the so-called LVC, it appears that there is a transfer of arguments

from VN to *suru*. However, given that *suru* has its own argument structure, such a notion is difficult to maintain. Also, such an idea is incompatible with the control structure which I defended in Chapter 5. In that chapter, I amassed evidence showing that the so-called LVC is a control structure, which presupposes the involvement of two independent predicates. Such evidence is incompatible with the view that *suru* is thematically empty. As I amply showed throughout this work, both the argument structure of *suru* and that of the complex event nominal contribute to the thematic array of the so-called LVC (5). Under this line of inquiry, obtaining the optimal generalization between the so-called light *suru* construction (5) and the so-called heavy *suru* construction (6) is simple. What we need is a verification that in the former type of construction, the head of the accusative phrase is non-referential/predicational, while, in the latter type of construction, it is referential/non-predicational. This generalization contrasts the two types of *VN-o suru* with no recourse to the (rather circular) two-way classification of *suru*, providing better explanatory force.

9.2.3. Argument Promotion

The idea of argument transfer from the VN to *suru* is regarded by some to be the most intriguing aspect of the LVC (Grimshaw and Mester, 1988; Jayaseelen, 1988). Assuming that the licensing of arguments must respect *locality*, how can the argument(s) of the head of the accusative NP be realized in the domain of an upper verbal predicate instead of the domain of a lower nominal predicate?

Since there is no totally empty *suru*, there is no full-scale argument promotion as Grimshaw and Mester (1988) advocate. In chapter 2, I demonstrated how empirically problematic their transfer hypothesis is. Given my demonstration in Chapter 5 that the so-called light *suru* construction is a control structure, there is no possibility of 'external argument promotion'. As for 'internal argument promotion', there is no consensus among the light *suru* hypotheses and various mechanisms are proposed: Argument Transfer (Grimshaw and Mester, 1988), Abstract Incorporation (Kageyama, 1991), Scrambling (Matsumoto, 1992), Late Lexical Insertion (Yamamoto, 1992) and A(rgument)-Percolation (Sato, 1993). Although the mechanisms vary, they are to a large extent construction specific, hence, undesirable.

As for accounts of argument promotion in the heavy *suru* hypotheses, they basically regard the clausal satellites either as non-arguments (i.e., adjuncts or modifiers) or arguments licensed by *suru* (cf. Hasegawa, 1991). If, however, specific types of satellites

are considered to be 'promoted arguments', construction specific mechanisms are proposed: e.g., raising for Goal promotion (Kajihara, 1991) or VP-adjunction for CP-promotion (Uchida and Nakayama, 1993). Due to the fact that these accounts must stipulate specific constructions and argument types, they cannot be optimal.

In my Minimalist analysis developed in Chapter 6, which adopts the assumption of Chomsky (1995), argument promotion is attributed to chain formation. I assume that this formation takes place at the stage of building a clausal constituent, i.e., before Spell-Out. Hence, although the (internal) argument promotion is 'movement', it is an integral part of the clausal tree building (i.e., Merge). Thus, my analysis does not require any construction specific mechanism to 'promote' (internal) arguments. Further, my analysis can account for the most intrinsic characteristic of the so-called LVC: while the promoted argument is lexically licensed by a VN, it is verbally Case-marked. This characteristic is attributed to chain formation, whose tail-ends are θ -marked by the head of the EVENT NP and whose head-ends are Case-marked either by the nominal and verbal complex (as in the case of DP and CP arguments) or internally (as in the case of a PP argument).

In proposing the above solution I took advantage of Minimalism, which allows a movement operation even at the stage of Merge. The significance is, however, that my account is immune from construction specificity. The motivated nature of the movement involved indicates the optimal nature of my analysis and also the optimal nature of Minimalism itself, at least, in comparison with GB (Chomsky, 1981, 1986a and b) which could not provide such an elegant solution.¹

9.2.4. Frozen Phenomena

An empirical generalization which emerges in my study is that when the accusative NP of the so-called LVC does not contain any genitive *no*-marked argument, the NP becomes syntactically 'frozen': no syntactic processes can be applied to it. The heavy *suru* hypotheses do not address this issue. As for the light *suru* hypotheses, strangely, they regard these phenomena as manifestations of the intrinsic property of light *suru*. They do not attempt to explain why such phenomena exist: the exceptions are Sells (1990) and Kageyama (1991), who basically equate the frozen phenomena to complex predicate

¹ The postulation of various rather stipulative mechanisms by the previous GB-based studies clearly indicates the disadvantage of GB and the struggles encountered in accounting for argument promotion.

formation. Although I agree in spirit with Sells (1990) and Kageyama (1991), I attribute the phenomena not to the intrinsic property of *suru*, but to the property of the accusative phrase: its being non-referential, its being categorically an 'NP' and its being Case-marked in situ. As was demonstrated in Chapter 6, my account involves little (construction-specific) stipulation, in accordance with the general guide lines of the Principle and Parameter Theory. Hence, my account is optimal in comparison with the previous studies.

9.2.5. Focus on the Accusative Phrase

I claim that *VN-o suru* constructions can be divided into mono- and bi-predicational *VN-o suru* forms and that this division is due to the two different types of nominals which head the accusative phrase. I examine the grammatical properties of *VN-o suru* forms to substantiate this claim. As a preliminary, employing Grimshaw (1990) as a theoretical framework and 'temporal adjunct clause' (Iida, 1987; Tsujimura, 1992) and 'nominal control' as syntactic diagnostics, I differentiated VN's into predicational and referential nominals. What is demonstrated in Chapter 3 is that Sino-Japanese VN's are utterly isomorphic between their referential and predicational nominal readings. I carried on the same theme to Chapter 4 and discuss there how mono- and bi-predicational *VN-o suru* forms can be distinguished from each other. By way of examining referentiality and boundedness associated with the accusative phrase (properties essentially predictable from count versus mass readings of nominals under the influence of different specifiers or modifiers) I differentiated *VN-o suru* forms into mono- and bi-predicational constructions and further into their telic and atelic sub-types. The fact that it is possible to classify *VN-o suru* forms in such a neat symmetrical manner suggests that it is the grammatical property of its accusative phrase which characterizes *VN-o suru* constructions.

9.2.6. Summary

In sum, relying on the following two premises, I have clarified where I stand with respect to the issues raised by the previous studies. The idea that *suru* functions as a light verb is problematic; and, the characterization of *VN-o suru* forms does not stem from the weight of *suru* but from the grammatical property of its accusative phrase.

9.3. Theoretical Issues Left Unanswered

9.3.1. Introduction

In this work, I employed various (sub-)theories and theoretical notions. Since the disambiguation of *VN-o suru* was my main concern, I may not have paid enough attention to theoretical issues. I will enumerate the theoretical issues which this work leaves unanswered.

9.3.2. Argument Structure

This work is a counterproposal to Grimshaw and Mester's (1988) account of *VN-o suru* constructions and to studies which follow their footsteps. One bias found among these studies is that they attempt to characterize *VN-o suru* constructions based largely on the notion of argument structure. In so doing, these studies make the assumption that if VN's are associated with argument-like satellites, these VN's are endowed with argument structure. This study pointed out that such a simplistic assumption is not warranted. Chapter 3 shows that because these studies do not assume that VN's can be thematic or non-thematic, they fail to present clear pictures of *VN-o suru* constructions.

Meanwhile, this study makes assumptions that even though thematic roles can be represented in syntactic terms, thematic roles are integral parts of Conceptual Structure, and so-called 'argument structure' can be 'dissolved' into conceptual structure. These assumptions were obvious in Chapter 7 where I developed a conceptual semantic analysis of *VN-o suru* forms. The study, however, neglects a rigorous investigation on how optimal such assumptions are. In this sense, the following kinds of theoretical issues are left unanswered: what is argument structure? what are thematic roles? and, how should these be represented?

9.3.3. Event Structure

As demonstrated in Chapters 3, 4 and 8, one of the basic claims of this study is that the characterization of *VN-o suru* formation cannot be attained without examining the aspectual properties of the construction. The study focused on the telic effect which the accusative phrase brings about. One assumption I made in Chapter 7 is that it is possible to represent the aspectual property of *suru* and the telic effect of the accusative phrase as part of their conceptual structure. In making such an assumption, however, I did not investigate how optimal this assumption is.

Another issue which is left unanswered is the correlation between argument structure and aspect or the so-called 'event structure'. Even if we assume that they are 'dissolvable' as part of conceptual structure, it is still unclear how thematic and eventual properties of conceptual structure are interrelated. For instance, an agentive predicate assumes an activity or accomplishment reading, while a non-agentive predicate assumes an achievement or state reading. Hence, there ought to be some correlation between these two properties. This kind of correlation is a driving force for such works as Tenny (1994). Obviously, I leave any rigorous investigation of this issue for future study.

9.3.4. Boundedness and Specificity

To disambiguate *VN-o suru* into mono- and bi-predicational constructions and further into telic and atelic sub-types, I pay due attention to their accusative phrases. In Chapter 4, I examine how the (un)boundedness of the accusative phrase affects the (a)telic interpretation of the *VN-o suru* construction. In such languages as English, with an overt distinction between mass nouns and count nouns and with the notion of (in)definiteness, it is relatively easy to observe how accusative phrases affect telicity since determiners assist in discerning whether these phrases are eventually bounded or not. In Japanese, the interpretation is highly ambiguous, though the presence/absence of a referential modifier assists in discerning the count vs. mass noun reading of a nominal and, hence, the (un-)boundedness of the accusative phrase of *VN-o suru*. The (un-)boundedness in turn assists in discerning its referentiality. However, since occasionally the effect of a modifier on the (un-)boundedness is indeterminate, I called upon the notion of specificity. My data in Chapter 4 suggested that specificity is an important component in determining the boundedness of nominals. There is, however, a claim that specificity is insignificant in such determination (Jackendoff, 1996). Hence, this issue of how significant specificity is in the telic interpretation seems to remain controversial.²

9.3.5. Cross-Linguistic Comparison

In studying the so-called Light Verb Construction in Japanese, this study made no active comparison with similar constructions in other languages. By the same token, this

² Concerning specificity, it is also unclear whether specificity is part of semantics or part of pragmatics. Further, concerning the relation between specificity and scope, it is strange that English numerals do not induce specific readings, while Japanese numerals do, despite the fact that in either type, no narrow scope reading is induced.

work did not examine whether the so-called LVC in such languages as English consists truly of complex event nominals. If my claim made for Japanese is right, such LVC forms as (7) cannot involve light verbs since such nominals as *look*, *sweep*, *drink* and *offer* are simple event nominals, judging from their compatibility with the indefinite (singular) determiner (cf. Grimshaw, 1996).

(7)

- a. John took a look at the boy.
- b. John gave the floor a sweep.
- c. John had a drink of beer.

In other words, the so-called LVC in English is a mono-predicational construction which actually does not contain a light verb. The implication made by my work are interesting and worth substantiation. I will, however, leave this for future study.

9.4. Summary

Despite the fact that I have left several theoretical issues unanswered, I believe my work has made a contribution to the disambiguation of *VN-o suru* forms, by showing that the characterization of *VN-o suru* construction arises not from the dichotic distinction of *suru* but from the dichotic distinction of its accusative phrase.

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