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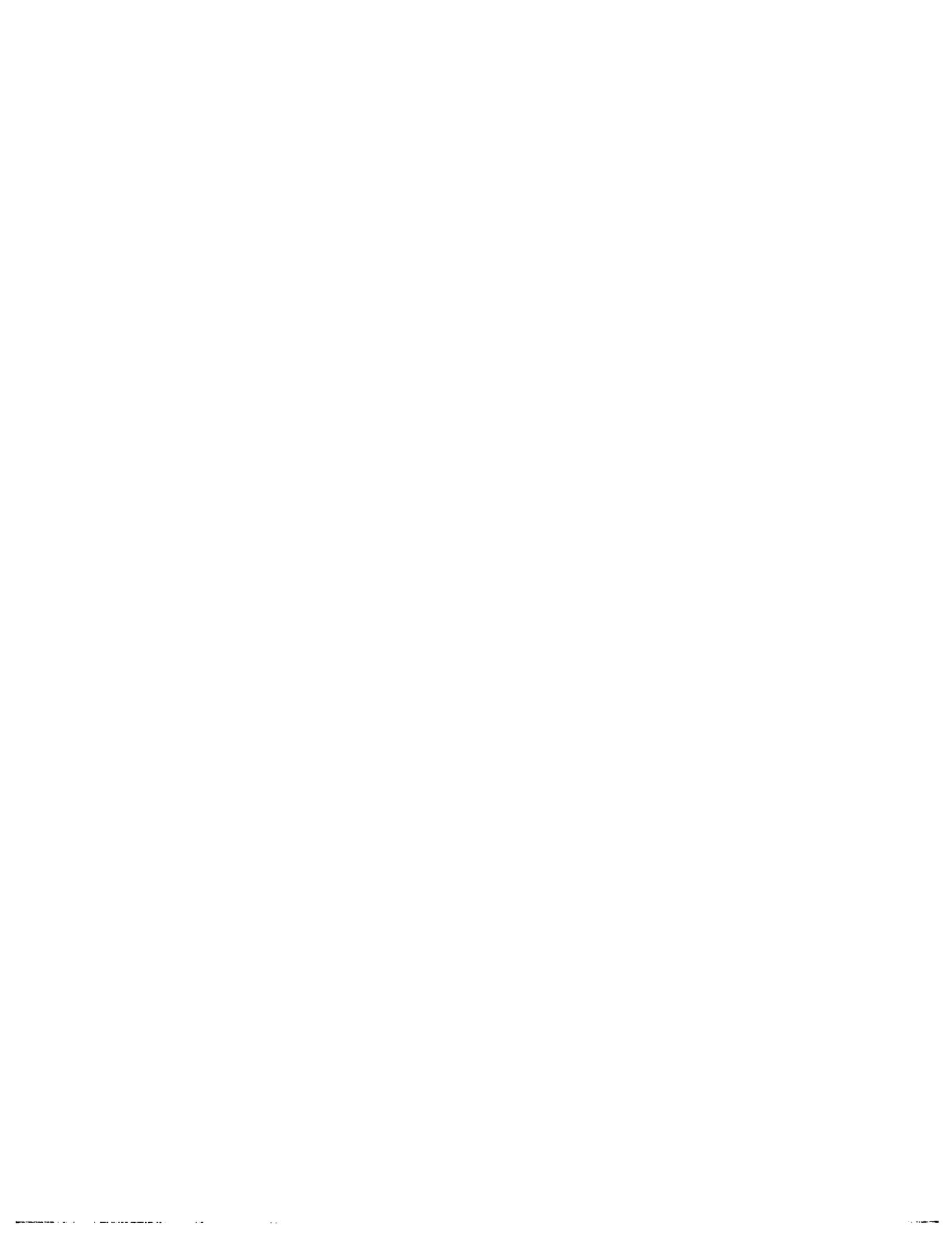
**Perspective-shifting constructions in Japanese: A lexibase
dependency analysis**

Springer, Hisami Konishi, Ph.D.

University of Hawaii, 1993

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PERSPECTIVE-SHIFTING CONSTRUCTIONS IN JAPANESE:

A LEXICASE DEPENDENCY ANALYSIS

A DISSERTATION SUBMITTED TO THE GRADUATE DIVISION OF THE
UNIVERSITY OF HAWAII IN PARTIAL FULFILLMENT OF THE
REQUIREMENTS FOR THE DEGREE OF

DOCTOR OF PHILOSOPHY

IN

LINGUISTICS

AUGUST 1993

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ABSTRACT

This dissertation is an analysis of perspective-shifting constructions in Japanese in the framework of lexicase, a strictly constrained lexicon-driven approach to dependency grammar which has been used in the analysis of 76 languages. 'Perspective-shifting' refers to strategies for alternative lexical encodings of a single external event. Constructions containing such related words encode distinct conceptual events. All languages make available mechanisms for using a single root, corresponding roughly to a single objective event, to appear as the stem of distinct but related words in different syntactic patterns. When such mechanisms involve the creation of words differing in lexically encoded case relation configurations, they will be referred to as 'perspective-shifting' mechanisms. The grammatical principles governing perspective-shifting constructions representing a single event are conceived of as mapping relationships between the heads of different constructions, and are formalized in terms of Derivation Rules. These rules state correspondences between dependents of the heads of the constructions, and indirectly formalize the relation between corresponding constituents in these constructions as well.

The data investigated in this study consist of a broad range of constructions selected from literary works by the Nobel Prize-winning novelist, Yasunari Kawabata, adapted and supplemented with my own examples.

Chapter I defines 'perspective-shifting constructions' and reviews previous studies from the 1930's to the present. It is followed by a presentation of the analytical framework and an updated localistic description of the Japanese case marking system. Chapter 2 introduces the lexical formalization system as well as the criteria and tests used in subcategorizing Japanese verbs. Chapters 3 and 4 present an analysis of the 16 primary intransitive and transitive subclasses. These two chapters represent a major expansion and refinement of earlier lexicase grammatical subcategorizations of Japanese verbs, achieve a fit between semantic and syntactic properties of the verbs investigated, and reveal a high degree of cross-class symmetry of subcategorization within the primary classes. Chapter 5 formally characterizes derivational relationships between the head words of constructions in terms of perspective shifts, and establishes a probably universal typology of inter-verbal derivational relationships. Chapter 6 lists the contributions made by the study and points out remaining problems.

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ABBREVIATIONS

Acc	Accusative	MNS	Means
actn	action	modl	modal
addn	addition	mprs	impersonal
assn	association	N	noun
caus	causative	NEG	negative
chst	change of state	nfrm	informational
cmbn	combination	ngtv	negative polarity
cmpr	comparative	nmnl	nominal
cnst	construction	Nom	Nominative
cntc	contact	P	postposition
COR	Correspondent	pasv	passive
cplr	copular	PAT	Patient
crsp	correspondent	prcs	process
ctvt	activity	prdc	predicate
dgre	degree	qnty	quantity
djct	adjectival	rfrn	referential
fctv	factitive	rvrs	reversible
fint	finite	sorc	source
GEN	genitive	Sprt	sentential particle
GER	gerund	sttv	stative
humn	human	telc	telic
lctn	location	Tpc	topic
LOC	Locus	them	theme

trns	transitive
trvs	traversal
V	Verb
xcls	exclusive
xtns	extension

CHAPTER 1. INTRODUCTION

1.1 AIMS AND SCOPE

The primary objective of this research is to study grammatical principles governing the perspective-shifting constructions in Japanese in the framework of the lexibase version of lexicalist dependency theory.

'Perspective shifting' refers to strategies for alternative linguistic encodings of a single event. All languages make available mechanisms for using a single root, corresponding roughly to a single objective event, to appear in more than one of these patterns. When such mechanisms involve patterns that involve differing case relation configurations, they will be referred to as 'perspective shifting' mechanisms. A construction as an output of such processing operations represents a conceptual event.¹

Patterns available to speakers for linguistically encoding conceptual events differ morphologically and/or syntactically. Constructions may differ either in the particular morphological shape in which the head of the construction appears or in the different syntactic configurations in which the head item appears. Therefore, these heads, each with their own encoded conceptual events, constitute the repository of these conceptual events.

The grammatical principles governing perspective-shifting constructions representing a single event are captured as derivational relationships, mapping relationships between the heads of different

constructions. Such relationships are formalized in terms of Derivation Rules that state correspondences between respective grammatical categories and subcategories of the heads of the constructions as well as between the construction heads and their dependents in the respective constructions.

I will follow these three processes in order to study perspective-shifting constructions in Japanese:

First, I will reexamine previous observations on perspective-shifting constructions;

Second, I will attempt to make a further contribution by re-interpreting and further developing and explaining those observations within a conceptual event lexical derivation perspective;

Third, I will present an analysis of Japanese verb classes within the rigorous and constrained lexicase dependency grammar framework (Starosta 1988) in order to permit its consequences and implications to be determined and tested against other speakers' intuitions.

In order to accomplish these tasks, the chapters are arranged as follows: chapter 1 introduces the objectives of this study, reviews previous research on perspective-shifting constructions, presents the analytical framework, augments former lexicase analyses of case-marking mechanisms in Japanese, and introduces the data. In chapter 2, I present the basic premises of lexicase for syntactic subcategorization of verbs, define the domain of subcategorization, review previous work, refine the diagnostics for the adjunct-complement distinction, and

present a formalism for lexical matrices. In chapter 3, I present the analysis of intransitive verbs in terms of eight primary verb classes, and I note derivational relationships that hold between various pairs of verbs as I present a syntactic subcategorization of intransitive verbs. Chapter 4 presents a subcategorization of transitive verbs and the derivational relationships that hold among them. Chapter 5 presents an analysis of perspective-shifting constructions based on the constrained formalism. Chapter 6 gives a summary of the study and some ramifications.

1.2 PREVIOUS STUDIES ON PERSPECTIVE-SHIFTING CONSTRUCTIONS

1.2.1 Kokugogaku

Among the traditional Kokugogaku ('national language') studies, Matsushita, in his unique framework, captured approximately 18 subtypes of perspective-shifting constructions (Matsushita 1930: 669-678). Although he did not use the term perspective-shifting, these examples fit the definition very well. Matsushita simply lists several examples, mostly in pre-modern Japanese, with brief explanatory notes. His subtypes seem to have been established according to dependency relationships that hold between the verb and its co-occurring actants. However, there is no detailed explanation of the guiding principles for establishing such dependency relationships.

Other studies in the Kokugogaku tradition, Yamada (1922, 1929, 1936), Hashimoto (1969) and Tokieda (1950), among others, incorporate perspective-shifting as a function of auxiliary verbs (Hashimoto) or suffixes ('hukugobi' in Yamada and 'setubigo' in Tokieda).

Except for Matsushita, examples of perspective-shifting are limited to morphologically marked forms if they are dealt with in the traditional Kokugogaku studies.

Sakuma (1967) formulates the notion 'bante' as in 1-*bante* (lit. first hand), 2-*bante* (lit. second hand), and 3-*bante* (lit. third hand) in order to account for some of the perspective-shifting constructions: passives and causatives. In causative constructions, his 1-*bante* is the instigator of the action and his 2-*bante* is the recipient of the action. His 3-*bante* is the locational complement in both transitive and intransitive actions. In passive constructions, Sakuma introduces a new *bante*, which is called *arate* (lit. new hand). Sakuma attempts to capture generalizations about the relationships among intransitive, transitive, passive (adversative and non-adversative), and causative constructions using these participants in his syntactic analysis. Sakuma, a psychologist by training, schemmatized the relationships observed in differing constructions. His presentation is quite illuminating even now, although some of his papers in that volume had been published elsewhere in the late 1950's and early 1960's.

The morphologically unmarked perspective-shifting constructions are studied by Kageyama (1980), Okutsu (1981), and Sadanobu (1990) for a few selected verbs. These studies described perspective-shifting as 'noun phrase switch' (Kageyama), 'hypallage' (Okutsu), and 'noun phrase exchange' (Sadanobu). The basic premises in the first two studies are situationally defined Fillmorean case grammar. Sadanobu (1990) limits his study to motion verbs and found some semantic fit between the types of verbs and acceptability of his 'noun phrase switch'.

1.2.2 Generative transformational studies

The majority of studies conducted in this framework is limited to morphologically marked perspective-shifting constructions: causatives and passives.

Early transformational studies, Kuno(1973), Tonoike (1975/76), and Shibatani (1978), among others, analyzed morphologically marked perspective-shifting constructions as their target. They assumed a VP node and a complex deep structure that included underlying verbs, *sase* (for causatives) and *rare* (for passives), in the underlying structure, and derived these constructions transformationally using the mechanisms of verb raising and equi-NP deletion.

In the Government and Binding analysis, Saito (1982) deals with the passive construction, assuming a parallel derivation, syntactic and semantic, and a VP node. Terada (1990) is an analysis based on Baker's Incorporation theory (Baker 1988).

Morphologically marked cases of perspective shifting have been studied in the Lexicalist analysis within the RST framework by Abe (1985), Farmer (1980, 1984), Ostler (1980), Hasegawa (1981), Marantz (1981, 1984), and Miyagawa (1989, 1981).,among others. Their analyses assume that the lexicon includes morphological processes to derive perspective-shifting constructions. Their analyses use such mechanisms as case-linking, morphological merger, and feature percolation.

1.2.3 Non-transformational analysis

There have been a few previous accounts of perspective-shifting constructions in non-transformational frameworks. The morphologically marked constructions have been studied by Ishikawa (1985) in the framework of lexical functional grammar and by Dubinsky (1985) in the framework of relational grammar.

In the lexicase grammatical framework, Taylor (1971) carefully noted some derivational relationships in his study of the Japanese language dialect of a native-speaking Japanese linguist. His observations were incorporated into his formulation of five derivational rules: potential, causative, passive (direct and indirect), and causative-passive. Taylor did not find an extensive number of examples in his data of perspective-shifting. His examples are limited to morphologically marked derivatives. His explicit formalism, although outdated due to the progress of the theoretical framework during the two decades since his study, enables us to construct additional plausible examples. The examples from this classic work were used as a basis for the reanalysis of about 150 Japanese sentences by Starosta and Nomura (1984) who applied the later version of lexicase framework for the preliminary analysis of verb subcategorization. Japanese verb subcategorization has been refined since by Unetani, Shin, and Starosta (1987), whose refinement included morphologically unmarked as well as marked derivatives. This version of verb subcategorization has been revised further by Lee (1989) as a preliminary work for her lexicase analysis of Japanese complementation. The current research on perspective-shifting constructions is built on these previous studies.

1.3 ANALYTICAL FRAMEWORK

1.3.1 Lexicase

The framework I chose for analysis is lexicase, a lexicon-driven version of dependency grammar.²

The basic premises in lexicase with regard to case frame subcategorization are as follows:³

- (a) Lexicase regards each distinct grammatical environment as identifying one grammatically defined lexical category, and
- (b) Lexicase assumes that a given lexical entry can be a member of one and only one grammatical category.

1.3.2 Grammar and perspective

Lexicase treats 'perspective' primarily as a matter of how situational roles are mapped onto case relations for a given verb class, and of how derivationally related verb stems differ in the perspectives that they impose on external situations.

Case relations are syntactic-semantic relations between a noun and its regent (Starosta 1988:115). There are universally only five case relations.⁴ They are PAT (Patient), AGT (Agent), COR (Correspondent), LOC (Locus) and MNS (Means). All five case relations may occur on complement NPs, required NP dependents of the head of a construction. The latter three case relations, COR, LOC, and MNS, may also occur as adjunct NPs, non-required dependent NPs.⁵

A shift in perspective in the sense of this dissertation is captured as the derivational relationship between two lexical items sharing a common stem and occurring in the differing grammatical environments as designated by the case frame configurations in their individual lexical matrices. A change in perspective necessarily results in a different lexical item.

A pair of derivationally related constructions represents two distinctive conceptual events for a single external event. For example, a visual presentation of a bowl of rice gruel might elicit one of two constructions:

(1a) Haha ga kome o kayu ni taita.
 Mother rice gruel cooked
 'Mother cooked rice into gruel.'

(1b) Haha ga kayu o kome de taita.
 'Mother cooked gruel with rice.'

The two conceptual events, and consequently the pair of derivationally related verbs that encode them, differ in:

1. the choice of which of the situational participants is encoded as the PAT case relation, and
2. the determination of the case relation of the other situational participants in accordance with the semantic features of the respective verbs.

Situationally, 'rice' is an input for the process of cooking and 'gruel' is an output.

If we regard the cooking process as something that is done to the rice, and thus choose *kome* 'rice' to be encoded as PAT, it must be

marked by the accusative case form,⁶ realized as the postposition *o*, since Japanese is an accusative language and the head of the construction, *taita* 'cooked', is a transitive verb. Since Japanese is an accusative language, not an ergative language, the AGT of a transitive verb is marked with a nominative case form, realized as the postposition *ga*.⁷ Since the remaining actant is marked by *ni*, the postposition that typically marks LOC, we will assume that *kayu* 'gruel' bears the LOC case relation, and is interpreted as the abstract destination (the terminal state) of the rice. Grammatical encoding involving this particular case relation configuration outputs construction (1a), not (1b).

On the other hand, if we view the cooking process as something that creates *kayu* 'gruel', and accordingly assign it the PAT case relation, it will be marked by the accusative case form, realized as the postposition *o*. The nominal that initiates the cooking is again encoded as an AGT, marked with the nominative case form, realized as the postposition *ga*. If we choose *kome* 'rice', as the MNS, the material being used in the creation of the gruel, it will be marked by the localistic case form, realized as the postposition *de*, yielding construction (1b), not (1a).

The following are additional pairs of examples of derivationally related constructions that call for the same explanation as above. Examples (2a) and (2b) describe a dish of snapper prepared as sashimi. Examples (3a) and (3b) describe yarn made into a sweater.

- (2a) Oba ga tai o sasimi ni tukutta.
 AGT PAT LOC
 Aunt snapper sashimi prepared
 'Aunt prepared the snapper into sashimi.'
- (2b) Oba ga sasimi o tai de tukutta.
 AGT PAT MNS
 'Aunt prepared sashimi with the snapper'
- (3a) Oba ga keito o seetaa ni anda.
 AGT PAT LOC
 Aunt yarn sweater knit
 'Aunt knit yarn into a sweater.'
- (3b) Oba ga seetaa o keito de anda.
 AGT PAT MNS
 'Aunt knit the sweater with yarn.'

These examples shows two patterns of case relation assignments:

(1) the assignment of the PAT case relation to an actant⁸ that serves as an input for the process designated by the head verb requires that the LOC case relation be assigned to an actant that may serve as an output of the process designated by the head verb, as in (1a), (2a), and (3a), and

(2) the assignment of the PAT case relation to an actant that may serve as an output of the process designated by the verb requires that the MNS case relation be assigned to an actant that may serve as an input of the process as in (1b), (2b) and (3b).

The two different case assignment patterns illustrate that there are two different perspectives for the same action: 1) a process in which a PAT is changed into a terminal state, LOC, and 2) a process in which a PAT is created using MNS as the raw material. Although verbs *taita* 'cooked' in (1a) and (1b) have identical forms, their case frame configurations differ from one another. Therefore these two verbs are distinctive

lexical items. Similarly *anda* 'knit' in (3a) and (3b), and *tukutta* 'prepared' in (2a) and (2b), are distinctive lexical items, each designating differing perspectives.⁹

In order to incorporate these semantic and syntactic distinctions two lexical entries must be established for each of the forms, *taita* 'cooked', *anda* 'knit' and *tukutta* 'prepared'.

(4a) *taita*₁, *tukutta*₁, *anda*₁

(4b) *taita*₂, *tukutta*₂, *anda*₂

Verbs in (4a) and (4b) require two case relations, AGT and PAT. We will refer to such verbs as 'transitive', designated by the feature [+trns]. The fact that verbs in (4a) in addition require the LOC case relation is represented by [+lctn]. Verbs in (4b), in addition to AGT and PAT, demand a MNS case relation. We will note this requirement by [+mode]. The features [+chst] 'change of state' and [+fctv] 'factitive' are semantic features to represent the fact that the two morphologically identical verb stems in (4a) and (4b) have different meanings. A more detailed account of such features will be introduced in chapter 3. The verbs in (4a) share the feature configuration (5a) and the verbs in (4b) share the feature configuration (5b):

(5a) [+trns, +lctn, +chst]

(5b) [+trns, +mode, +fctv]

Given a pair of conceptual events such as the ones encoded by the corresponding verb pairs in (4a) and (4b), neither conceptual event has any logical, ontological, or temporal priority over the other. They are simply different ways of perceiving the same objective external reality, and the derivational process that relates them is simply a formal

statement of exactly how their semantic representations and case frames correspond to each other. Therefore, referring to these conceptual events, we need not state that the PAT in *taita*₁ is 'substituted by' or 'demoted to' or 'realized as' MNS in *taita*₂; or MNS in *taita*₂ is 'substituted by' or 'promoted to' or 'realized as' PAT in *taita*₁. Neither need we state that *taita*₁ is derived from *taita*₂ or vice versa. We will designate the crucial derivational relationship between the two heads of constructions which represent two differing conceptual events by a colon notation:¹⁰

- (6) *taita*₁ : *taita*₂
 (7) *tukutta*₁ : *tukutta*₂
 (8) *anda*₁ : *anda*₂

In terms of case frames, or the specifications for the arrays of complement case relations required by two head verbs, their derivational relationships are represented in (9):¹¹

- (9) [+trns, +lctn, +chst] : [+trns, +mode, +fctv]

The use of this colon notation is extended also for the morphologically marked derivational relationships relevant to perspective-shifting that are discussed in later chapters.

The two distinctive lexical matrices, or the specifications for the arrays of complement case relations required by the two verbs, represent the two conceptual events. These conceptual events present differing ways of perceiving the same objective external reality. The two distinctive configurations of contextual features in (9) represent two distinctive grammatical environments identifying two grammatically defined lexical categories.

The pair of constructions discussed above includes phonologically identical verbs. The same analytical frame is applied for more clearly marked instances of derivational processes relevant to perspective shifts in chapter 5.

1.4 CASE RELATIONS, CASE FORMS, AND CASE MARKING IN JAPANESE

As mentioned in section 1.3.2., the current lexibase theory has five case relations: PAT (Patient), AGT (Agent), LOC (Locus), MNS (Means), and COR (Correspondent). While the first two case relations, PAT and AGT, may occur only as obligatory dependents or complements of the head of constructions, the last three may occur as both obligatory and non-obligatory dependents of the verb. Non obligatory or non-required dependents are called adjuncts. A case relation is a complement case relation if assigned to a complement and an adjunct case relation if assigned to an adjunct.

Case forms explicitly mark grammatical meaning and function of the nominals to which the case forms are appended, identifying the case relation that the actant bears to its regent, the head of the construction. Case markers are grammatical devices that realize abstract case forms.

The actants are arguments of a verb in case grammar (Tesnière 1959:105-107, Starosta 1988: 120). The distinction proposed by Tesnière between circonstants and actants is motivated semantically and by the presence as opposed to the absence of prepositions. The distinction is not the same as our more syntactically motivated distinction between adjuncts and complements. We define an adjunct as a non-obligatory

dependent to the regent and a complement as an obligatory dependent to the regent. For example, in Tesnière's analysis, *de veste* in *Alfred change de veste* 'Alfred changes his jacket' is not an actant, but a circonstant. He claims that in effect this type is an adverb (Tesnière 1959:128). In my analysis, however, *de veste* is an actant indispensable for the event to take place, and the sentence is incomplete without it. We call this obligatory dependent to the regent verb change a complement which bears a MNS case relation. It should be noted here that actants as defined by Tesnière are limited to the subset of my complements, obligatory participants in the sentence.

Adjuncts as non-obligatory participants in the sentence may freely co-occur with any verb, subject to pragmatic constraints. Complements are obligatory actants for some particular verb or verb class. The head of a construction, a verb, therefore, is subcategorized in terms of its complements, including actants marked for complement case relations, adverbial complements, and verb-headed complements. That is, a word can also be subcategorized by non-NPs as well, e.g. by manner adverbs of Swahili in Khamisi (1985) and verb-headed complements of Japanese in Lee (1989).

Case relations and case forms are not in a one-to-one correspondence to each other. Nonetheless, we may observe some consistently associated case form/case relation pairs. For example, since Japanese is an accusative language, the PAT of Japanese transitive verbs is always marked by the Accusative case form, abbreviated as [+Acc], which is normally marked by the Accusative postposition *o*; and the AGT of transitive verbs and the PAT of intransitive verbs are always

marked by the Nominative case form, abbreviated as [+Nom] and typically realized as the Nominative postposition *ga*. MNS is marked by the locative case form, typically realized by the postposition *de*, and LOC and COR by the locative case form, realized by the postpositions *ni*, *yor**i*, *kara*, *made*, and *e*.

Such prototypical correspondences between case forms and case relations are used in support of the claim that case forms as a category signal the presence of case relations (Lee 1989:35).

While the case form is an abstract category, the case marker is a concrete grammatical device that realizes the case form. The case form is drawn from a universal set, universal in the sense that case form exists as an abstract category across languages. The case marker as a grammatical device, on the other hand, is language specific (Starosta 1978:504). As the case forms in Japanese signal the case relation, it is crucial to have a systematic access to case forms and the case-marking system in Japanese.

In the next section, the case marking system of the Japanese language in the lexicase framework is discussed.

1.4.1 Case marking system in Japanese

1.4.1.1 Case forms in Japanese

Case forms in Japanese are realized by case markers. Traditional grammarians referred to case markers under the cover term, *zyosi*, translated as 'helping words' or 'particles' or 'noun postpositions' (Martin 1975:38). A literal translation for postpositions is 'kootisi'.

It should be noted that when Matsushita (1901: 224-233) used the term 'kootisi', he was referring not to the postpositions in the sense of 'particles' and 'noun postpositions' but to a set of words that is positioned immediately after so-called 'zyosi', i.e. *yotte/yoru*, *taisite/taisuru*, *oite/oiteno*, *totte/totteno*, *kansite/kanssuru*, which appear immediately after our case-marking postposition *ni* as in *ni yotte*, *ni yoru*, *ni taisite*, *ni taisuru* etc.; others such as *issyo ni/issyo no*, which follow our case-marking postposition *to* as in *to issyo ni/issyo no*; and *megutte/meguru* which follows *o* as in *o megutte/megur*, to name a few. The first form of the pair occurs immediately before a verb, while the second form of the pair precedes a noun. The first pair such as *ni yotte* was treated as a complex postposition by Sugimoto (1986: 331) and Teramura (1982:185) though their terms differ slightly: 'hukugoo kaku zyosi' (complex case particle) by Sugimoto and 'kakuzyosiku' (case particle phrase) by Teramura. Suzuki (1972: 499-501) follows Matsushita and stated that this group of words needs more study.

For the analytical purposes of this study, I will not follow the practice prevalent in transformational linguistic analyses of Japanese of treating some of Matsushita's 'kootisi' together with our case-marking postposition as complex postpositions, e.g., *ni yotte*, *o megutte*, etc. Instead, I will treat the first forms of the pairs from Matsushita, *yotte*, *taisite*, *oite*, *totte*, and *kansite* as a regent verb in [-root] form. This regent together with its dependent may in turn form another dependency relationship. In this new dependency relation, this verbal complement should be treated as any other verbal complement for

further analysis. That is, in my analysis 'complex postpositions' do not exist.

1.4.1.2 Localistic analysis of postpositions in Japanese

A localistic analysis of case markers in Japanese in the lexicase framework was first presented in Starosta and Nomura (1984). Since then, it has been revised by Unetani, Shin & Starosta (1986, 1987), and Starosta (1987). The subcategorization of postpositions by Starosta (1987) was revised by Lee (1989), who provided a near-complete listing of Japanese postpositions in her subcategorization tree (34), repeated here as Figure 1.1 below and the mapping of case forms and case relations in her Table 1.2, which is presented on the following page.¹²

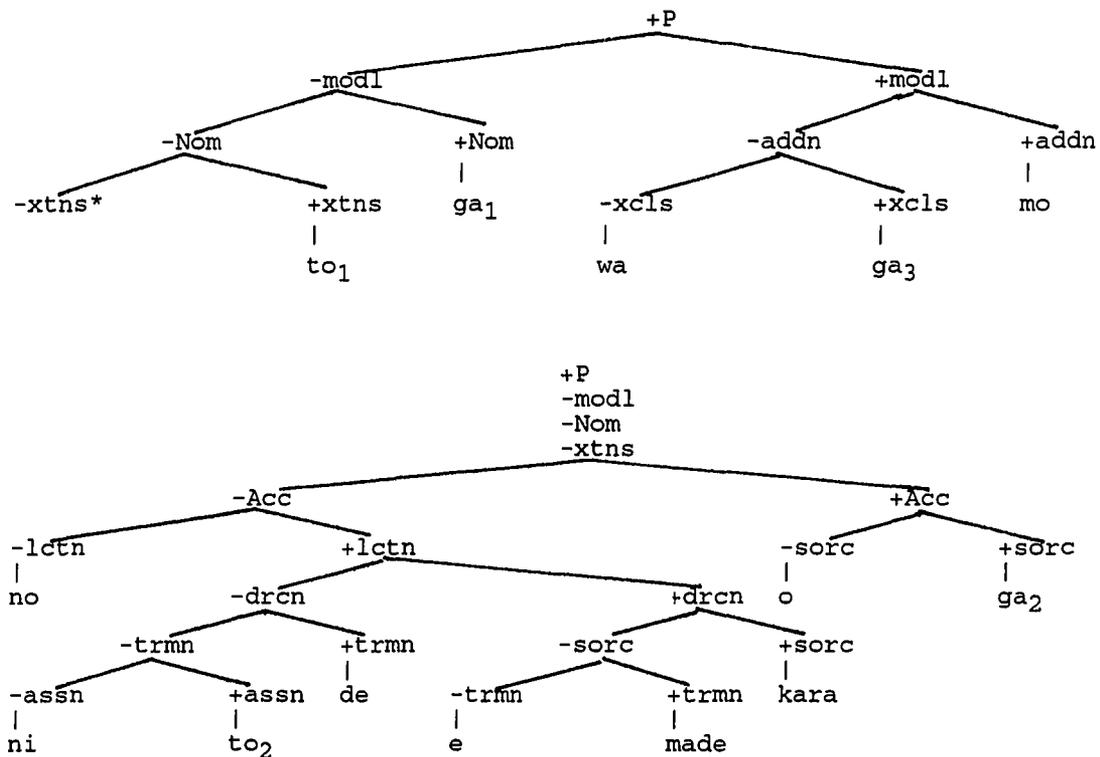


Figure 1.1 Subcategorization of Postpositions (Lee 1989:44)

Table 1.1 Case Form/Case Relation Mapping (Lee 1989:45)

	ga ₁	o	ga ₂	no	ni	de	e
	+Nom -sorc	+Acc +sorc	+Acc	-lctn	-assn -trnm	-drcn +trmn	+drcn -trmn
AGT	+						
PAT	+	+	+				
LOC					+	+	+
LOC (o)					+	+	
COR				+	+		
COR (o)							
MNS						+	
MNS (0)						+	

	made	kara	to ₂	wa	ga ₃	mo
	+drcn	+sorc	+assn	-xcls	+xcls	+addn
AGT						
PAT						
LOC	+	+				
LOC (o)						
COR			+			
COR (o)			+	+	+	+
MNS						
MNS (0)						

1.4.2 Augmentation

In this section I will first review Lee's subcategorization of postpositions and suggest revisions.

1.4.2.1 yori

The current subcategorization by Lee of postpositions with localistic features 'location' and 'direction', abbreviated as [lctn] and [drcn], respectively, have six individual members: *ni*, *to₂*, *de*, *e*, *kara* and *made*. They are fully specified by the following localistic features in the analysis by Lee:

- (10) ni [+P, -modl, -xtns, -Acc, +lctn, -drcn, -trmn, -assn]
 (11) to₂ [+P, -modl, -xtns, -Acc, +lctn, -drcn, -trmn, +assn]
 (12) de [+P, -modl, -xtns, -Acc, +lctn, -drcn, +trmn]
 (13) e [+P, -modl, -xtns, -Acc, +lctn, +drcn, -sorc, -trmn]
 (14) made [+P, -modl, -xtns, -Acc, +lctn, +drcn, -sorc, +trmn]
 (15) kara [+P, -modl, -xtns, -Acc, +lctn, +drcn, +sorc]

Lee's inventory does not include the postpositions that did not appear in her example sentences. The postposition *yor*i is one of those excluded in her inventory.

The sentences with the postposition *yor*i, (16) through (21), have varied degrees of grammaticality, designated by conventions: '?', '??', '*', '**'.

When *yor*i in (17) is replaced by the postposition *kara*, all the sentences are accepted as grammatical.

- (16) Umi no kanata *yor*i/kara tegami ga todoita
 Ocean far letter arrived
 'A letter arrived from overseas.'
- (17) Yocroppa *yor*i/kara tegami ga todoita.
 'A letter arrived from Europe.'
- (18) Rondon ?*yor*i/kara tegami ga todoita.
 'A letter arrived from London.'
- (19) Hawai Daigaku ??*yor*i/kara tegami ga todoita.
 'A letter arrived from the University of Hawaii.'
- (20) Sensei **yor*i/kara tegami ga todoita.
 'A letter arrived from the teacher.'
- (21) John ***yor*i/kara tegami ga todoita.
 'A letter arrived from John.'

The grammaticality judgments on *yor*i sentences vary depending on the individual. One native speaker reported that (16)-(19) are acceptable; (20) is a little awkward; while (21) is marginally

acceptable. To the same individual, if these sentences are spoken, none are acceptable. On the production level, the same individual reported that he may use (16); may or does not use (17)-(19); and does not use (20)-(21). A statistical study notes that *kara* occurs 30 times more often as *yor*i (GZ3:126). The same study notes that the occurrence of *yor*i is not always in a literary stylistic environment.

Following Y.R. Chao (Chao 1968:768-769), this intuitive semantic content of localistic features for a subset of English prepositions and Japanese postpositions is shown in (22) below, where the circle designated by 'O' indicates a locus in space and the arrow indicates a location or orientation of the central participant in the particular action or process of the conceptual event.

The English language prepositions 'toward', 'to', 'at', and 'from' encode a, b, c/d and e/f respectively, while Japanese encodes a with postposition *e*, b with *made*, c with *ni*, d with *de*, e with *kara*, and f with *yor*i respectively:

(22)	English	Japanese
a. O <-	toward	<i>e</i>
b. O <-	to	<i>made</i>
c. O .	by	<i>ni</i>
d. O .	at	<i>de</i>
e. O ->	from	<i>kara</i>
f. O ->	away from	<i>yor</i> i

Based on examples (16)-(21) and the localistic features illustrated in (22)e and (22)f, we may specify the semantic distinctive features for the postpositions *kara* and *yori* as follows:

(23) *kara* [-modl, -Nom, -xtns, -Acc, +lctn, +drcn, +sorc, +trmn]

(24) *yori* [-modl, -Nom, -xtns, -Acc, +lctn, +drcn, +sorc, -trmn]

The localistic feature 'terminus', abbreviated as [trmn], means that the end point is perceived as included in the spatial interval designated by the case relation LOC. The localistic feature 'association', abbreviated as [assn] signifies that the end point is perceived as closely associated with or united with the spatial or abstract location of the case relation LOC.

In examples (16)-(21), we observed that the location designated by the LOC, *Umi no kanata* in (16), *Yocroppa* in (17), *Rondon* in (18), *Hawai Daigaku* in (19), *sensei* in (20) and *John* in (21) becomes increasingly more specific and point-like, while the felicity of combining it with *yori* decreases. This inverse relationship is captured in the positive and negative marking of the localistic feature, 'terminus', abbreviated as [+trmn]. The positive marking on this feature means the end point is perceived as included in the spatial interval designated by the case relation, LOC.

The examples encoded in the lexical entries in (23) and (24) justify a bifurcation into [+trmn] and [-trmn] for the node [+sorc] under [+drcn]; and the placement of *kara* and *yori* accordingly:

```

+P
-modl
-Nom
-xtns
-Acc
+lctn
+drcn
+sorc
/      \
-trmn  +trmn
yori   kara

```

With this addition of *yori* as a [-trmn] postposition, the mapping table must be revised. The postposition *yori* has been established here as a case marker which realizes a case form signalling the presence of a LOC complement.

It should be noted however that in the following it is plausible that the case form *yori* marks not the LOC but the COR complement.

```

(26) Nagoya ga Oosaka yori      Tookyoo e      tikai.
      Nom      away from      toward close
      PAT      COR              LOC
      'Nagoya is closer to Tokyo than Osaka is.'

```

This assignment of COR on the *yori*-marked actant is syntactically supported by the 'one per Sent' constraint, a crucial assumption in the case subcategorization of verbs in the lexicase framework: no complement case relation may occur more than once in any given clause (Starosta 1988:138). That is in (26), since the regent *tikai* already has a LOC complement case relation assigned to the actant Tokyo which is marked by postposition *e*, to assign an additional LOC to the *yori*-marked actant would be a violation of the 'one per Sent' constraint. Assignment of COR to the same actant, on the other hand, is not a violation of the constraint. This analysis is also supported by the fact that unlike

sentence (16), in (26) *yori* cannot alternate with *kara*, another LOC marking postposition.

There are other instances of the *yori*-marked actants that cannot alternate with *kara* and that do not have a distinctive LOC actant in the same clause:

- (27) Fusako wa hahaoya yori minikui
 mother away from is ugly
 'Fusako is uglier than her mother.'

These facts substantiate our statement regarding the mapping between case forms and case relations. The case form *yori* marks not only the LOC but also the COR. The mapping is not one-to-one.

1.4.2.2 *ni* [+xtns,-assn]

The current subcategorization by Lee of postpositions with features 'non-modal', 'non-nominative' and 'extension' abbreviated as [-modl], [-Nom] and [+xtns], respectively, has a single individual member: *to*₁.

Since there is a contrast between the two sentences (28) and (29), I conclude that the two underlined postpositions are different. The *ni* in (28) is a localistic as in Lee's *ni* [+P,-modl,-xtns,-Acc,+lctn,-drctn,-trmn,-assn] while *ni* in (29) is a complementizer in Lee's sense.

- (28) Ekityoo ga isya ni iku.
 Station master Nom physician goes
 'The station master goes to the physician.'

- (29) Ekityoo ga isya ni naru.
 Station master Nom physician as becomes
 'The station master becomes a physician.'

Example (28) is a single clause construction while (29) includes two clauses where the PAT of the higher clause is the actor of the lower clause, headed by the nominal predicate *isya* 'physician'.

Furthermore (29) alternates with and contrasts with (30) which includes Lee's to_1 .

(30) Ekityoo ga isya to_1 naru.
 Station master Nom physician as if becomes
 'The station master assumes the role of a physician.'

Based on these examples, I propose a branching node for the feature 'association' for non-modal, non-nominative extension postposition, as shown in (31):

(31) +P
 -modl
 -Nom
 +xtns
 / \
 -assn +assn
 ni to
 'as' 'as if'

The complementizers therefore have the following feature specifications.

(32) ni_1 [+P, -modl, +xtns, -Acc, +lctn, -drcn, -trmn, -assn]
 (33) to_1 [+P, -modl, +xtns, -Acc, +lctn, -drcn, -trmn, +assn]

1.4.2.3 Accusative LOC

Lee (1989), Starosta (1988), and Starosta and Nomura (1984) associated postposition *o* solely with the PAT in transitive clauses. According to this analysis the *o*-marked actant, *soogen o* in (34) is a PAT and the verb *hasiru* 'runs' is [+trns]:

- (34) Uma ga soogen o hasiru.
horse prairie runs
'The horse runs on the prairie.'

25

The Patient centrality hypothesis claims that every verb has a Patient in its case frame (Starosta 1988:128). The 'one per Sent' constraint states that no complement case relation may occur more than once in any given clause (Starosta 1988:138). I will also assume that an ability to go through the derivational process of *o*- and *ni*-causative is a sufficient criterion for identifying an intransitive verb in Japanese; while an inability to derive an *o*-causative is a sufficient criterion for identifying a transitive verb.¹³

- (35) Soogen ga uma ni hasirareru
prairie horse is run
'The prairie had a horse run (and is affected by that)' (The horse runs on the prairie (and the prairie is affected by the running.)

- (36) Suzuki ga uma o soogen o hasiraseru.
forces to run
'Suzuki makes the horse run on the prairie.'

- (37) Suzuki ga uma ni soogen o hasiraseru.
forces to run
'Suzuki lets the horse run on the prairie.'

Example (35) is consistent with either a transitive or intransitive analysis of (34). The grammaticality of both *o*-causative (36) and *ni*-causative (37) determine that the regent *hasiru* 'run' in (34) is [-trns] which in turn determines that the actant marked by the [+Nom] case form, encoded as the postposition *ga*, is the PAT. The *o*-marked actant *soogen* 'prairie' in (34) cannot be a PAT because of the 'one per Sent' constraint. Therefore, we assign it the case relation LOC tentatively. The case array for the regent of (34) then is PAT-LOC. The case array for the regent of (35) on the other hand is PAT-COR. Examples (36) and (37) are (morphological) causative constructions that

contain an additional case relation. This additional case relation has a macrorole, actor, marked by the [+Nom] case form, realized as postposition *ga*. Since the Japanese causativization pattern, which associates non-causative NPi *ga* with causative NPi *o*, derives transitive verbs with NPi *o* objects from intransitives with NPi subjects, Suzuki is the AGT. The case array for the transitive regent in (36), *hasiraseru*, must be as follows:

- (38) Suzuki *ga* *uma* *o* *soogen* *o* *hasiraseru*.
 AGT PAT LOC [+trns]
 actr
 'Suzuki makes the horse run on the prairie.'

Example (38) is a direct counterexample to the usual 'Double o constraint' assumed in other analyses, but it is consistent with the lexical dependency analysis proposed here, since it violates neither patient centrality nor the 'one per Sent' constraint. Case marking follows the accusative pattern. Had we on the other hand assumed that the case array of (34) is AGT-PAT, thus assuming the regent *hasitta* as [+trns], the causativized sentence would violate the 'one per Sent' constraint:

- (39) Suzuki *ga* *uma* *o* *soogen* *o* *hasiraseru*.
 AGT PAT PAT [+trns]
 'Suzuki makes horse run on the prairie.'

This claims that the sentence (36) would be categorically ungrammatical, which is contrary to the linguistic fact.

The case array for (37) is accordingly given as (40):

- (40) Suzuki *ga* *uma* *ni* *soogen* *o* *hasiraseta*.
 PAT COR LOC [-trns]

The concept of LOC complements marked by non-locative case markers is further supported by examples in Korean. Korean example (41) (=Example (71)b, Jeong 1992:90) represents a LOC complement marked by a dative postposition. In (41) a causee nominal Mino is marked by a locative marker, *eykey*, called 'dative' by Jeong.

(41) Mira-ka Mino-eykey chayk-ul ilk-hi-ess-ta.
 -Nom -to book-Acc read-CAUS-Pst-DEC
 +N +P +N +P +N +P +V
 +Nom +Nom -Nom +lctn -Nom +Acc +trns
 AGT LOC PAT
 'Mira made Mino read a book.'

According to Jeong, (41) is a natural and unmarked causative for native speakers. The dative case-marker appended to the causee is analyzed as an animate locative marker. By contrast, the double accusative construction (42) includes a causee nominal marked by an accusative marker:

(42) Mira-ka Mino-lul chayk-ul ilk-hi-ess-ta.
 -Nom -Acc book-Acc read-CAUS-Pst-DEC
 'Mira made Mino read a book.'

In other words (42) illustrates an example of Acc-LOC.

A statistical study on motion verbs taken from modern periodicals (Miyajima 1986: 41-59) has turned up several examples in which Acc LOC specifies the point of departure rather than the traversal boundary, as observed in sentences (34)-(37). These constructions are headed by regents, *hanareru* 'leave', *oriru* 'descend', *saru* 'leave', and *deru* 'exit' among others (Miyajima 1986: 41-59). Hashimoto observes that such postpositions may alternate with the postposition *kara* (Hashimoto 1969:110):

(43) Ie o hanareru
house leave
leave house

28

(44) Ie kara hanareru.

While (43) means one removes oneself semi-permanently from the institution represented by house: family, kin, etc., (44) will be more acceptable for describing the act of vacating the locality expressed by one's house.

I am inclined to recognize that the *o*-marked actant in (43) is indeed a PAT, which is commonly an entity affected by the verb. In other words, the head verb *deru* in (43) is transitive and contrasts with the homophonous intransitive locational verb *deru* in (44). This is to say that the *kara/o* alternation pointed out by Hashimoto among others is best analyzed as a derivational relationship with two head verbs belonging to differing classes of verbs: *hanareru* in (44) in an intransitive verb and *hanareu* in (43) in a transitive verb.

The fact that *o*-causative prevails on (44) but not on (43) supports this analysis:

(43c) *iyagaru Suzuki o ie o hanaresaseru.
unwilling house forced to leave
'They forced the unwilling Suzuki to leave the house.'

(44c) iyagaru Suzuki o ie kara hanaresaseru.
unwilling house forced to leave
'They forced the unwilling Suzuki to leave the house.'

Among previous studies, Matsushita (1930:238) and Shibatani (1978:292) treat *o*-marked actants in constructions headed by the regent verbs *agaru* 'ascend', *wataru* 'cross', *deru* 'leave' and *tobu* 'fly' as the object 'kyakugo' (Matsushita), and the direct object 'tyokusetu

mokutekigo' (Shibatani), equivalent to our PAT of transitive verbs. Both Yamada (1936:414) and Hashimoto (1969:109-110) appear to distinguish traversal objects from objects. Yamada states that an *o*-marked actant which occurs with motion verbs, *tobu* 'fly', *sugu* 'pass', and *saru* 'leave' among others, signifies the location of the action. Yamada (1933:560) observes the same fact in literary Japanese. Hashimoto observes further that an *o*-marked actant may refer to a path or the point of departure, depending on the regent. These actants, in their analyses, are Acc LOC in our framework. Taylor distinguishes *o*-locatives from other locatives. According to Taylor, *o*-locative verbs are those that have been given the pseudo-feature 'mvnt' (movement) and have the case-frame feature [+([+O, +LOC])___-]. He mentions also that the situational or contextual referent of these actants is interpreted as the bounded area within which the verbal 'movement' occurs (Taylor 1971: 33).

Haig (1981) tests the objecthood of the *o*-marked actant that occurs with intransitive motion verbs. His tests of objecthood includes particle deletion, passivization, case marking, and quantifier floating. He argued that so called 'traversal object', *o*-marked noun phrases used with motion verbs, are adverbial phrases located immediately below direct and indirect objects in an accessibility hierarchy. Haig observes that these 'adverbial phrases' are treated as direct objects only when no true direct objects are present (Haig 1981: 89). This analysis would of course be impossible in a dependency grammar, since an 'adverbial phrase' is a phrase which has an adverb as its head, a

requirement not observed in Haig's more powerful transformational analysis.

In my analysis 'traversal objects' are postpositional phrases that have a direct dependency relationship with the verb. These postpositional phrases are LOC complements of the [-trns,+lctn] motion verbs. As such they are marked with [+Acc] case form. The case frame of these [-trns] verbs explicitly states this dependency requirement.

The establishment of a subtype of LOC marked by [+Acc] case forms requires that the mapping of case relations and case forms should be further revised.

1.4.2.4 [+modl] postpositions

In analyzing naturalistic data one often encounters modal postpositions. Modal postpositions do not mark grammatical relations as non-modal postpositions do. Rather they are indicators of information packaging, often referred to as topicalization. Nominals headed by modal postpositions may be either adjuncts or complements. In the lexical matrix, nominals that bear a complement case relation and are headed by modal postpositions are linked by way of a feature ([+them]) to the complement case relation. In other words, the topic nominals do not have a case relation, but are linked to one. Therefore, it is important to have a systematic access to these modal postpositions. In the following I will review previous lexicase analyses of Japanese modal postpositions and augment the system of modal postposition marking based on the naturalistic data.

In a preliminary survey of Japanese case markers, Starosta and Nomura (1984) singled out postpositions *wa* and *mo* as 'modal' [modl], distinguishing them from each other in terms of the semantic feature addition [addn]:

- (45) *wa* [+modl, -addn]
mo [+modl, +addn]

Lee (1989), observing the so-called exhaustive listing *ga*₃ in her data, augments Starosta and Nomura (1984) as follows:

- (46) *wa* [+modl, -addn, -xcls]
*ga*₃ [+modl, -addn, +xcls]

In addition to the above three modal postpositions, we observe the postpositions *made* marks an actant as topic in (47) and (48).

- (47) *Syuuiti no ibiki ga Singo ni made kikoeta.*
 Gen snoring Nom by Tpc could hear
 'Syuuiti's snoring was so loud that even Singo could hear it.'
 (YA71)
- (48) *Tabi ni made dete isogu hituyoo wa sarasara nai.*
 trip by Tpc leave hurry need Tpc at all not
 exist
 'Off on a trip, he saw no need to hurry himself.'
 (YU83)

The postposition *made* in (47) and (48) cannot be interchanged with the preceding postposition *ni*:

- (47a) **Syuuiti no ibiki ga Singo made ni kikoeta.*
 (48a) **Tabi made ni dete isogu hituyoo wa sarasara nai.*

This is the same situation found with other [+modl] postpositions, for example, the topic marker *wa*. While *Singo ni wa kikoeta* is acceptable, *Singo wa ni kikoeta* is ungrammatical.

The postpositions *made* in (47) and (48) are optional, that is, *made*-dropping will not cause ungrammaticality of (47b) and (48b), just as the dropping of topic marking *wa* following other postpositions has no affect on grammaticality:

- (47b) Syuuiti no ibiki ga Singo ni (wa) kikoeta.
 (48b) Tabi ni dete isogu hituyoo (wa) sarasara nai.

Because of this distributional property, I conclude that the postposition *made* in (47) and (48) have the feature [+modl] and that there is a distinct form *made* which is [-modl].

So far, we have established that there is a [+modl] postposition *made*. Based on the features presented in Lee (1989), I tentatively propose the following localistic features for this postposition in (49):

- (49) *made*₂ [+modl,+addn]

This in turn calls for a revision of localistic features assigned to *mo*, which is also characterized as (50) by Lee.

- (50) *mo* [+modl,+addn]

I will revise this feature analysis after examining other postpositions in the data that mark an actant as topic. They are *bakari* in (51), *dake* in (52), *sae*¹⁴ in (53), and *sika* in (54):

- (51) Ohaka mairi bakari site iru wa
 cemetary visiting do exist Sprt
 Only cemetary visiting she does.
 'She spends all her time at the cemetary' (YU80)

(52) Sorera no marui isi wa hi no ataru hanmen dake
these Gen round stone sun Gen shine half-side

33

yuki no naka ni kuroi hada o misete iru.
snow Gen inside by black skin Acc show exist

'Only on the side exposed to the sun did the round stones show their black surface.' (YU71-m)

(53) ...mata toki ni wa megane no huti ni sae tomaru
also occasion by spectacles rim by stop

'[In the summer red dragon flies flew calmly about, lighting on a hat or a hand, or] [occasionally even on] the rim of a pair of spectacles..' (YU81)

(54) Datte watasi wa hitori no hito sika kanbyoosinai.
but I one Gen person do not nurse
'But there has only been one man I could possibly nurse.' (YU137-m)

Let us examine these postpositions in a more controlled environment:

(51a) Gengogaku bakari benkyoosita/benkyoosinakatta.
linguistics studied/did not study
'Only linguistics [they] studied.'

(51a) Gengogaku dake benkyoosita/benkyoosinakatta.
'Only linguistics [they] studied/did not study.'

(53a) Gengogaku sae benkyoosita/benkyoosinakatta.
'Even linguistics [they] studied.'

(54a) Gengogaku sika benkyoosinakatta
'They did not study anything but linguistics.'

(54b) *Gengogaku sika benkyoosita.

(55) Gengogaku made benkyoosita/benkyoosinakatta.
'Even linguistics [they] studied/did not study.'

From (51a), (52b), (53a) and (55) we can assign localistic features as follows:

(56) bakari [+modl, -addn]
dake [+modl, -addn]
made [+modl, +addn]
sae [+modl, +addn]

Examples (54a) and (54b) indicate that there are cases where a negative predicate imposes expectations on topic markers. For example, the pairs of English examples in (57) illustrate this negative polarity imposed by the word *didn't*:

- (57) John bought some/*any ice.
 John didn't buy *some/any ice.

Any is a 'negative polarity' word, since it must appear in a range of semantic contexts including the environments of negative verbs.

Similarly, the word *benkyoosinai* imposes negative polarity and thus allows negative polarity postpositions such as *sika*:

- (58a) *Suzuki sika gakusei ga benkyoosuru.
 student study
 'Among students only Suzuki studies.'
- (58b) Suzuki sika gakusei ga benkyoosinai.
 study-ngtv
 'Among students, other than Suzuki, nobody studies.'

On the basis of this type of negative polarity, we abolish the feature, 'addition', and establish a new feature, 'combination', which is abbreviated as 'cmbn'. We revise the feature specifications for modal postpositions as follows:

- (59) wa [+modl,-cmbn,-xcls]
 ga₃, dake, bakari [+modl,-cmbn,+xcls]
 mo [+modl,+cmbn,-ngtv,-xcls]
 made₂, sae [+modl,+cmbn,-ngtv,+xcls]
 sika [+modl,+cmbn,+ngtv]

These modal postpositions are presented in a subcategorization tree format in Figure 1.2:

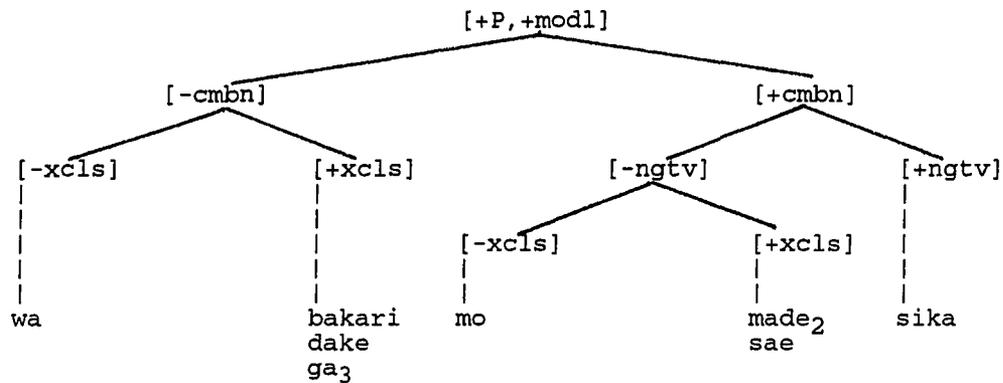


Figure 1.2 Modal Postpositions in Japanese

In the lexical matrix I will use the generic feature [+mod1] for modal postpositions, unless there is a need to distinguish multiple occurrences of such postpositions. For glosses I will use Tpc, topic, for postpositions in Figure 1.2.

1.4.3 Augmented Case-Marking Systems in Japanese

The subcategorization tree, Figure 1.2 above and Figure 1.3 below together with the list of postpositions with their distinctive features in Table 1.2 in the next page summarizes the augmented case marking system in Japanese. The features listed in Table 1.2 will be used in later chapters in the matrices and in the discussion.

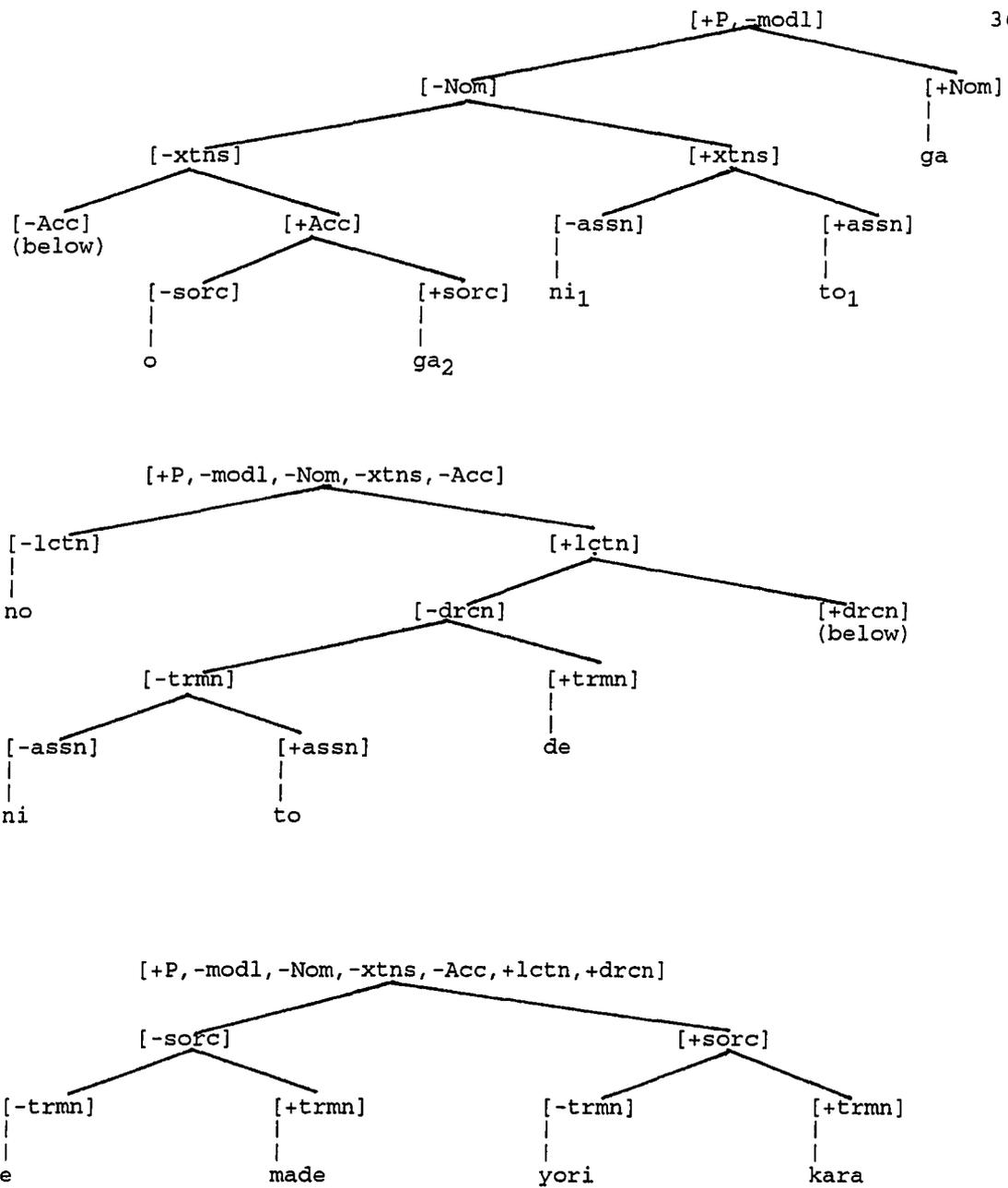


Figure 1.3 Non-modal Postpositions in Japanese

Table 1.2 Case Form and Case Relations in Japanese

		AGT	PAT	LOC	COR	MNS
ga	[+Nom]	xxx	xxx			
ga ₂	[+Acc,+sorc]		xxx			
o	[+Acc]		xxx	xxx		
ni	[-assn]			xxx	xxx	
to	[+assn]				xxx	xxx
de	[-drcn,+trmn]			xxx		xxx
e	[-sorc,-trmn]			xxx		
made	[-sorc,+trmn]			xxx		
yori	[+sorc,-trmn]			xxx	xxx	
kara	[+sorc,+trmn]			xxx		
ni ₁	[+xtns,-assn]					
to ₁	[+xtns,+assn]					

1.5 SOURCE OF DATA

The primary source of data for this dissertation consists of selected sentences from *Kawabata Yasunari shu* (1968), a compilation of representative literary works by the Nobel Prize winner, including his *Snow Country*, and *Yama no Oto* (1957), a novel by the same author. The example sentences from contemporary prose by Kawabata, who is not a linguist, represent a broad range of constructions relatively free from the observer's paradox. The naturalistic data provide a setting in order to clarify contextually conditioned linguistic phenomena crucial to a thorough analysis of the head of construction.

The source is identified by numbers preceded by a title abbreviation. In providing English glosses for Kawabata's writing I benefited from translations by Edward G. Seidensticker where available.

I have supplemented the primary source with plausible examples based on my own intuition as necessary. These plausible examples are no doubt influenced by my preliminary analysis of 415 examples of verbs in sentences in the *Kleines japanisches Valenzlexikon* ['Small Japanese valence lexicon'] (Rickmeyer 1977). Each of the plausible example sentences I constructed has been cross-checked with at least two non-linguist native speakers. The final grammaticality judgements on data, however, come from my own intuition.

Both types of example sentences are presented in Kunrei style romanization. One principled exception is proper names that have been well established in Hepburn style romanization. Grammarians such as Matsushita and Hashimoto, for example, are presented in Hepburn orthography.

NOTES

¹The conceptual event in a 'reality construction' view of language is presented by Grace (1987) and its implication to lexicase grammatical analysis is discussed by Starosta (1991a). Following Grace (1987:31), the constructed realities represented by sentence-level signs will be referred to as conceptual events.

²This framework is evolving. The version current as of 1988 is outlined in the form of a monograph by Starosta as *The case for lexicase: an outline of lexicase grammatical theory*. For brief information regarding lexicase theory in Japanese cf. Starosta and Springer (1986).

³In the lexicase view, linguistic signs represent sound, meaning, and distribution. The third component of the sign distinguishes signs in lexicase from the sign of classical Saussurean linguistics (Starosta 1988:44-45). The basic premises for subcategorization comes from the triune representation of linguistic signs in lexicase.

⁴The inventory of case relations is given in Starosta (1988: 126), Starosta and Springer (1986), and Starosta and Nomura (1984), among others.

⁵The details of case relations and case forms in Japanese are discussed in 1.3.3.

⁶Case forms are sets of case markers that realize case relations (Starosta 1988:115). Case forms in Japanese will be discussed in the subsequent section.

⁷Morphological markedness and regularity of case marking as well as the subject choice hierarchy for accusative language are discussed in Starosta (1988: 181-182).

⁸The arguments of a verb are referred to as 'actants' in case grammar. Actants are central participants in the process designated by the verb according to Starosta (1988: 120)

⁹These pairs of verbs belong to different primary classes of verbs with distinctive lexical matrices in the transitive class. They will be discussed in chapter 4.

¹⁰The use of a colon notation replaces a fletched arrow used in pre-1991 lexicase formalism for derivation rules.

¹¹It should be pointed out that (9) is a highly abbreviated formulation of such derivational relationships. The more complete contextual features associated with case relation specifications are presented in detail in the syntactic subcategorization of verbs in chapters 3 and 4.

¹²Lee states her reason in her footnote for the localistic feature source assigned to the Accusative *ga*, or *ga*₂:

The feature name 'source' has been assigned here, based on the thinking that *ga* marked NP Mary in 'John *ga* Mary *ga* suki da.' 'John likes Mary', for instance, may be seen as a kind of source of the emotion. In another example, 'John *ga* nihongo *ga* wakaru.' 'John understands Japanese.', nihongo 'Japanese ' may also be viewed as a source of the knowledge.' (Lee 1989:51)

¹³In previous non-dependency analysis the 'double o constraint' is invoked as an ad hoc explanation for the inability of transitive verbs to causativize.

¹⁴Lee (1989) notes *sae* as an additional modal postposition in her footnote 6 (Lee 1989: 51).

CHAPTER 2. SYNTACTIC SUBCATEGORIZATION OF JAPANESE VERBS

2.1 INTRODUCTION

The main purpose of this chapter is to present a lexical dependency analysis of Japanese verbs. This chapter is organized as follows. In section 2.2. I define the domain of subcategorization. Section 2.3. introduces procedures to establish a dependency relationship. I present the expected outcome of the analysis in terms of major classes in section 2.4.

2.2 DOMAIN OF VERB SUBCATEGORIZATION

2.2.1 Verbs

I define a verb in Japanese as a regent that is lexically marked to expect a PAT as a dependent. In addition, a verb in Japanese has the following inherent categories: tense, aspect (together with mood), and conjugation class (cf. Anderson 1985:189-191).¹

This definition of a Japanese verb is not identical to the category 'yoogen' or predicates projected by the long line of studies done in the tradition of Kokugogaku studies, including Yamada (1908, 1916, 1922) and Hashimoto (1959), among others.

Yamada, for example, defines his 'yoogen' as consisting of three types: 'doosi' (verbs), 'keiyoosi' (adjectives) and 'sonzaisi' (existential words). The last category is equivalent to copulas and BE-verbs. He defines the distinction between verbs and adjectives semantically in

terms of temporal axis: adjectives are atemporal while verbs are not; or verbs describe events as internal to the temporal domain while adjectives describe the state of events as external to the temporal domain (Yamada 1922: 251-252; also Yamada 1908 and 1916 make the same observation). Hashimoto includes verbs, adjectives and 'keiyoo doosi' (adjectival verbs) (Hashimoto, Kokugohoo yoosetu p.96) in 'yoogen'. Tokieda (1950) includes verbs and adjectives in 'yoogen'. The stems of 'keiyoodoosi' in his analysis belong to the class of nominals according to my analysis. Hashimoto further differentiates his verbs from his adjectives on the following grounds (Hashimoto, Kokubunpoo taikeiron p.50-51):

a. his verbs may appear in imperative sentences; while his adjectives are excluded from imperatives.

b. his verbs may cooccur with a wider range of derivational suffixes (his 'zyodoosi' auxiliary verbs), while his adjectives are limited to a handful of derivational suffixes.

c. In prenominal environments, the inflectional suffix for his adjectives '-i' is deleted, while the inflectional suffix of his verbs '-u' does not undergo this deletion:

(1)

waka-i huuhu waka-huuhu
 young couple

hanasia-u huuhu *hanasia-huuhu
 communicating couple

d. The so-called *-ku* form of Hashimoto's adjectives is allowed to modify predicates, while the so-called *V-i* form of Hashimoto's verbs cannot modify predicates:

- (2)
- | | |
|-----------------|------------------------|
| yoi (be good) | yoku taberu (eat well) |
| nomu (to drink) | *nomi taberu |

In the following analysis I analyze Hashimoto's adjectives as [+V,-cplr,+djct], where the feature [-cplr] means non-copular and [+djct] means adjectival. This formalization of 'adjectives' entails that adjectives are actually adjectival verbs in my analysis. I analyze Hashimoto's verbs as [+V,-cplr,-djct] and copulas as [+V,+cplr].

In addition, I include in the predicates so-called 'keiyoo doosi' (adjectival verbs) and 'sahen doosi gokan', the uninflected segment in the verbs of Sino-Japanese origin (e.g., *benkyoo* is the uninflected segment of Sino-Japanese origin in a so-called 'sahen doosi' *benkyoosuru* 'to study') and the deverbal nouns that function as predicates. I represent the so-called 'keiyoo doosi' as [+N,+djct,+prdc,-qnty] and the so-called 'sahen doosi gokan' as [+N,-djct,+prdc,-qnty]. Additionally, I include quantifying nouns such as *sanzikan* 'three hours' and *takusan* 'many' in the predicates. I distinguish the former type of quantifying nouns from the latter type by the feature [\pm djct], representing *sanzikan* as [+N,-djct,+prdc,+qnty] and *takusan* as [+N,+djct,+prdc,+qnty].² The entire group will be referred to collectively as [+N,+prdc]. The range of predicates in this study is summarized in the following diagram:

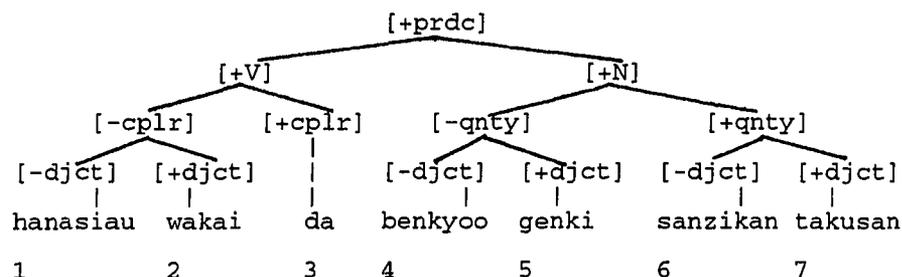


Figure 2.1 Predicates

Hashimoto's 'yoogen' includes 1, 2, and 7. Tokieda's 'yoogen' includes 1 and 2. Yamada's 'yoogen' includes 1, 2, and 3.

The class of verbs as defined in my analysis, therefore, is identical to the category 'yoogen' or predicates as defined by Yamada.

2.2.2 Domain of verb subcategorization

2.2.2.1 VP issues

Since lexibase assumes no more than one bar on a constituent in syntactic structure, the VP node is not permissible in any structure. Consequently, the distinction between VP-external and VP-internal subject, which has become popular in recent Chomskyan transformational analyses, is not maintained. Therefore, my analysis assumes that the structure of Japanese, and in fact the structure of all languages, is 'non-configurational' in Chomskyan terminology.

In the early government and binding framework, the place for a non-configurational analysis of Japanese has been argued for as early as the 1980's by Farmer (1980), Hale (1980), and Whitman (1987), among others. Chomsky himself assumed after Farmer and Hale that Japanese is

of the non-configurational type (Chomsky 1981:128). More recently, Fukui (1986) maintains the non-configurationality of Japanese, implying that the head of a sentence in Japanese is not an INFL as claimed by GB studies, but a verb.

The studies in the Kokugogaku ('national language') tradition, Otsuki, Yamada, Matsushita, Kindaichi (1950), and Mikami (1953), among others, subcategorize verbs based on aspects and voice-related phenomena without the notion of subjecthood being defined in terms of VP nodes. This fact implies that these grammarians too viewed the structure of Japanese sentences as in effect 'non-configurational'.

2.2.2.2 The notion of 'subject'

The notion of subject is examined by Matsumoto cross-linguistically. He observes that the subject of 'non-pro drop' languages has resulted from the coalescence of three quite different linguistic functions into a purely syntactic category: (1) the discourse topic, (2) morphological case-marking and (3) the semantic agent or the primary role of a verb. Other languages, he observes, use different grammatical apparatus to signal the three functions. According to Matsumoto, the first function is realized by topicalization in Japanese or by focus in the Philippine languages. However, according to Starosta (1986), Philippine languages have a Japanese-like conventional preposed topic which is not the same thing as 'focus'; focus in the Philippine language is rather a verbal derivation mechanism for recentralizing Patient, which is totally unlike Japanese topic marking postpositions

(Starosta 1986). According to Matsumoto, the second function is illustrated by case and verbal endings in old Indo-European languages. On the basis of the subject being quite a complex and heterogeneous concept and being manifested as surface syntactic phenomena only in a very limited number of languages, Matsumoto concludes that the subject cannot be part of the theory of syntax as a universal category (Matsumoto 1991:1-41).

Contrary to Matsumoto, who seems to be overemphasizing the differences, I maintain that other than morphological marking and the accusativity versus ergativity distinction, languages are not that different with respect to 'subjecthood'. I disagree with Matsumoto who maintains that the subject cannot be part of the theory of syntax as a universal category. However, he is correct in his statement if he is directing this conclusion against the subject defined purely in terms of VP nodes. In my analysis, the subject is a necessary part of the theory of syntax and universal grammar (though it is not an unanalyzable theoretical primitive), but it is not and cannot be defined 'configurationally' in a dependency grammar.

The first subject function noted by Matsumoto, or that of the discourse topic, is realized by topicalization in Japanese. A lexical dependency analysis of Japanese topicalization has been presented in Springer 1992. The second function noted by Matsumoto, the morphological case marking of Japanese, is maintained in my analysis by the case forms, realized as case-marking postpositions. The third

linguistic function of marking the semantic agent or the primary role of a verb in Japanese, in my analysis, is delegated to the macrorole 'actor'. For example, I define subject as case relation-bearing [+Nom] complement to the regent. Since Japanese is an accusative language, the subject bears an actor macrorole in intransitive as well as transitive sentences. We note these and other complement case relations in the case frame of the regent verb.

2.3 PREVIOUS STUDIES ON VERB SUBCATEGORIZATIONS

2.3.1 Kokugogaku studies

In the Kokugogaku tradition, verbs have been studied on the basis of facts related to aspects by Yamada (1908), Kindaichi (1976,1950), and his followers, among others. The verbs have also been studied on the basis of voice-related facts by Otsuki (1897), Sakuma (1967), Matsuhita (1930), and by Mikami (1953), among others.

Yamada (1908) is of particular interest as a model of an emerging dependency analysis. He classifies verbs according to their 'characteristics' (p.271-312). Yamada begins his discussion by questioning the wisdom of the direct import of the notion of transitivity to the analysis of Japanese. This position is no doubt a reaction to the earlier study by Otsuki in his *Ko Nihon bunten* (1897, 1923 printing) and its supplement, *Ko Nihon bunten bekki* (1897, 1923 printing). Otsuki's position on the matter of transitivity is stated in sections 116 through 120 in his *Ko Nihon bunten* (pp.64-70) and in

sections 75 and 76 in *Ko Nihon bunten bekki* (pp.42-43). Otsuki's supplementary remarks for section 76 in *Ko Nihon bunten bekki* (pp. 42-43) indicate that Otsuki apparently found the notion of transitivity quite useful in the analysis of Japanese.

Otsuki subcategorizes verbs according to transitivity and to the number and the types of complements the verbs required. His complements are of two types: *mokuteki* 'object' and *hyoozyun* 'the abstract basis of comparison'. His statement (Otsuki 1898: 42-43) indicates that *mokuteki* is more like the LFG OBJ1, while *hyoozyun* is comparable to LFG OBJ2 and OBL. His examples show that *mokuteki* refers to our PAT of transitive verbs. *Hyoozyun*, in examples given by Otsuki, are complements other than our PAT and AGT. Otsuki establishes four subcategories of verbs: (a) *mutai zidoo* 'unpaired intransitive' for verbs requiring neither *mokuteki* nor *hyoozyn*, (b) *yuutai zidoo* 'paired intransitive' for verbs that require *hyoozyun* but not *mokuteki*, (c) *tantai tadoo* 'single paired transitive' for verbs that require *mokuteki* but not *hyoozyun*, and (d) *hukutai tadoo* 'multiple paired transitive' for verbs that require both *mokuteki* and *hyoozyun*. It is clear that from this description that his (a) verbs are comparable to intransitive verbs with no other complements but our PAT, his (b) verbs are comparable to our intransitive verbs which require either our LOC or COR or MNS in addition to PAT, his (c) verbs are comparable to our transitive verbs, which require our PAT and AGT, and his (d) verbs are comparable to our transitive verbs which require either LOC, COR, or MNS in addition to our PAT and AGT. It is clear that neither *mutai tadoo* 'unpaired transitive' nor *tantai/fukutai*

zidoo 'single/multiple paired intransitive' exists by his definition in this system. What we find here is the beginning of a dependency analysis of Japanese verbs. Otsuki's observations regarding transitivity relate in a very basic sense to the notion of valency. Otsuki's analysis is further defined by Yamada as presented below.

Otsuki further observes the following relation of correspondence between the transitivity of verbs:

(a) some intransitive verbs such as *huku* 'blow', *masu* 'increase', *mau* 'dance' and *hiraku* 'open', among others have homophonous transitive counterparts, or, in his own words: According to their usage this subset of examples of verbs may be either intransitive or transitive (*Ko Nihon bunten* p. 68-69);

(b) some intransitive verbs such as *ataru* 'strike', *nokoru* 'remain', and *otiru* 'fall' have transitive counterparts, *ateru*, *nokosu* and *otosu*, respectively, while others such as *saku* 'blossom' and *naku* 'cry' do not;

(c) some transitive verbs have intransitive counterparts, while others such as *kaku* 'write' and *kuu* 'eat' do not (*Ko Nihon bunten bekki*: 42)

By these three statements, Otsuki gives four subclasses of verbs on the basis of available correspondence in terms of transitivity and semantics of matched verbs:

- (3)
1. [-trns] : [+trns]
 ataru 'be hit' : ateru 'hit'
 nokoru 'remain' : nokosu 'leave'
 otiru 'fall ' : otosu 'drop'
 2. [-trns] : [+trns]
 saku 'blossom' : *
 naku 'cry' : *
 3. [-trns] : [+trns]
 * : kaku 'write'
 * : kuu 'eat'
 4. [-trns] : [+trns]
 hiraku 'open' : hiraku 'open'
 huku 'blow' : huku 'blow'
 masu 'increase' : masu 'increase'
 mau 'dance' : mau 'dance'

The unpaired intransitive verbs in the left column of the fourth subclass in the above subgrouping based on Otsuki's statement represent Perlmutter's class of predicates determining initial unaccusative strata (Perlmutter 1978:162-163; Perlmutter and Postal 1984:98-99), or 'ergative' verbs in the GB framework (Radford 1988: 446). Otsuki's intransitive examples in the second subclass seem to represent verbs in the unergative class in the framework of relational grammar.³

It should be noted that the terms *yuutai* and *mutai* in contemporary literature, however, are different from *yuutai* as defined by Otsuki almost a century ago. The term in modern usage refers to the relation of correspondence in terms of transitivity and not to the relation of pairing/unpairing of a verb and its dependent as given by Otsuki in the four subgroups of verbs, presented above as 1 through 4. For example, the intransitive verb *aku* 'open' has the transitive counterpart *akeru*.

In contemporary studies such as Hayatsu (1987), among others, the intransitive verb with a transitive counterpart, i.e. *aku*, is called a

Yuutai 'correspondence' intransitive verb and *akeru* is called a *Yuutai* transitive verb. However the intransitive verbs such as *aru* 'exist', *hohoemu* 'smile', *kareru* 'wither', *otoroeru* 'weaken', and *somuku* 'rebel', among others, have no corresponding transitive verb. Therefore, these verbs with no counterparts are called *Mutai* 'no correspondence' intransitive verbs. According to this definition, Otsuki's subclasses 1 and 4 are *Yuutai* verbs and subclass 2 and 3 are *Mutai* verbs. Hayatsu (1987) studied the semantics of numerous *Yuutai* verbs, or verbs in Otsuki's subclasses 1 and 4. I summarize her results as follows: (1) these intransitive verbs have a [+Nom] complement that is non-human; and (2) semantically these verbs describe the change in the non-human subject that results from the action. These findings, based on purely semantic studies, could also be applied to an English 'unaccusative' verb such as 'melted' in the following sentence: The ice melted. The Japanese translation of the same sentence *koori ga toketa* has a transitive counterpart *koori o tokasita* 'someone melted the ice'. In the sentences which include the unaccusative verb *toketa* 'melt', the [+Nom] complement *koori* 'ice' has a semantic feature non-human [-human]. The verb *toketa* 'melted' describes the change in *koori*, the non-human subject. This illustrates the interaction between semantics and syntax in two languages that are typologically different.

Yamada's criticism of the direct import of the notion of transitivity by Otsuki is based on two facts (Yamada 1908: 292-299 and Yamada 1922:75):

1. Some Japanese intransitives allow passive derivation; and
2. Some nominals marked by accusative case form are excluded from the grammatical status of direct object.⁴

With respect to 1 and 2 above, Yamada is using true grammatical rather than semantic criteria here. These same points arise in my own analysis of verbs in this chapter.

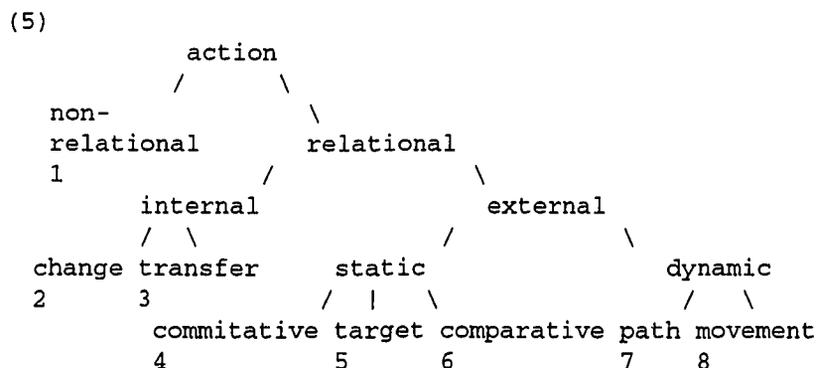
After a lengthy discussion, Yamada opts for the subcategorization based on action types, which is signaled by case markers (Yamada 1908:309). The action types are primarily a semantic rather than a syntactic classification.

I present Yamada's chart of action types with English equivalents and supply reference for further discussion.

(4)

doosa sayoo (action)
 tandoku sayoo (single event/non-relational) 1
 kankei sayoo (relational action)
 ziko kankei (internal relation)
 henkan (change) 2 'ni' 'to'
 idoo (transfer) 3 'o'
 taita kankei (external relation)
 seisei (static)
 kyoodoo (comitative) 4 'to'
 taihyoo (target) 5 'ni'
 hikaku (comparative) 6 'ni' 'yori' 'kara'
 doosei (dynamic)
 keiyu sayoo (path) 7 'o'
 idoo undoo (movement) 8 'o' 'yori' 'kara'

I present Yamada's chart below in a tree format for convenience of discussion. English equivalents are substituted for his terms.



In the chart (5), transitives (in Otsuki's sense) are distributed in all locations: on the non-relational action branch (1), on the reflexive or internal relational action (2 and 3) and on the non-reflexive or external relational action (4-8). Yamada's analysis is unique in that he saw a correspondence between the designated action types and the postpositions signaling the type of such relations, and for each class he gave postpositions that signaled the function of these dependents. Yamada's subcategorization of verbs may be regarded as a prototype of valency-based subcategorization. For example, subtype (4-8) requires at least two dependents; (2-3) at least two, and (1) requires at least one dependent. Yamada characterizes each dependent by the terms he attributed to the action types: movement, path, comparative, etc.

2.3.2 Contemporary analyses

2.3.2.1 Nitta

Nitta (1980, 1988), assuming a non-configurational structure for Japanese, introduces a lexicon-based notion 'kaku seibun' to refer to

'the noun phrase whose co-occurrence is specified by the verb' (Nitta 1988:19-20).

His 'kaku seibun' seems to be comparable to the term 'complement' in dependency grammar terminology. Nitta schematizes the hierarchy of dependency relationships between complements and the verb, and between adjuncts and the verb (Nitta 1988:29-31). Nitta seems to be presenting his dependency relations using a variation of Tesnière's stemma notation. He does not specifically mention Tesnière in the text, but does include him in his bibliography at the end of the book.

With respect to complement types, however, Nitta's analysis is based primarily on situational roles. Nitta calls these situational roles 'kaku' (case) or 'sinsoo kaku' (deep case) (Nitta 1980:32). Nitta's 'kaku' includes the following situational roles: 'doosasyu' (agent), 'taisyo' (theme), 'aikata' (participants), 'basyo' (location), 'gen'in' (cause) and 'syudan' (means) (Nitta 1980:33). He claims that these 'deep cases' are realized by the insertion of case-marking postpositions: agent is realized by the insertion of *ga*, theme by the insertion of *o*, and participants by *to* (for symmetrical verbs) or by either *to* and *ni* (for meso-symmetrical verbs) or by *ni* and *kara* (for anti-symmetrical verbs) (Nitta 1980:36-37). This appears to be Fillmorean case grammar. Although he utilizes the concept 'kaku seibun', which is similar to our complement case relation, his analysis is based primarily on Fillmorean 'deep cases', that is, situational roles. In other words, in his scheme the 'kaku' defined in terms of

According to these examples, his participants can be distributed among a source, or a goal, or simultaneously source and goal (Nitta 1980, as represented in Nitta (88:37)). It seems that his 'participant' here overlaps with his other deep case: location.

2.3.2.2 Muraki

Muraki (1982, republished in 1992), examines the valency of verbs based on his notion of *zyutugoso*, a kind of an atomic component of lexical predicates. Muraki's *zyutugoso* seems to be a theoretical primitive based primarily on semantic relations between nominals and verbs. The semantic range of his *zyutugoso* covers location, abstract relations, reason or purpose, and change or action, among others. In addition, he proposes a *zyutugoso* which refers to the part-whole relationship between two nominals, as well as a *zyutugoso* for so-called double subject constructions. His *zyutugoso*, which indicates part-whole relations between nominals, has no direct relevance to my analysis. The double subject type of *zyutugoso* does not warrant a separate category in my analysis. Since I make a rigorous distinction between complements and adjuncts, the verbs in this category, as given in Muraki's examples, are simple intransitive verbs in my analysis.

Muraki provides 30 such *zyutugoso*, which include 'locational locative', 'nonlocational locative', 'locational source', 'locational goal', and 'directional', among others. He correlates his 'zyutugoso' with his 'kaku keisiki', my case-marking postpositions. For example, his locational locative is correlated with the array of postpositions

[ga/o, ni]. His definition of locational locative goes as follows: 'Nj is a place where Ni (+con) exists'. Muraki's Ni is a [+Nom] or [+Acc] complement in our analysis. His '+con' refers to a semantic feature of Ni which is 'concrete'. His Nj is a noun with case forms other than our [+Nom] and [+Acc] complement. In addition, he uses his 'basic proposition' such as *sonzai* 'location' defined as 'Ni exists in Nj', *syozoku* defined as 'Nj is a part of Ni', and *dootei* defined as 'Ni is equal to Nj.' (Muraki 1982 (1992): 150-151). A similar approach was followed by Mizutani and Ishiwata below.

2.3.2.3 Mizutani and Ishiwata

Mizutani and Ishiwata (1983), among others, treat the surface forms as primary. They utilize the notion of valency in verb subcategorization. In addition, Mizutani and Ishiwata take a particular interest in the semantic features of actants such as abstract, action, animal, concrete, diverse, human, location, number, material, and time. They make a distinction between complement and adjunct (p.123). They list individual verbs in terms of semantic features of their actants and the postpositions which co-occur with such actants. The list, therefore, provides us with the valency value of the verb and the dependent postposition to the verb. In addition, the list specifies the semantic features of the nominal which is a dependent of the postposition.

2.3.2.4 Teramura

Teramura (1982) provides a comprehensive catalog of action types. Under the cover term, *koto no ruikei* 'prototypes of propositions' he identifies 30 types based on the kind of *hogo* 'complements' required by the *zyutugo* 'predicates' and on the kind of *kakuzyosi* 'case-marking postpositions' that appear with these complements (Teramura 1982: 81).

Teramura's analysis is presented in a theory-free format. However, it is clear that Teramura treats the surface forms, more specifically here the case-marking postpositions, as primary in his analysis. For example, based on the case forms, Teramura subcategorized verbs with valence value 2 (his verbs representing relationship between *syutai* and *taishyoo*) in three groups, (Teramura 1982: 88). In his scheme the complements of these verbs are represented by X and Y. All three groups of verbs require X marked with the [+Nom] postposition *ga*. In addition, Y in Teramura's subtype 1 is marked by the postposition *o*, Y in subtype 2 by postposition *ni*, and Y in subtype 3 by postposition *to*. Teramura calls subtype 1, 2, and 3 verbs *hatarakikake*, *taimen*, and *soogo doosa*, respectively. These terms capture the shared semantic features among the member verbs of the subtype: 'active', 'facing', and 'reciprocal actions.' Teramura, therefore, has presented a match between his syntactic subtypes of valence 2 verbs and his prototypes of propositions.

In addition to his (30) prototypes Teramura gives examples of sentences with null valence (177-178).

In order to determine the valence of verbs, Teramura needs to distinguish his 'hissu hogo' or complements from his 'hukuji hogo' or adjuncts. Teramura relies on a diagnostic test 'hanmon yuuhatu no kanoosei' (1982: 83). His description of 'yuuhatu no kanoosei' is paraphrased below in my words (6):

(6)

The simplest method to distinguish complements from adjuncts is to consider the potential of inviting questions on the statement you have given. Of course, we administer this without providing contextual information. For example, your statements in (8) a, b, and c on the left column will invite questions from the other participant of the discourse as given after "--" below:

- (8)a. Destroyed the bridge --Who?
 b. The child destroyed --What?
 c. Destroyed --Who? What?

The participants may request as much information as they want on the event. However, there are essential and indispensable elements for the concrete representation of the event. They are 'who' in a, 'what' in b, and 'who' and 'what' in c. Such indispensable elements are called 'complements'.

Item (7) below illustrates the actual Japanese examples from Teramura, where the complements are designated by interrogative words followed by [+Nom] and [+Acc] case forms, or postpositions, *ga* and *o*:

(7)

- (8)a. Hasi o kowasita -- Dare ga?
 b. Kodomo ga kowasita -- Nani o?
 c. Kowasita -- Dare ga? Nani o?

Hasegawa (1988) proposes an identical test, and refers to it as 'question pull'.

Teramura notes that his diagnostic is not free from problems. For example, in his analysis, the *ni*-marked actants in (8) and (9) below are complements, while the *ni*-marked actant in (10) is a 'zyun hissu hogo' or a secondary complement (1982:84):

- (8) isya ni naru 'to become a doctor'
 (9) too ga hutatu ni wareta 'the party split into two'
 (10) tyawan ga hutatu ni wareta 'the teacup broke into two'

According to Teramura, while the *ni*-marked actant in (10) may not be elicited by his diagnostics, it has some weight in the subcategorization of the verb *wareru*, and hence it is a secondary complement.

- Naru* (8) and *Wareru* (9) : 'hissu hogo' (complement)
Wareru (10): 'zyun hissu hogo' (secondary complement)

However, I see no reason to add another category of complement such as Teramura's 'zyun hissu hogo' in my analysis. The *ni*-marked actant in (8) belongs to the category [+N,+prdc], and it figures in the subcategorization of the verb *naru* 'to become'. The verb *wareru* in (9) and (10) belongs to the same class of verb as *naru* in (8). The *ni*-marked actants in (9) and (10) figure in the subcategorization of the verb *wareru* in (9) and (10). In other words, these verbs require a

complement. I will label this class of verbs as class x. When Teramura's diagnostics do not single out the *ni*-marked complement for regent *wareru* in (10), then, it is not because *ni*-marked actant is secondary. Rather, it is a necessary consequence of the fact that there is a homophonous verb *wareru* that does not belong to class x. This homophonous *wareru* belongs to another class of verb x' which includes, among others, *wareru* in (11) and *otita* (fell) in (12).

(11) *tyawan ga wareta* 'The teacup broke.'

(12) *tyawan ga otita*. 'The teacup fell.'

It is possible to infer that Teramura's diagnostics in this case single out the homophonous verb *wareta* of class x', possibly because it is more common. However, when the question pull test elicits the *ni*-marked actant, this verb *wareta* belongs to class x. I will discuss the distinction between these two classes of verb x and x' in section 2.5.2.

Teramura lists a dozen 'hukuzi hogo' or adjuncts. Among the examples given for adjunct status, the following turn out to be complements in my analysis:

(13)

- A. actants marked by 'kara' for 'dedokoro' or source;
- B. actants marked with 'yori' for 'hikaku no kizyun' or abstract basis of comparison;
- C. actants marked with 'de' for his 'doosasyu' or agent.

In my analysis, A is a LOC complement, B is a COR complement, and C is a MNS complement. Examples follow:

(14)
 Hasi no tamoto kara eki made hasiru
 bridge end from station to runs
 '(He) runs from the end of the bridge to the station.'

In this example according to Teramura, the *kara*-marked actant 'hasi no tamoto' is an adjunct (Teramura 1982:179). However, the verb *hasiru* in my analysis is an intransitive locational verb. As such, the *kara*-marked actant is a complement, not an adjunct. To be more specific, this verb belongs to the subtype 7. The details of this class of verbs are presented in chapter 3, section 5.2.7 (p. 231).

(15)
 Koohii yori kootya (no hoo) ga yoi
 Coffee than tea good
 'Black tea is better than coffee.'

According to Teramura, the *yori*-marked actant *koohii* is an adjunct (Teramura 1982:179). The adjectival verb *yoi* in my analysis, however, is an intransitive correspondent verb, and the *yori*-marked actant is a complement-marking COR. This has been established in chapter 1, section 4.2.1 (p.18).

(16)
 Keisatu de sirabeta
 police at investigated
 'The police investigated the matter.'

According to Teramura, a *de*-marked actant *keisatu* in (16) is an adjunct (Teramura 1982:183, modified). However the verb *sirabeta* in my analysis is an impersonal transitive mode verb. The *de*-marked actant is a MNS complement. The details of this type of verbs are presented in chapter 4. section 2 (p. 317).

2.4 LEXICAL DEPENDENCY ANALYSIS

Since we assume a non-configurational structure for the Japanese language, the subject NP in our analysis is defined not by the node that dominates it, but by the case form feature assigned to it; it is a [+Nom] complement to the regent predicate. As Japanese is an accusative language, the case relation for the subject is AGT if and only if the regent is [+trns] and PAT if and only if the regent is [-trns]. When a referential [+Nom] complement does not exist in the case frame of a verb, we label the verb as impersonal [+mprs].

Discerning complements from adjuncts in previous lexicase analysis of Japanese by Lee (1989) and Singapore Mandarin by Ng (1992) depended primarily on a diagnostic test previously used by Teramura (1982) and by Hasegawa (1988). Following Hasegawa, I will call the diagnostic 'question pull'. As noted by Teramura, question pull is efficient in checking the status of an actant. However, I observe that this diagnostic test is rather problematic in eliciting information on argument structures for all the homophonous verbs. For homophonous verbs, it is possible to elicit only the most prototypical type of argument structures. Miyajima's study on quantitative constraints on the valency of motion verbs (1986) clearly points to the limitation of the diagnostic of 'question pull'. I have, therefore, added the following tests to enhance the question pull: preposing, topicalization, semantic scope check via scrambling, and the causativization test. I will present each diagnostic below.

2.4.1. Diagnostics

2.4.1.1. Preposing

Adjuncts are more susceptible to preposing than complements. For example, of the two LOC actants 'in the pot' and 'in the kitchen' in

(17) the LOC actant 'in the kitchen', not 'in the pot' may be preposed:

(17)

Mother cooked chicken in the pot in the kitchen.

a. In the kitchen Mother cooked chicken in the pot.

b. ?In the pot Mother cooked chicken in the kitchen.

If sentence (17)b is acceptable at all, the LOC actant can only bear a contrastive interpretation, which must be provided contextually.

Otherwise the sentence (17)b is unacceptable. On the other hand, the preposed 'in the kitchen' in (17)a does not require a contrastive interpretation. It is simply descriptive. This is to say that 'in the pot' is a LOC complement, while 'in the kitchen' is a LOC adjunct.

2.4.1.2 Topicalization

Adjuncts are more amenable to topicalization than complements are. Complements, if topicalized, must bear a contrastive interpretation. Such a contrastive interpretation must be based on additional contextual information. This diagnostic is especially helpful when a sentence includes multiple LOC or multiple MNS actants. If we could topicalize one LOC but not the other, for example, the topicalizable actant is an adjunct. That is, if a sentence has both a complement and adjunct LOC or MNS, we cannot force complement LOC/MNS to topicalize over adjunct

LOC/MNS unless we are given additional contextual information to force a contrastive interpretation:

(18)

Haha ga daidokoro de nabe de tori o ryoorisita
 Mother kitchen pot chicken cooked
 a. Daidokoro de wa haha ga nabe de tori o ryoosisita
 b. *Nabe de wa haha ga daidokoro de tori o ryoorisita

According to this test, the *de*-marked actant *nabe* 'pot' is a complement, while the *de*-marked actant *daidokoro* 'kitchen' is an adjunct.

2.4.1.3 Semantic Scope check by scrambling

When a change in linear position of an actant changes its semantic scope, the actant is an adjunct. When the interpretation of an actant is not sensitive to linear order, the actant is a complement.

(19)

Sakka ga Tanaka ni roosui de sinaseta.
 Author old age let die
 'The author let Tanaka die because of old age. (=Tanaka is old)'
 ? Roosui de sakka ga Tanaka ni sinaseta.

If the preposed version is accepted, the author, not Tanaka, is of old age, and could not keep Tanaka, the protagonist of his literary work, alive. The shift of semantic scope here confirms that *roosui de* is an adjunct. Another scrambled version given in (19)' below is ambiguous: either the author (a) or Tanaka (b) is of old age:

(19)'

Sakka ga roosui de Tanaka ni sinaseta

(a)

'The author, because of his old age, let (his protagonist) Tanaka die.'
(The novel by the aged author ended prematurely, terminating the protagonist's life.)

(b)

'The author let Tanaka die because of old age.' (The author terminated the life of his protagonist in the novel because of the protagonist's old age.)

2.4.1.4 Causativization test

One of the basic premises of lexibase is Patient centrality, that is, every verb has a Patient in its case frame, and this Patient is pivotal to the statement of several kinds of linguistic generalizations. The semantic implication of this hypothesis is that the PAT is the scope of a complement. Causativization is a way of testing and confirming this. For example, when causativizing a verb changes the semantic scope of the LOC or MNS actant as compared to the scope with the uncausativized verb, these actants are adjuncts. If the scope remains the Patient after causativization, the LOC or MNS actant is a complement. In the following examples, (21) is a causativized version of (20), and (23) is a causativized version of (22):

(20)

Tanaka ga penki o kabe ni nutta
 paint wall painted
 PAT LOC

'Tanaka painted the wall.'

(21)

Yamada ga Tanaka ni penki o kabe ni nuraseta
 PAT LOC made paint

'Yamada made Tanaka paint the wall.'qq

(22)
 Tanaka ga kabe o penki de nutta
 PAT MNS painted
 'Tanaka painted the wall with paint.'

(23)
 Yamada ga Tanaka ni kabe o penki de nurasetta
 PAT MNS made paint
 'Yamada made Tanaka paint the wall with paint.'

In both the uncausativized version (20) and causativized version (21) the LOC actant *kabe* (wall) is more closely associated with PAT *penki* (paint) than with the action as a whole. Therefore, the LOC actants in (20) and (21) are complements to the regent verbs *nutta* and *nurasetta*, respectively. Similarly in both the uncausativized version (22) and the causativized version (23), the MNS actant *penki* (paint) is closely associated with PAT *kabe* (wall). Therefore the MNS actant in (22) and (23) are complements for the regent verb *nutta* and *nurasetta*, respectively.

By contrast, the MNS adjunct *denwa de* 'by telephone' in both the uncausativized version (24) and causativized version (25) is not closely associated with PAT *Suzuki*. In fact, in (24) Tanaka is making a telephone call, while in (25) either Yamada or Tanaka is making a telephone call in order to have Suzuki come over.

(24)
 Tanaka ga denwa de Suzuki o yonda.
 AGT MNS PAT invited
 'Tanaka invited Suzuki by telephone.'

(25)
 Yamada ga Tanaka ni denwa de Suzuki o yobasetta.
 AGT COR MNS PAT caused to invite
 'Yamada made Tanaka invite Suzuki by telephone.'

2.4.2 Lexical matrix

After we determine the adjunct/complement status of the actant by question-pull, preposing tests, topicalization tests, and determining semantic scope by observing the effect of changes in linear sequence or causativization, we will be able to identify complement case relations in the subcategorization of the verb. In my analysis, the complete subcategorization frame or lexical matrix for a regent predicate includes the following information:

(26)

- a. the grammatical category of each dependent word
- b. the formal or semantic function assigned to the dependent word bearing this grammatical category.

The formal function assigned to the dependent word bearing this grammatical category includes features designated by inflections, parts of speech, or case forms such as [+Acc] or [+Nom] in addition to the case relations. In addition, the matrix must specify (a) skeletal structure: endocentric or exocentric, and (b) adjunct or complement status.

The endocentric and exocentric structures are illustrated by the following rules:

(27)

- a. [+V] -> [?(+[P])]
- b. [+P] -> [?(+[N])]

Rule (27)a specifies an endocentric structure, that is, verbs may have a [+P] dependent. Rule (27)b formalizes an exocentric structure, specifying that a [+P] must have a [+N] dependent.

The adjunct or complement status is formalized as follows:

- (28)
 a. [+W, n[+X]]
 b. [+W, n([+Y])]

Here X and Y stand for any category or contextual features other than a word class or 'part of speech'. According to (28)a, the word with the index number n is a complement of W marked with (or interpreted as bearing) a feature [+X]. Note that there is no parenthetical notation surrounding the [+X]. Example (28)b says that a word with the index number n is an adjunct of W marked with (or interpreted as bearing) the non-contextual feature [+Y]. This is indicated by the parenthetical notation surrounding [+Y]. For example, sentence (29) (from Starosta 1992a, Figure 34) includes one complement *Mary* and one adjunct *there* as specified in the lexical matrix of the regent, *died*:

(29)

	died	
Mary	2ndex	there
1ndex	+V	3ndex
+N	+fint	+N
	+past	+lctn
	-trns	
	1([+N])	
	1[+actr]	
	1[+Nom]	
	1[+PAT]	
	3([+lctn])	
	3([+LOC])	
	3([+N])	

The regent *died* is an intransitive finite verb in the past tense. The regent heads an endocentric construction, as 'Mary' and 'there' are linked externally by an optional valency feature [?(+N)]. However, 'Mary' is a complement because it is linked internally by three obligatory features, [1[+Nom],1[+PAT],1[+actr]]. 'There', on the other hand, is an adjunct. It is marked for case form (lctn = Locative case form) and case relations (LOC = Locus case relations), but these markings are optional: [3([+lctn]),3([+LOC])].

While the complement of a given word is fixed, the number of adjuncts of the same type that a word may take is in principle open-ended. Therefore, we have a mechanism of cloning an adjunct feature each time it is indexed, so that there will always be one available to link another adjunct of the same type. We formalize this by providing [?(+lctn)],?(+LOC)] in the same case frame. (For a more detailed discussion on formalism and analyses, see Starosta 1992.)

Note that dependency is determined by a pair-wise comparison of words in the syntactic structure. Each dependency is specified by linking rules or conventions which copy an index of a dependent word as the value of a contextual feature in the lexical matrix of the regent. Index numbers 1 and 3 assigned to features in the matrix for the verb 'died' capture dependency relations among two pairs of words: 'Mary' and 'died'; and 'died' and 'there'. I will present my analysis of Japanese verbs in the same formalism in chapters 3 and 4.

2.5 MAJOR VERB CLASSES

2.5.1. Primary Verb Classes

In our analysis of verbs, we first establish primary classes of verbs according to the types of complement case relations the verb requires. Since lexibase has five case relations and since PAT is obligatory, we have a maximum of sixteen possible primary verb classes. The rules which characterize these 16 primary classes are as follows:

```
SR-1 [+V]  -> | ±trns |
              | ±lctn |
              | ±crsp |
              | ±mode |
```

According to the subcategorization rule SR-1, verbs are either transitive or intransitive, locational or non-locational, correspondent or non-correspondent, and mode or non-mode. The redundancy rules 1-5 state the implications of each of these features in terms of expected complement case relations:

```
RR-1 [+V]      -> [?[+PAT]]
RR-2 [+trns]   -> [?[+AGT]]
RR-3 [+lctn]   -> [?[+LOC]]
RR-4 [+crsp]   -> [?[+COR]]
RR-5 [+mode]   -> [?[+MNS]]
```

Figure 2.2 below illustrates primary verb classes.

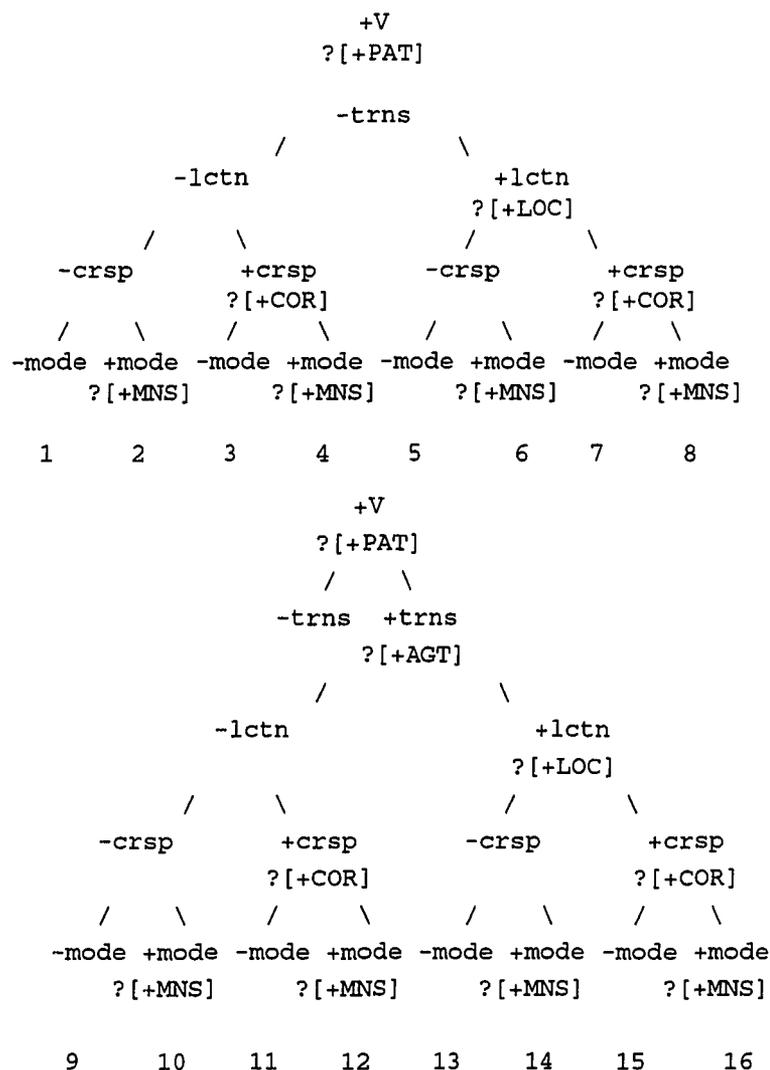


Figure 2.2 Primary Verb Classes

2.5.2 Complement Types and Verb Classes

The verbs are also subcategorized in terms of the feature [+xtns] 'extension'. Pagotto (1985: 3-4), Unetani et al. (1987:4), and Lee (1989:188) define the notion of the extension predicate as follows: the extension predicates ([+xtns]) require [+prdc] dependents as complements (?[+prdc]), whereas non-extension predicates do not. The notion was

introduced in my previous discussion of the homophonous verb form *wareta* 'broke' in section. 2.3.2.4. The presence of the feature [+xtns] or [-xtns] in the lexical matrix of the verb gives two classes referred to earlier as *x* and *x'*. The verbs in the *x'* class are non-extension verbs, and have [-xtns] in their case frames, while verbs in the *x* class are extension verbs, requiring a *ni*-marked nominal predicate complement, which include the feature [+xtns] in their lexical matrix.

For the purpose of clarity, I will repeat the five examples introduced earlier, with extension features indicated:

- (8) *Isya ni naru* 'to become a doctor'
[+prdc] [+xtns]
- (9) *too ga hutatu ni wareta.* 'the party split into two'
[+prdc] [+xtns]
- (10) *tyawan ga hutatu ni wareta* 'the teacup broke into two'
two' [+prdc] [+xtns]
- (11) *tyawan ga wareta* 'the teacup broke'
[-xtns]
- (12) *tyawan ga otita* 'the teacup fell'
[-xtns]

According to my analysis, the verbs *naru* and *wareta* in (8)-(10) are [+xtns], requiring [+prdc] complements, while the verb *wareta* in (11) and *otita* in (12) as well as the *wareta* in (30) and (31) below are [-xtns] verbs that have the feature [-xtns] in their lexical matrices:

- (30) *too ga wareta* 'the party split'
[-xtns]
- (31) *tyawan ga wareta.* 'the tea-cup broke'
[-xtns]

During the course of analysis, I have found six subclasses of extension verbs. I will present these six classes of extension verbs in tree format in Figure 2.3 and Figure 2.4 below.

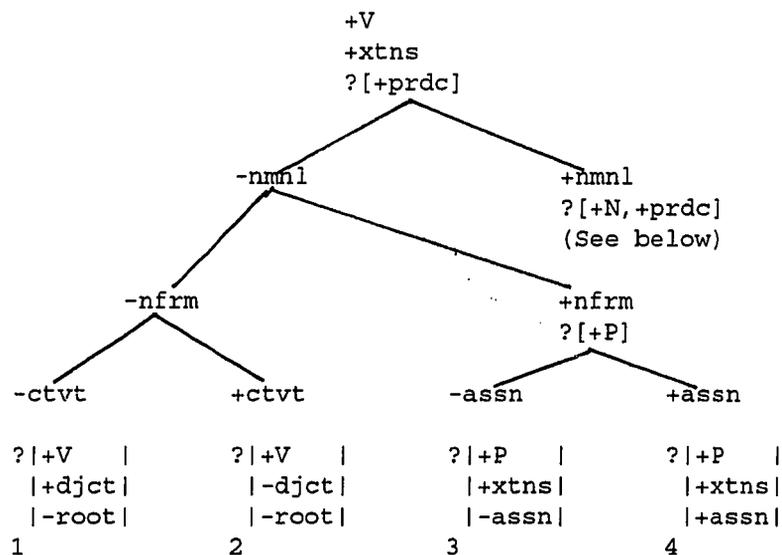


Figure 2.3 Non-nominal Extension Verbs

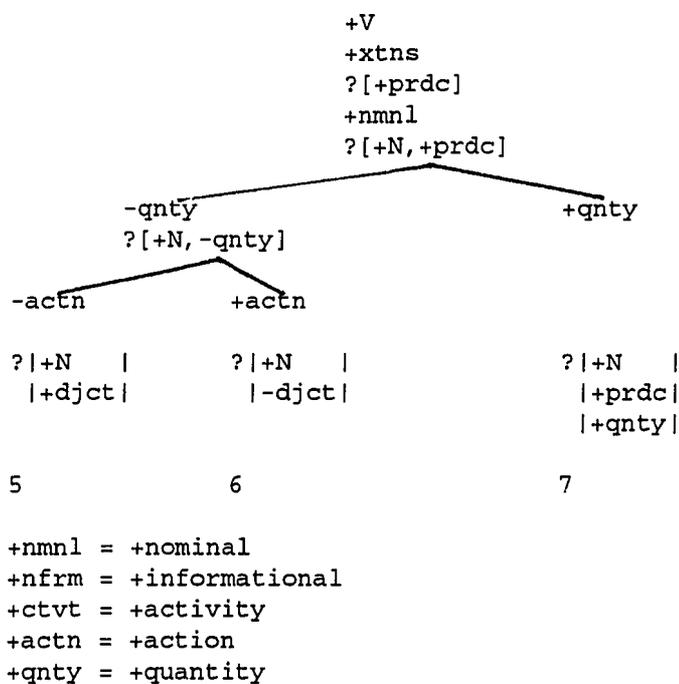


Figure 2.4 Nominal Extension Verbs

In Figures 2.3 and 2.4, the feature nominal ([+nmnl]) specifies that the regent has a predicate nominative complement ([+N,+prdc]), whereas non-nominal ([-nmnl]) verbs do not require such a complement. This formulation puts quantifiers that co-occur with extension verbs such as *suru* (e.g. \$100 *suru* 'It costs \$100.') and our adjectival nouns such as *kiree* 'pretty' and *shizuka* 'quiet', which occur with our copulars, into the same group under [+nmnl]. Therefore, the nominal predicate complements are either quantity [+qnty] or non-quantity [-qnty]. Non-quantity nominal predicate complements are either action or non-action.

The feature action ([+actn]) specifies that the regent has an action predicate nominal as a complement, whereas non-action ([-actn]) verbs do not co-occur with such a complement. I will represent the features for an action predicate nominal as [+N,-djct] and those for a non-action predicate nominal as [+N,+djct]. The examples of non-action predicates includes *kiree* 'pretty' and *shizuka* 'quiet', among others. The action extension verbs do not occur with such a complement. The [+actn] extension verbs have non-stative predicate nouns such as *benkyoo* 'studying' as complements. Such complements have been referred to as deverbal nouns.⁴

The feature informational ([+nfrm]) specifies that the verb requires a complement and that the required complement must include an extension postposition, either *ni*₁ [+P,+xtns,-assn] or *to*₁ [+P,+xtns,+assn] as the lexical head of the complement. The complement here forms an exocentric construction. A [-assn] verb requires *ni*-marked complements, while a [+assn] verb requires *to*-marked complements. The feature non-informational ([-nfrm]) refers to verbs which do not have a complementizer postposition as their dependent. The [-nfrm] extension verb and its complement form an endocentric construction. This class of verbs is divided further into [+ctvt] and [-ctvt]. The [-nfrm,-ctvt] extension verbs require an adjectival verb in non-root form as their dependent. The [-nfrm,+ctvt] extension verbs require a non-adjectival verb in non-root form as their dependent.

Our examples (8), (9), and (10) all belong to the group of verbs that share the feature [+V,+xtns,-nmnl,+nfrm,-assn]. Also, they are members of Primary Verb Class 1, or PVC-1, which is characterized by a combination of features [+V,-trns,-lctn,-crsp,-mode]. The dependency analysis of these and other [+xtns] verbs is discussed in the sections below on PVCs.

I will give subcategorization rules to cover the types of of [+xtns] verbs presented in tree format in Figures 2.3 and 2.4 as follows:

```
SR-2  [+V]      --> [+xtns]
SR-3  [+xtns]  --> [+nmnl]
SR-4  [+nmnl]  --> [+qnty]
SR-5  [-qnty]  --> [+actn]
SR-6  [-nmnl]  --> [+nfrm]
SR-7  [-nfrm]  --> [+ctvt]
SR-8  [+nfrm]  --> [+assn]
```

The redundancy rules 6-13 state the implications of these features in terms of expected complement types:

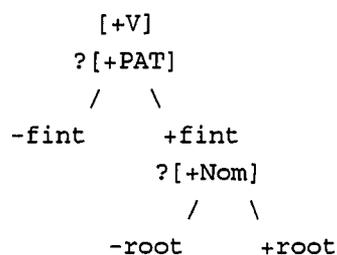
```
RR-6  [+nmnl]  --> [?[+N,+prdc]]
RR-7  [+qnty]  --> [?[+N,+qnty]]
RR-8  [-qnty]  --> [?[+N,-qnty]]
RR-9  [+actn]  --> [?[+N,-djct]]
RR-9  [-actn]  --> [?[+N,+djct]]
RR-10 [-nfrm,-ctvt] --> [?[+V,+djct,-root]]
RR-11 [-nfrm,+ctvt] --> [?[+V,-djct,-root]]
RR-12 [+nfrm,-assn] --> [?[+P,+xtns,-assn]]
RR-13 [+nfrm,+assn] --> [?[+P,+xtns,+assn]]
```

2.6 SUBJECTHOOD

Lexicase assumes that every language manifests a category that we can call 'subject' (Starosta 1988:181), though this category is not an

unanalyzed primitive as it is in other frameworks such as relational grammar and Chomskyan transformational grammar. The subject, or more precisely the [+Nom]-marked case relation-bearing complement, may occur in finite non-root and root clauses.

(32)



For example, in (33) below *Tanaka* is the subject of a non-root verb *hiite*; while *Suzuki* is the subject of a root verb *syookaisita*.

(33)

Tanaka ga piano o hiite Suzuki ga uta o syookaisita.
 play song introduced
 'Tanaka played the piano and Suzuki introduced the song.'

An infinitive is defined in lexicase as a (verb or noun) predicate that does not allow a grammatical subject to appear overtly as a dependent, and an infinitival complement is an infinitive whose presence is required by its regent.

Lee (1989:84) suggests that *V-te* as an infinitive in the following construction, on the basis of that fact that the complement clause can never have an overt subject. Lee's example (58) is repeated here as

(34):

(34)
 John ga [Δ utat-te] i-ru
 *jibun ga
 'John is singing.'

In the course of examining extension verb constructions, I observe that the non-root form of adjectival verbs also can never have an overt subject, as follows:

(35)
 Kikuko ga [Δ akaku] natta.
 *jibun ga
 'Kikuko became red. (Kikuko's face reddened.)'

This gives additional support for Lee's suggestion to revise the claim that Japanese lacks infinitival clauses (Teramura 1984:59, Starosta 1988:217 Note 3).

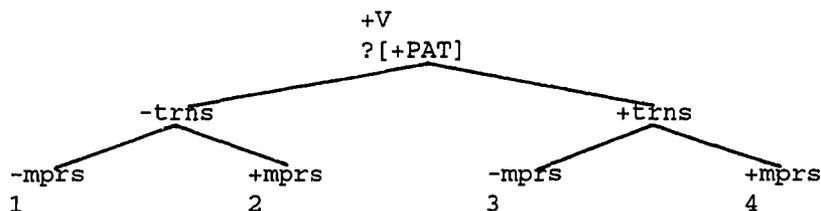
In Japanese, the subject represented by a [+Nom] complement is AGT if the lexical matrix of the regent has a contextual feature [+trns]. The subject represented by a [+Nom] complement is PAT if the lexical matrix has a contextual feature [-trns]. The verbs that occur with referential subjects are non-impersonal ([-mprs]) verbs. These verbs contrast in terms of 'personality' with finite verbs that do not occur with an overt referential subject. We call the latter impersonal ([+mprs]) verbs. The rules SR-8 and SR-9 formalize the personality distinction in verb subcategorization:

SR-8 [+V] -> [+mps]

SR-9 [+mprs] -> [?[+Nom, -rfrn]]

The diagram below summarizes how personality subcategorizes verbs.

(36)



It should be noted that [+mprs] verbs can have overt non-referential dummy subjects if the language provides any. For example, English has non-referential dummy subjects available ('it' and 'there'), but Japanese does not.

The so-called null valence or *zero-koo zyutugo* (0-arity verbs) proposed by Teramura are a sub-class of [+mprs] verbs in our analysis.⁵ Our data include [+mprs] verbs in many of the primary classes.

In summary, the verbs may be subcategorized in three basic ways: in terms of sixteen primary classes based on co-occurrence with complement case relations, in terms of 6 potential extension types, and in terms of personality, which yields two types. Each primary class is further subcategorized using grammatically significant environments or frames used to establish membership in distributional subclasses. The lexical matrix for regent verbs specifies these three types of dependency relations by using indices on each contextual feature assigned by means of linking rules.

In the following section, I present a detailed account of primary verb classes with illustrative data. I also refer to how these primary classes relate to extension and personality.

NOTES

¹It should be noted that verbs in languages such as Chinese and Thai are the exception to Anderson's statements, quoted below:

'Perhaps the most important inherent category of verbs which is undeniably inflectional is that of tense and aspects (together with mood).' (Anderson 1985:190)

'A final inherent category of verbs is that of conjugation class.' (Anderson 1985:191)

²The fact that *takusan* occurs in the following environment provides an independent justification for this analysis: __ na N, e.g. *takusan na miyage* 'many gifts', *takusan na mondai* 'many problems'. The other adjectival nouns such as *kiree* and *genki* occur in the same environment, as in *kiree na sora* 'pretty sky' and *genki na kodomo* 'healthy child'.

³According to Perlmutter and Postal, strata of basic clauses are characterized as follows (Perlmutter and Postal 1984:95):

A stratum is transitive if and only if it contains a 1-arc and a 2-arc. A stratum is intransitive if and only if it is not transitive. A stratum is subjective if and only if it contains a 1-arc. A stratum is objective if and only if it contains a 2-arc. A stratum is unergative if and only if it is subjective and intransitive. A stratum is unaccusative if and only if it is objective and intransitive.

⁴The examples of occurrences of different types of nominal predicates are given below for a selected list of verbs.

occurrence as complement 1
 as adjunct (1)
 non-occurrence 0

			+N		
			+prdc		
	-djct	-qnty	+djct	-djct	+qnty
	benkyoo		genki	3-zikan	takusan
suru	1		0	1	(1)
kakaru	0		0	1	1
sugiru	0		1	1	1
desu	1		1	1	1

⁵Teramura (1982:178) gives the following as examples of his zero-koo zyutugo (zero-arity predicate): *Ame da* 'It's raining'; *Yuki da* 'It's snowing'; *Zisin da* 'Earthquake!'; *Kazi da* 'Fire!'

In my analysis, the copula *da* in these examples is treated as an impersonal extension verb that requires a predicate nominal *ame*, *yuki*, *zisin*, or *kazi* as a complement. In my analysis, therefore, the valence value for this predicate is one, not zero. Earlier in section 2.5.2, I have presented a more comprehensive discussion of extension verbs.

CHAPTER 3. SYNTACTIC SUBCATEGORIZATION OF JAPANESE INTRANSITIVE VERBS

[PRIMARY VERB CLASSES 1-8]

In this chapter, I present a subcategorization of Japanese intransitive verbs in terms of their syntactic distributions. In the course of the analysis of intransitive verbs I have achieved a fit between their semantic and syntactic properties. I discuss the details of the fit for each of the Primary Verb Classes in this chapter. I have also found a high degree of symmetry throughout the system, most notably in the distribution of verbal and LOC complements. I discuss the symmetry in conjunction with verbs in Primary Verb Classes 1-8 in this chapter, and generalize my observations based on data from transitive verbs in chapter 4. Chapter three consists of eight sections and covers the analysis of the intransitive verbs in Japanese according to the eight primary classes established in chapter 2.

3.1 PRIMARY VERB CLASS 1 (PVC-1)

The verbs in this class share a cluster of four features [-trns, -lctn, -crsp, -mode]. These simple intransitive verbs are further subcategorized by the features stativity ([+sttv]), extension ([+xtns]), telicity ([+telc]), adjectivity ([+djct]), and by personality ([+mprs]). These subgroups are shown in Figures 3.1 through 3.7 with relevant features. I discuss each subgroup of PVC-1 verbs below.

3.1.1 Subtypes within Primary Verb Class 1

The subtypes are presented in the subcategorization trees in Figure 3.1 through Figure 3.7. The verbs in this class must have a PAT that is marked with the [+Nom] case form. This requirement excludes impersonal verbs in Figure 3.5, 3.6, and 3.7 below. The asterisk indicates that no examples have been found for the subtype.

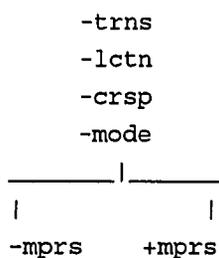


Figure 3.1 PVC-1 Subtypes (1)

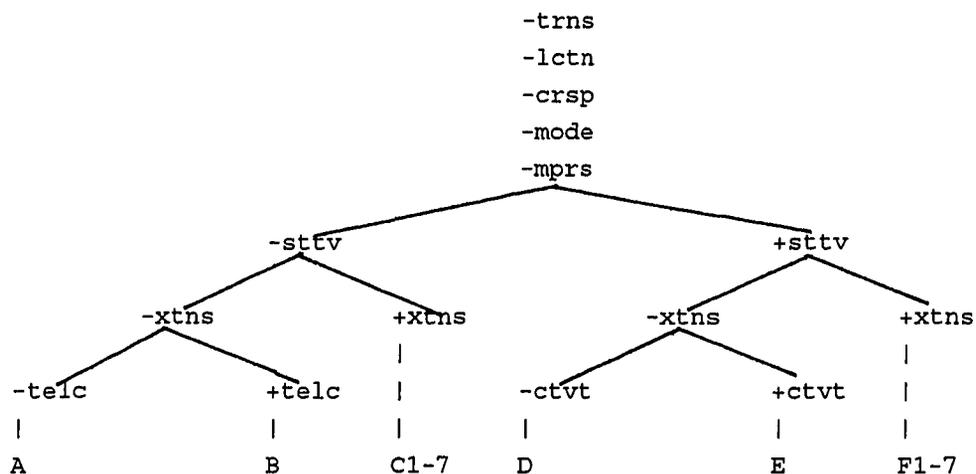


Figure 3.2 PVC-1 Subtypes (2)

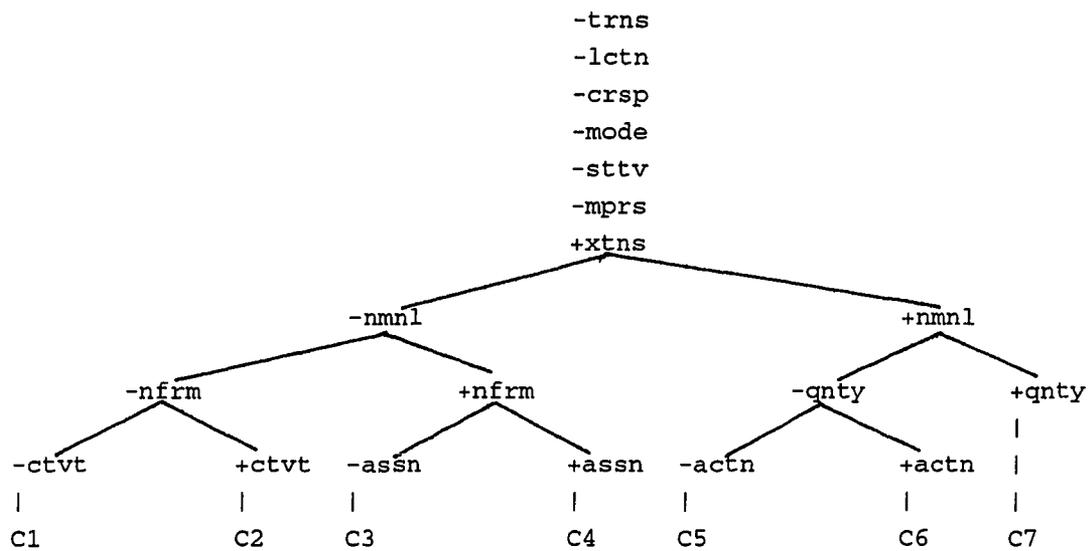


Figure 3.3 PVC-1 Subtypes (3)

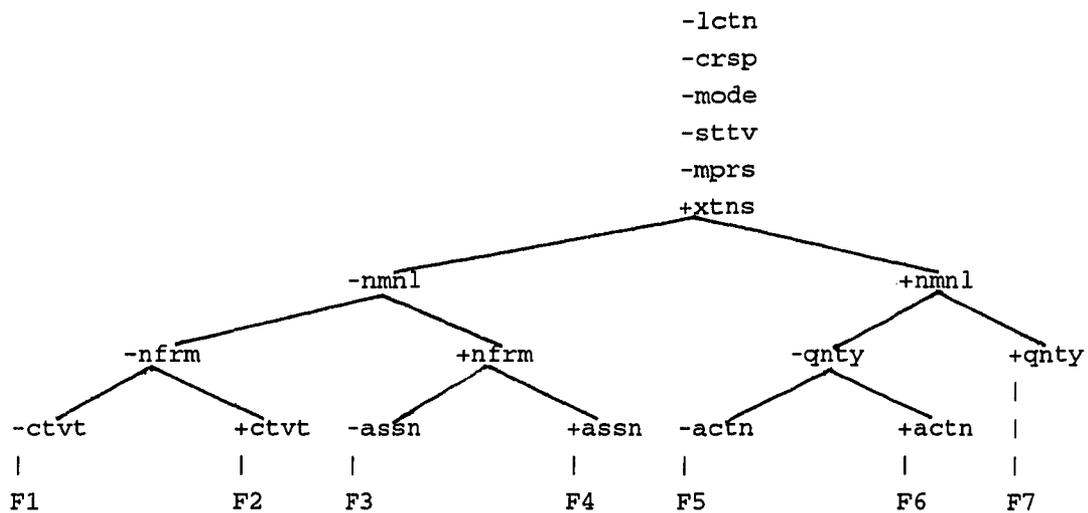


Figure 3.4 PVC-1 Subtypes (4)

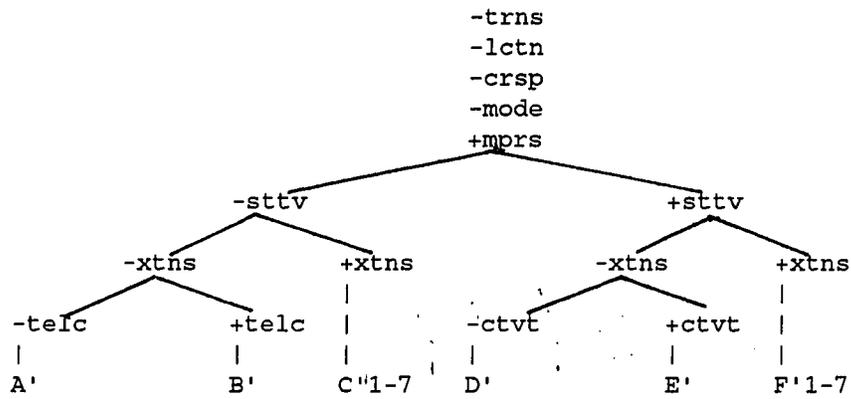


Figure 3.5 PVC-1 Subtypes (5)

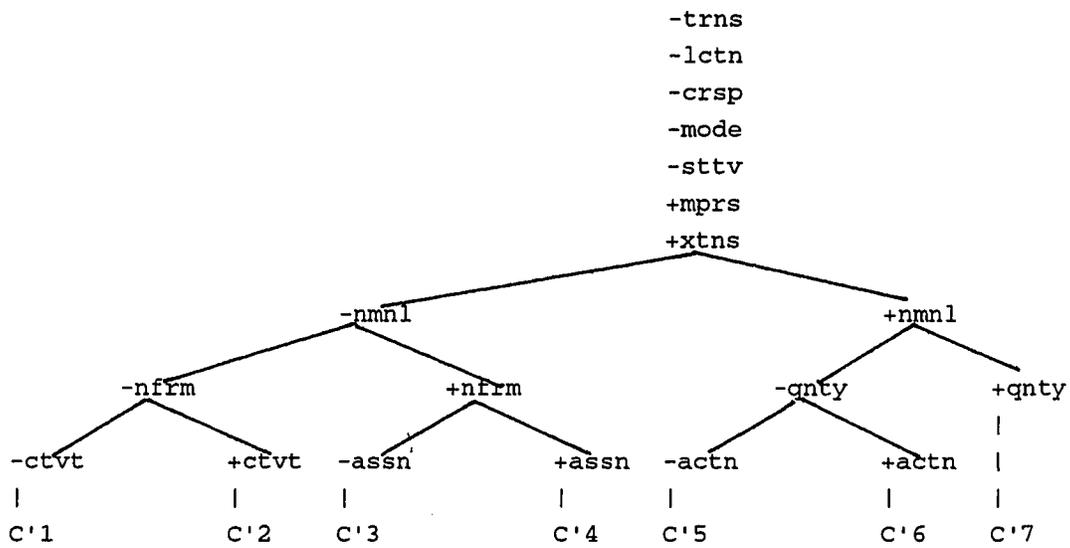


Figure 3.6 PVC-1 Subtypes (6)

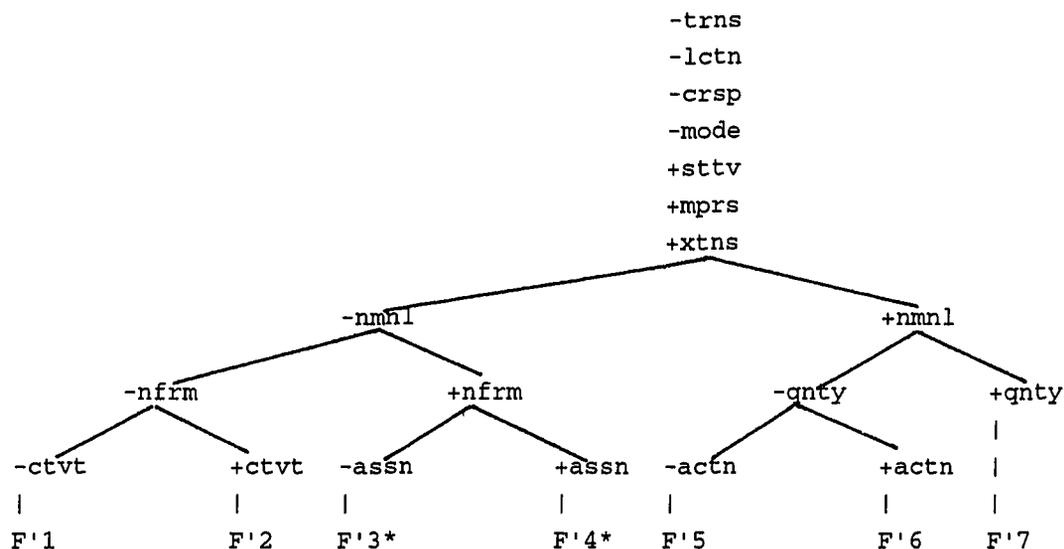


Figure 3.7 PVC-1 Subtypes (7)

3.1.2 Analysis of verbs in PVC-1.

The PVC-1 verbs are either impersonal or non-impersonal. The non-impersonal, non-stative, non-extension PVC-1 verbs are either atelic (A) or telic (B). The distinction between these two types can be established by a semantic test in which an aspectual marker '-te iru' is attached to the stem of the regent verb. For A verbs, the attachment of this aspect marker entails progressive interpretation, whereas for B verbs such entailment is not present. Instead, when we attach the same aspect marker to B verbs, it indicates that the result of such activity designated by B continues. In the following example, the regent verb *nagareta* in (1) is a type A PVC-1 verb, while regent verb *sinda* in (2) is a type B PVC-1 verb.

3.1.2.1 PVC-1-A

(1) PVC-1-A:

Yuki	no	reiki	ga	nagarekonda
snow	Gen	cold	Nom	poured in
1ndex	2ndex	3ndex	4ndex	5ndex
+N	+P	+N	+P	V
			+Nom	-crsp
				-lctn
				-mode
				-mprs
				-sttv
				-telc
				-trns
				-xtns
				4([+P])
				4(+P
				+Nom)
				4([+Nom])
				4 +Nom
				+actr
				4[+actr]
				4 +PAT
				+actr
				4[+PAT]
				?([+P])

'The snowy cold poured in.' (YU5)

As noted in the preceding paragraph, an addition of the aspect marker *'-te iru'* to the regent, *nagarekonde iru* entails progressive interpretation: 'the snowy cold is pouring in.'

This example (1) is given with a fully specified matrix for the verb, complete with indices assigned by linking mechanisms.¹ Hereafter, however, when the fully specified matrix is not necessary for the understanding of the example, I will give only the contextual features

required for the subcategorization of the verb without specifying the skeletal structures and other items used primarily for linking. For example, the verb *nagarekonda* 'poured in' in (1) is specified as: [-crsp, -lctn, -mode, -mprs, -trns, -xtns] with indices identifying the ultimate output after linking operations in (1)':

(1)' PVC-1-A

Yuki	no	reiki	ga	nagarekonda
snow	Gen	cold	Nom	poured in
1ndex	2ndex	3ndex	4ndex	5ndex
+N	+P	+N	+P	V
			+Nom	-crsp
				-lctn
				-mode
				-mprs
				-sttv
				-telc
				-trns
				-xtns
				4 ([+Nom])
				4 [+actr]
				4 [+PAT]

The following verbs, among others, belong to this subtype A:

<i>aruku</i>	to walk
<i>hatarku</i>	to work
<i>kagayaku</i>	to shine
<i>oyogu</i>	to swim
<i>omoidasareru</i>	to be reminded of
<i>suru</i>	to feel a chill come over (a person)
	(e.g. : <i>samuke ga suru</i>)

3.1.2.2 PVC-1-B

(2) PVC-1-B

Meizin wa	Urokoya	de		sinda.
Master as for		at		died
1ndex	2ndex	3ndex	4ndex	5ndex
+N	+P	+N	+P	+V
	+modl		-drcn	+telc
			+trmn	-crsp
				-lctn
				-mode
				-mprs
				-sttv
				-trns
				-xtns
				2([+modl])
				2([+Nom])
				2([+them])
				2[+actr]
				2[+PAT]
				4(-drcn)
				+trmn
				4([+LOC])

'The master died at the Urokoya Inn.' (ME5-modified)

With the aspect marker *-te iru*, this verb is interpreted as a result:

'The master ended up dead at the Urokoya Inn.' The aspect marker *-te iru* indicates the 'resultative' state and not the progressive state of the PAT.

As presented in the section on modal postpositions, the fully specified matrix for the postposition *wa* stands as follows:

[+P,+modl,-cmbn,-xcls]. In the lexical matrix of verbs, however, I use the lexical feature [+modl] to represent the clusters of features assigned to the topic case form [+Tpc] *wa*. In (2) [+modl] is the

corresponding 'case form' feature for the topic case form and theme [+them] is the 'case relation'. The topic case form [+Tpc] is glossed as 'as for'.

Meizin wa as a topic phrase in (2) is linked by way of theme [+them] to the PAT case relation, while *Urokoya de* is not.² The locational phrase *Urokoya de* is not linked to a complement, that is, it does not figure in the subcategorization of the regent *sinda*. Although there is no [+Nom] complement in 2, theme linking is available to assign an index to PAT. That is, the verb *sinda* is not an impersonal verb.

It should be noted that the availability of an external index is not what makes a verb impersonal or non-impersonal. Personality is an inherent feature of the verb itself, and does not depend on the given context.

The following verbs belong to subtype B:

<i>amaru</i>	to be abundant
<i>hueru</i>	to increase
<i>ikiru</i>	to be alive
<i>kakaru</i>	to require (time, money)
<i>mitukaru</i>	to be found/located
<i>wareru</i>	to be broken/split
<i>you</i>	to become drunk

In relational grammar, type A verbs are called unergative, while type B verbs are called unaccusative (Perlmutter 1978:160; Perlmutter and Postal 1984:95; Rosen 1984:42).³ In the GB framework, type A is referred to as intransitive and type B as 'ergative' (Radford 1988:446). In my analysis, they are both simple intransitive verbs distinguished in

terms of the telicity feature. The telicity is tested by a diagnostic of adding the aspect marking *-te iru* form.

3.1.2.3 PVC-1-C1

The third major simple intransitive subtype, non-impersonal, non-stative extension verbs C1 through C7 for PVC-1, is illustrated in

(3)-(12):

(3) PVC-1-C1

Yoru	no	soko	ga	siroku	natta.
night	Gen	bottom	Nom	white	became
1ndex	2ndex	3ndex	4ndex	5ndex	6ndex
			+P	+V	+V
				+djct	+xtns
				-root	-crsp
					-ctvt
					-lctn
					-mode
					-mprs
					-nfrm
					-nmnl
					-root
					-sttv
					-trns
					4 [+actr]
					4 ([+Nom])
					4 [+PAT]
					5 [+prdc]
					5 +djct
					-root

'The earth lay white under the night sky.' (YU2)

The non-impersonal verb *natta* in (3) is a non-correspondent, non-locational, non-mode, non-stative intransitive verb: [-trns, -crsp, -lctn, -mode, -sttv]. As the verb requires a non-root form

of an adjectival verb *siroku* as a dependent, it is an extension verb [+xtns]. Without *siroku*, the sentence is ungrammatical:

* *Yoru no soko ga natta.*

Therefore, the lexical matrix of the verb includes the following contextual features as well: [+xtns, -nmnl, -nfrm, -ctvt]. Therefore, the fully specified features excluding skeletal and linking features include a cluster of 16 features in the matrix of the head verb *natta*.⁴ It should be noted that the parenthetical notation applied in the matrix for case forms such as [+Nom] differs from the same notations used for the case relations: while the parentheses on the case relation designate adjuncthood, the parentheses on case forms refer to 'pro-drop' phenomena. Other verbs in this category include:

<i>mieru</i>	to strike someone as (sad)
<i>narikakaru</i>	to begin to turn (red)
<i>omoeru</i>	to strike someone as (beautiful)
<i>tuku</i>	to turn out to be (costly)

3.1.2.4 PVC-1-C2

(4) PVC-1-C2

Suzuki	ga	aruite	mita.
	Nom	walk	tried
1ndex	2ndex	3ndex	4ndex
+N	+P	+V	+V
		-djct	+ctvt
		-root	+xtns
			-crsp
			-lctn
			-mode
			-mprs
			-nfrm
			-nmnl
			-sttv
			-trns
			2[+actr]
			2[+PAT]
			2([+Nom])
			3[+prdc]
			3 -djct
			-root

'Suzuki tried to walk / Suzuki ventured out on foot.'

The intransitive, non-correspondent, non-locational, non-mode extension verb *mita* (the past tense form of verb *miru* 'to see') functions as a kind of manner auxiliary verb in this example. Similar constructions are found in Formosan languages and in Thai (Starosta, personal communication). *Mita* has a non-root form of an intransitive verb, *aruku* (to walk), as a dependent. Verbs in this category include:

<i>iku</i>	to go (on foot)
<i>kaeru</i>	to return (on foot)
<i>kureru</i>	to give a favor of (walking)
<i>kuru</i>	to come (on foot)
<i>oku</i>	to (walk) beforehand
<i>simau</i>	to finish (walking)

3.1.2.5 PVC-1-C3

(5) PVC-1-C3				
Suzuki	ga	isya	ni ₁	natta
	+Nom	physician	as	became
1ndex	2ndex	3ndex	4ndex	5ndex
+N	+P	+N	+P	+V
			+xtns	+nfrm
			-assn	+xtns
				-assn
				-crsp
				-lctn
				-mode
				-mprs
				-nmnl
				-sttv
				-trns
				2([+Nom])
				2[+actr]
				2[+PAT]
				4[+prdc]
				4 +xtns
				-assn

'Suzuki became a doctor.'

Example (5) is modified from example (8) presented earlier in chapter 2 by adding a [+Nom] complement *Suzuki ga*. The verb *naru* belongs to the extension subclass [-nmnl,+nfrm,-assn], or extension verb, subtype 3 in Figure 2.4 introduced in chapter 2, section 4.2. The following verbs also belong to this subclass:

<i>ataru</i>	to be in the position of (being a relative)
<i>kanzirareru</i>	to be able to feel (the pure existence)
<i>kanziru</i>	to feel
<i>mieru</i>	to seem (brilliant white with the color of snow)
<i>tuku</i>	to turn out (to be a costly venture)
<i>ureru</i>	(The store) sells (for a substantial sum)

3.1.2.6 PVC-1-C4

(6) PVC-1-C4

Suzuki	ga	isya	to ₁	natta
	Nom	physician	became	as
Index	2ndex	3ndex	4ndex	5ndex
	+P	+N	+P	+V
			+xtns	+assn
			+assn	+nfrm
				+xtns
				-crsp
				-lctn
				-mode
				-mprs
				-nmnl
				-sttv
				-trns
				2([+Nom])
				2[+actr]
				2[+PAT]
				4[+prdc]
				4 +assn
				+xtns

'Suzuki assumed the role of a doctor'

As stated earlier, the verb *naru* in (6) belongs to the extension subclass [-nmnl,+nfrm,+assn] (= extension verb, subtype 4 in Figure 2.4). In addition to *natta* in (6), *suru* 'do' and its past tense form *sita* 'did' in (7) and (8) below also belong to subclass PVC-1-C4:

(7) Kikuko wa kyoton to₁ sita/suru.

'Kikuko did/does not seem to understand.' (YA38)

- (8) Singo wa gyot to₁ sita/suru.
 'He was/is astonished at himself.' (YA51)

I tentatively analyze the verb *sita* 'did' or *suru* 'do' in (7) and (8) as PVC-1-C4. The words *kyoton* in (7) and *gyot* in (8) involve sound symbolism. The 't' in *gyot* and *hot* represents the so-called 'sokuon' assimilated to the following initial sound of the postposition to₁. These words vividly describe the manner of an action. These words representing sound symbolism can be predicates on their own in casual speech, given an appropriate context. The degree of phonological cohesion between a word of sound symbolism and the postposition to₁ varies as shown here in examples (7) and (8). I tentatively assign the status of 'predicate nominative' to these words until a comprehensive study on adverbs is available.

In addition to the verbs just mentioned, the following verbs also belong to this class:

yobareru to be called (a liar)
iwareru to be called (a specialist)

Notice that from the examples (3), (5) and (6) above, it can be established at least three homophonous intransitive non-impersonal extension verbs *naru* on the basis of grammatically significant environments:

a. Subtype C1 of PVC-1 *naru*, as in (3). This *naru* belongs to the extension subclass [-nmnl, -nfrm, -ctvt], or subtype 1 in Figure 2.4 of extension verbs in 2.4.2);

b. Subtype C3 of PVC-1 *naru* as in our earlier example (8) presented in chapter 2, modified and given with a [+Nom] complement as (9):

- (9) Suzuki ga isya ni₁ natta.
 'Suzuki became a doctor.'

In (9), the verb *naru* belongs to the extension subclass [-nmdl,+nfrm,-assn], or subtype 3 of extension verbs in Figure 2.3 introduced earlier in chapter 2 section 4.2.

c. Subtype C4 of PVC-1 *naru* as in:

- (10) Suzuki ga isya to₁ natta.
 'Suzuki assumed the role of a doctor'

In (10) the verb *naru* belongs to the extension subclass [-nmdl,+nfrm,+assn], or subtype 4 in Figure 2.3 of extension verbs presented in chapter 2.

3.1.2.7 PVC-1-C5

- (11) PVC-1-C

Atama	ga	sappari	suru.
head	Nom	clear	become
index	2ndex	3ndex	4ndex
+N	+P	+N	+V
		+djct	+nmdl
			+xtns
			-actn
			-crsp
			-lctn
			-mode
			-mprs
			-qnty
			-sttv
			-trns
			2 ([+Nom])
			2 [+actr]
			2 [+PAT]
			3 [+Acc]
			3 [+prdc]
			3 +prdc
			+djct

'The head becomes clear.' (YU8'1-modified)

There is an independent justification that *sappari* is an adjectival noun: *karaoke ga sappari na Tanaka* 'Tanaka who is not good at karaoke singing.' The following simple intransitive verb belongs to subtype C5.

sugiru to exceed

In: *Kanozō wa seiketu sugita.* (YU8'4)
 she Tpc clean exceeded
 'She was too clean.'

3.1.2.8 PVC-1-C6

(12) PVC-1-C6

Musuko	ga	benkyoo	sita
son	Nom	study	did
1ndex	2ndex	3ndex	4ndex
+N	+P	+N	+V
		-djct	+nmnl
			+actn
			+xtns
			-crsp
			-lctn
			-mode
			-mprs
			-sttv
			-trns
			2 ([+Nom])
			2 [+actr]
			2 [+PAT]
			3 [+Acc]
			3 [+prdc]
			3 +prdc
			-djct 5

`(My) son studied.'

The dependent *benkyoo* 'study' is an accusative predicate with features [+N,+prdc,-djct] and [-fint] in the sense that it does not occur with a clausemate nominative, including a non-emphatic *zibun*:

(12a) *Musuko ga zibun ga benkyoo sita.

I analyze *benkyoo sita* 'study did' as two lexical items consisting of this predicate nominal and the extension verb *sita* (past tense of verb *suru* 'do'). This is supported by the fact that modal postpositions can be inserted between the dependent nominal and the regent :

(12b) Musuko ga benkyoo wa sita.

In (12) and (12b) *benkyoo* is a nominal predicate. Muraki (1980), among others, captures this type of nominal predicate as his 'analytical' derivation of nouns into 'verbs' (Muraki 1980, republished as Muraki 1992:221). For example, a non-indigenous nominal *memo*, shortened from 'memorandum', may be derived into a verb synthetically as *memoru* by suffixation of 'ru', or analytically as *memo suru* by adding a verb *suru*, or periphrastically as *memo o toru* 'to write a memo'. Other non-indigenous nominals, such as *zerokkusu* 'xerox' and *fakkusu* 'fax', go through Muraki's analytical and periphrastic derivation, but not his synthetic derivation. The predicate nominal *benkyoo* belongs to the latter type. The output of Muraki's analytical derivation is *benkyoo suru*, as illustrated in our examples (12) and (12b). The output of his periphrastic derivation in the past tense form is *benkyoo o sita*, as in (12c):

(12c) [[Musuko ga] [benkyoo o] sita.]

In my analysis, *sita* in (12c) is a non-extension, transitive verb belonging to the class PVC-9, which will be discussed in chapter 4, section 1.

The lexical item *suru* in the output of Muraki's analytical derivation has been singled out as a 'light' verb by Grimshaw and Mester (1988), Miyagawa (1989), and Tsujimura (1990), among others, in grammatical theories where the VP node is a given and a transformation is required. In my analysis, however, their 'light' verbs belong to this class of nominal, non-action extension verbs. The 'light verbs', therefore, represent a small subclass of nominal extension intransitive verbs in my analysis, and no exceptional category with exceptional grammatical properties need be posited to account for them.

A topicalized version of (12c), (12d), appears to be identical to (12b). However the two constructions are different since in (12d) the head verb is [-xtns,+trns], while in (12b) the head verb is [+xtns,-trns].

(12d) Musuko ga benkyoo wa sita.

Thus in reality there are two types of 'Musuko ga benkyoo wa suru'. Our example (12b) represents type 1, which includes two lexical items: *suru*, our intransitive extension verb, and a topicalized nominal predicate *benkyoo*. I am thus assuming the constituent structure indicated by the brackets in (12) and (12b):

(12) [[[Musuko ga] benkyoo] sita]
 Nom +prdc -trns
 'My son engaged in studying.'

(12b) [[Musuko ga] [benkyoo wa] sita]
 Nom +prdc Tpc -trns
 'Studying my son engaged in.'

The second type is represented by (12b), which is a topicalized version of (12c) above. As we have seen, *sita* in (12c) belongs to the PVC-9 class of verbs, and *benkyoo* in this construction is a derived nominal; it is [-prdc] and bears the PAT case relation. This contrasts with *benkyoo* in (12) which is [+prdc]. As a predicate, the *benkyoo* in (12) requires a dependent nominative actor PAT. Since *benkyoo* is [-fint], this nominative PAT cannot appear overtly. The actor PAT of the higher clause, *musuko* 'my son', controls this missing actor PAT. That is, the nominal predicate *benkyoo* may occur as an infinitival complement of the extension transitive verb *suru*. The verb *sita* in (12c) below is considered to be a transitive counterpart of the homophonous intransitive extension verb *sita* in (12), and (12d) is its topicalized counterpart.

(12c) Musuko ga benkyoo o sita.
 AGT PAT
 'My son studied.' (Literally, 'My son did studying.')

(12d) Musuko ga benkyoo wa sita
 AGT Nom PAT Tpc +trns
 'The studying my son did.'

For the head verb *sita* 'did' in sentence (12e) below there are potentially two possible analyses: (12e1) and (12e2):

(12e) Musuko ga hooritu o benkyoo sita.
 My son Nom law Acc studying did
 'My son studied law.'

(12e1)
 [[Musuko ga] [hooritu o] [benkyoo] sita]
 Nom law Acc +prdc +trns

(12e2)
 [[Musuko ga] [[hooritu o] benkyoo] sita]
 Nom law Acc +prdc -trns

Let us assume that (12e2) is correct. In (12e2) the predicate nominal *benkyoo* is transitive and requires a PAT, *hooritu*, as well as an AGT in the matrix. This predicate nominal is a complement to the intransitive extension verb *suru*. Preposing of *hooritu o* and placing it in front of *musuko ga* in (12e2) then requires a structural representation in which *hooritu* is no longer the object of the lower clause:

(12e2p) hooritu o Musuko ga [benkyoo] sita.
 Acc +prdc

Since (12e2p) is good, it could be taken to support a transitive analysis of this *suru*, or alternatively, an analysis in which the *musuko ga* too is inside the *benkyoo* clause. In the former case, *sita* is [+trns], and *hooritu* is the PAT of the [+trns] regent, marked by the [+Acc] postposition *o*. This upper PAT *hooritu* would then be expected to control the actor of the lower infinitival complement clause. However, in (12e2p), it is not the PAT *hooritu*, but the AGT *musuko* that controls the actor of the *benkyoo* clause.

The transitive corresponding to (12e2p), or (12f), should then be grammatical, as we have observed that (12c) is a transitive counterpart of (12). However, the corresponding transitive (12f) is ungrammatical:
(12f)

*Musuko	ga	hooritu	o	benkyoo	o	sita.
son	Nom	law	Acc	+prdc	Acc	+trns
'My son studied law.'						

Example (12f) is ruled out on two accounts: (1) if it is assumed that *benkyoo* is a [+prdc], then it should not have the [+Acc] postposition *o*; and (2) if I analyze *benkyoo* as a PAT NP of the transitive *sita*, then it can not have its own clause structure, particularly a subject. Note that even if I take an alternative approach and analyze *benkyoo* as a PAT of transitive verb *sita*, (12f) is ruled out where *hooritu o* and *benkyoo o* are both co-dependents of *sita*. In other words, (12f) is ruled out due to this violation of the 'one-per-Sent' constraint, since it includes two PATs, [+Acc]-marked nominals *benkyoo o* and *hooritu o*, in the same clause. I have thus ruled out (12e1) and established (12e2) as the correct analysis, and the transitivity of the head verb *sita* in (12e) is thus established as [-trns]. Therefore in my analysis the head verb *sita* of the sentence (12k) with a topic case form below is [-trns], not [+trns]:

- (12g) Musuko ga hooritu o benkyoo wa sita.
 Nom law Acc +prdc Tpc -trns
 'Studying law, my son did (but he ended up as a journalist).'

Furthermore, in (12h-j) below we observe that the range of possible dependents is marked on the complement nominal predicate rather than on the regent verb *sita* 'did'. For example if we replace *benkyoo* with *kekkon* 'marriage' or *hankoo* 'resistance', the dependent *hooritu o* is no longer acceptable. Instead *kekkon* and *hankoo* require their own MNS and LOC complement dependents, respectively:

- (12h) *Musuko ga hooritu o kekkon/hankoo sita.
 Nom Acc +prdc
 (12i) Musuko ga gaikokuzin to kekkon sita.
 Nom foreigner with marriage did
 'My son married a foreigner.'
 (12j) Musuko ga titioya e hankoo sita.
 Nom father against resistance did
 'My son resisted his father.'

In (12i) *gaikokuzin to* is a MNS complement of the nominal predicate *kekkon*, while in (12j) *titioya ni* is a LOC complement of the nominal predicate *hankoo*. Moreover, the non-predicate nominative *kekkon* and *hankoo* take the same range of complement dependents:

- (12i) Gaizin to no kekkon ga ooi.
 'Interethnic marriages are prevalent.'
 (12j) Titioya e no hankoo ga medatsu.
 'Resistance to his own father is conspicuous.'

The facts presented in (12h) to (12j) verify that *hooritu* is the complement of *benkyoo*, not of *sita*. Therefore, we must establish that (12e2), not (12e1), is the correct analysis.⁶

The transitivity of the head verb *suru* in (12e), therefore, is [-trns]. This analysis gives us a uniform account of the transitivity

of the extension verb *suru/sita* 'do/did' regardless of the types of nominal predicates that are required as the dependent complements.

The *benkyoo* in (12) may be analyzed as an 'unaccusative noun' in a more powerful theoretical frame that allows multi-level structure, such as the one used in Tsujimura (1990), which is based on Baker's incorporation theory. In my analysis it is rather an accusative predicate that is [-fint]. Thus *benkyoo* in (12) in my analysis is [-trns]. However, *benkyoo* in (12e) is [+trns]. In both (12) and (12e) the PAT *musuko* of the upper clause headed by *sita* is interpreted by the regular infinitival control rule as coreferential with the implied actor of the lower clause headed by the nominal predicate *benkyoo*.

The following [+actn] predicate nominals, among others, occur with the [+xtns, -trns] regent verb *suru*:

<i>ansin suru</i>	to feel easy about
<i>antei suru</i>	to be stabilized/secured
<i>atozusari suru</i>	to move back
<i>kaiketū suru</i>	to resolve
<i>kansei suru</i>	to finish
<i>keiren suru</i>	to be convulsed
<i>nagatooryū suru</i>	to stay for a long time
<i>niwakazukuri suru</i>	to feign (himself to be in a traveller's weariness)
<i>nusumimi suru</i>	to steal a glance
<i>roobai suru</i>	to be flustered
<i>sanpo suru</i>	to stroll
<i>seikatu suru</i>	to make a living
<i>sippai suru</i>	to fail
<i>yoakasi suru</i>	to stay up all night
<i>yakusoku suru</i>	to promise

These predicate nominals each require their own prescribed complement case relations. For example, the predicate nominals *ansin*, *antei*, *atozusari*, *nagatooryu*, *roobai*, *sanpo*, *seikatu*, and *yoakasi* require PAT only. The predicate nominals *kaiketu*, *kansei*, *keiren*, *niwakazukuri*, *nusumimi*, and *sippai* also require AGT. The predicate nominal *kakeoti* requires PAT and COR; while *soodan* and *yakusoku* require PAT, AGT, and COR. These predicate nominals are extension nominals dependent on the [-trns.+xtns] regent verb *suru*. The majority of these extension nominals are of Sino-Japanese origin. However, a few exceptions are found: *atozusari*, *nusumimi*, and *niwakazukuri*. They are compounds formed from indigenous words, in contrast to other compounds that include a word of Sino-Japanese origin. For example, *nusumi* 'stealing' and *mi* 'looking' yield 'stealing a glance at'; and *niwaka* 'sudden' and *tukuri* 'making' yield 'feigning'.

3.1.2.9 PVC-1-C7

(13) PVC-1-C7

Kono	sigoto	wa	3-zikan	kakatta.
this	job	Tpc	3-hours	took
1ndex	2ndex	3ndex	4ndex	5ndex
Det	+N	+P	+N	+V
		+modl	+qnty	+nmnl
				+xtns
				-actn
				-crsp
				-lctn
				-mode
				-mprs
				-sttv
				-trns
				3([+modl])
				3([+Nom])
				3([+them])
				3[+actr]
				3[+PAT]
				4[+Acc]
				4[+prdc]
				4 +prdc
				+qnty

'It took three hours to do this job.'

The feature quantity ([+qnty]) is a cover term for numeric quantification including time, distance, age, etc. *Sanzikan* in (13) is a predicate nominal. As a noun it should have a case form. This case form, however, cannot be [+Nom]. Let us note this case form as [+Acc]. For a fully specified matrix of the regent verb *kakatta*, this case form should be included with index number 4 as 4[+Acc] together with a skeletal feature 4([+N]). This case form [+Acc] will be linked to a [+N] skeletal feature as other case relations are. The matrix in the abbreviated form in (13) does not include these features. Neither does

it includes 'tobiisi' features required for linking operations. They are: 4[+N,+Acc] and 4[+Acc,+qnty], among others. In (13) the topic phrase is linked to the PAT actor by the theme. The corresponding untopicalized sentence is: *Kono sigoto ga san-zikan kakatta* 'This job took three hours.'

The subtypes A, B, and C in PVC-1 differ from D, E, and F below in that A, B, and C have imperative forms and co-occur with *-te iru* forms. The verbs in PVC-1-D, E, and F do not take imperatives. They do not co-occur with aspect-marking *-te iru* forms at all. These verbs share the feature [+sttv]. The stative PVC-1 verbs are either non-extension (subtypes D and E) or extension (subtype F). The non-extension stative PVC-1 is either non-activity ([-ctvt], subclass D) or activity ([+ctvt], subclass E). PVC-1-D verbs are adjectival verbs, while verbs in PVC-1-E are non-adjectival verbs. Examples of PVC1-D include *nai* 'does not exist', among others. The verbs in PVC-1-E include *aru* 'exist', *iru* 'need', and *dekiru* 'be capable of', among others. Selected examples follow:

3.1.2.10 PVC-1-D

The PVC-1 verbs in subclass D share a cluster of four features: [-mprs,+sttv,-xtns,-ctvt].

(14) PVC-1-D

Hansya	ga	nakatta.
glare	Nom	did-not-exist
1ndex	2ndex	3ndex
+N	+P	+V
		+sttv
		-crsp
		-ctvt
		-lctn
		-mode
		-mprs
		-trns
		-xtns
		2([+Nom])
		2[+actr]
		2[+PAT]

'There was no glare.' (YU15')

The verbs in PVC-1-D include the following:

<i>ooi</i>	(The houses built in the style of the old regime are) plentiful
<i>siroi</i>	(The mountain covered with the snow is) white
<i>tikai</i>	(The radiance of the Milky Way is) near
<i>tumetai</i>	(The glance is) cold

3.1.2.11 PVC-1-E

The subclass PVC-1-E is characterized by the cluster of the following features: [+ctvt,+sttv,-crsp,-lctn,-mode, -mprs,-trns,-xtns].

The regent *iru* in (15) and *aru* in (16) below belong to this class.

(15)

Ano	musume	wa	mada	iru	kai
that	girl	Tpc	still	exist	Sprt
1ndex	2ndex	3ndex	4ndex	5ndex	
	+N	+P	+Adv	+V	
		+modl		+ctvt	
				+sttv	
				-crsp	
				-lctn	
				-mode	
				-mprs	
				-trns	
				-xtns	
				3 ([+modl])	
				3 ([+them])	
				3 [+actr]	
				3 [+PAT]	
				4 ([+Adv])	
				4 ([+time])	

'Is that girl still around?'

This example is modified from the original in Kawabata: *Osisyoo san toko no musume wa mada iru kai* 'Is the girl who lived with the music teacher still around?' (YU68)

A sentential particle, *Sprt*, does not figure in subcategorization. Unlike case-marking postposition, *Sprt* does not mark propositional contents. In this particular case *kai* marks the interrogative sentence. The adverb of time, *mada*, is an adjunct to the non-extension transitive verb *iru* 'exist'.

(16)
 Sarasiya wa mukasi kara atta.
 bleach-house Tpc ancient from existed
 'From ancient times there were houses that specialized in bleaching.'

In (16) *mukasi kara* is an adjunct. The verb *aru* 'exist' requires that the PAT be non-animate, in contrast to *iru*, which requires an animate PAT. Other verbs in this class include:

<i>dekiru</i>	to be able to handle (French, English)
<i>iru</i>	to need (money, time)
<i>mieru</i>	to catch the sight of (mountain, people)
<i>tokeru</i>	to be able to resolve (problem, conflict)
<i>yasasisugiru</i>	to be excessively easy

These simple intransitive verbs in the subclass PVC-1-E are derivationally related to subclasses of two-argument verbs: PVC-3 or PVC-9, among others. These verbs with multiple complements will be discussed in upcoming sections in the chapter. Examples below relate to the verb *iru*.

PVC-1-E	Zikan ga iru 'It takes time.'
PVC-3	Siage ni zikan ga iru 'The final coat (of paint) requires time.'
PVC-9	Suzuki ga kane ga iru 'Suzuki needs money.'

3.1.2.12 PVC-1-F1

The non-impersonal, intransitive, stative extension verbs have a cluster of the following features: [-trns, -lctn, -crsp, -mode, -mprs, +sttv, +xtns]. The verbs in this subclass (PVC-1-F) are further subcategorized according to the dependent types, F1-7. An F1 verb is characterized by the cluster of the features [-nmnl, -nfrm, -ctvt]. The F2 verbs share a cluster of the features [+sttv, +xtns, -nmnl, -nfrm, +ctvt]. The F3 verbs have a shared cluster of features [+sttv, +xtns, -nmnl, +nfrm, -assn]. The F4 verbs share a cluster

of the features [+sttv,+xtns,-nmnl,+nfrm,+assn]. The F5 and F6 verbs have a cluster of the features [+sttv,+xtns,+nmnl,-qnty,-actn] and [+sttv,+xtns,+nmnl,-qnty,+actn], respectively. The F7 verbs have a cluster of the features [+sttv,+xtns,+nmnl,-qnty]. Examples follow:

(17) PVC-1-F1

Kyuukyu byooin	wa	tikaku	datta
emergency hospital	Tpc	near	cplr
1ndex	2ndex	3ndex	4ndex
+N	+modl	+V	+V
		+djct	+sttv
		-root	+xtns
			-crsp
			-ctvt
			-lctn
			-mode
			-mprs
			-nfrm
			-nmnl
			-trns
			2([+modl])
			2([+them])
			2[+PAT]
			2[+actr]
			2([+Nom])
			3[+prdc]
			3 +djct
			-root

'The emergency hospital was nearby.'

3.1.2.13 PVC-1-F2

(18) PVC-1-F2

Musume	wa	tyoohoogararete	iru
girl	Tpc	being/appreciated	exist
1ndex	2ndex	3ndex	4ndex
+N	+P	+V	V
	+modl	-djct	+ctvt
		-root	+xtns
			-crsp
			-lctn
			-mode
			-mprs
			-nfrm
			-nmnl
			-trns
			2([+modl])
			2([+Nom])
			2([+them])
			2[+actr]
			2[+PAT]
			3[+prdc]
			3 -djct
			-root

'The (services of the) girl are (much) valued.' (YU19)

The regent *iru* in (18) takes a dependent that is a non-root form of the intransitive and passive verb *tyoohoogarareru*. The *wa*-marked phrase is an adjunct of regent *iru*. However, it is linked to the PAT by way of a theme. The verbal complement *tyoohoogararete* is a non-root form of *tyoohoogarareru*, a [+sttv] verb that is derived by passivizing *tyoohoogaru* 'to value'. Incidentally, *tyoohoo* is an adjectival noun, [+N,+djct]. An addition of the suffix *-garu* to this nominal derives the transitive *tyoohoogaru*.

The most frequently found F-2 verb in the data is *iru* and its other inflected forms: *ita* (past), *inai* (non-past negative), and *inakatta* (past negative).

The [+xtns] verbs themselves may occur with other [+xtns] verbs, as illustrated by the multiple occurrence of extension verbs within a sentence in (20)-(22) below. Such occurrences are subject to pragmatic constraints:

(19)

Naeko	wa	hatarakigi	de	teiryuuzyo	made	
	Tpc	work clothes	with	bus stop	up to	
1	2	3	4	5	6	
Tieko	o	mukae	ni	dete	matte	ita.
	Acc	greet		leave	wait	existed
7	8	9	10	11	12	13

'Naeko, in her work clothes left for the bus stop and was waiting for Tieko.' (KO113)

The verbs *dete*, *matte* and *ita* in (19) are all extension verbs. The phrases 3-4 and 7-8 are connected with the verb *matte*, while 5-6 and 9-10 are connected with the verb *dete*.

The verb *matte* is a complement to the head verb *ita*. The head verb *ita* also requires a PAT, Naeko, which is co-indexed with the noun marked by a topic case form postposition *wa*.

(20)

Husako	wa	Kikuko	kara	tyaken	o	watasarete
	Tpc		from	tickets	Acc	handed
1	2	3	4	5	6	7
kite	ita.					
come	existed					
8	9					

'Husako came with tickets for tea service that [Kikuko had given her].' (YAn81)

In (20), the head verb *ita*, an extension verb in the subclass F2, requires a PAT, which is identified with the noun phrase *Husako*, is marked by a topic case form *wa*, and a verbal complement *kite*. This verbal complement itself is an extension verb belonging to the subclass C2.

(21)

Singo	no	atama	wa	keiku	ya	gyakusetutu
	Gen	head	Tpc	aphorism	and	paradox
1	2	3	4	5	6	7
ni	taisite	mohaya	nibuku	natte	ita.	
toward	already	dull	become	existed		
8	9	10	11	12	13'	

Shingo's mind was no longer as sharp as it had once been to aphorisms and paradoxes.' (YA 10)

In (21) the extension verb *natte* (subclass C1) is a complement to the head verb *ita* which belongs to a subclass of stative extension verbs, F2.

3.1.2.14 PVC-1-F3

(22) PVC-1-F3

Eiko	wa	agarisoo	ni ₁	nakatta.
	Tpc	come-inside	as	did-not-exist
		-appearance		
Index	2ndex	3ndex	4ndex	5ndex
	+P	+N	+P	+V
	+modl		+xtns	+nfrm
			-assn	+sttv
				+xtns
				-assn
				-crsp
				-lctn
				-mode
				-mprs
				-nmnl
				-trns
				2([+modl])
				2([+them])
				2([+Nom])
				2[+actr]
				2[+PAT]
				4[+prdc]
				4 +xtns
				-assn

'Eiko seemed reluctant to come inside.' (YA62)

Besides *nakatta*, the past tense form of *nai*, the following verbs in the data belong to this subclass:

<i>kawarinai</i>	to be no more than (a lie)
<i>suginai</i>	to be no more than (part of a mob)
<i>tigainai</i>	to be confident that (it is true)
<i>ureru</i>	to be salable (for a substantial sum.)

3.1.2.15 PVC-1-F4

(23) PVC-1-F4

Hanasiburi	ga	gaikokuzin	to ₁	omowareta.
manner of	Nom	foreigner	as-if	was considered
speech				
1index	2index	3index	4index	5index
	+P	+N	+P	+V
			+xtns	+assn
			+assn	+nfrm
				+sttv
				+xtns
				-crsp
				-lctn
				-mode
				-mprs
				-nmnl
				-trns
				2([+Nom])
				2[+actr]
				2[+PAT]
				4[+prdc]
				4 +xtns
				+assn

'The manner of speech appeared to be that of a foreigner.'

3.1.2.16 PVC-1-F5

(24) PVC-1-F5

Otoko	wa	akirakani	hukoo	datta.
man	Tpc	clearly	unhappy	was.
1ndex	2ndex	3ndex	4ndex	5ndex
+N	+P	+Adv	+N	+V
	+modl		+djct	+cplr
				+nmnl
				+sttv
				+xtns
				-actn
				-crsp
				-lctn
				-mode
				-mprs
				-trns
				2 ([+modl])
				2 ([+them])
				2 [+PAT]
				2 [+actr]
				2 ([+Nom])
				4 [+Acc]
				4 [+prdc]
				4 +prdc
				+djct

'The man was clearly unhappy.' (YU11--modified.)

The topic phrase is an adjunct to the head verb *datta* (past tense form of the copular verb *da*), while *akirakani* 'clearly' is an adjunct to the regent *hukoo*.⁷ This predicate nominative is a complement of the extension verb *datta*. The head of the construction in example (24), *datta* has the valence value of two.

3.1.2.17 PVC-1-F6

The verbs in this class are characterized by the following features: [+actn, +nmnl, +sttv, +xtns, -crsp, -lctn, -mode, -mprs, -trns].

(25)				
Ozyoo-san	ga	gaikookan	siboo	desu.
His daughter	Nom	diplomat	aspiring	is
1ndex	2ndex	3ndex		4ndex
+N	+P	+N		+V
		-djct		+actn
				+nmnl
				+sttv
				+xtns
				-crsp
				-lctn
				-mode
				-mprs
				-trns
				2 ([+Nom])
				2 [+PAT]
				2 [+actr]
				3 [+Acc]
				3 [+prdc]
				3 +prdc
				-djct

'His daughter aspires to be a diplomat.'

In (25), the word indexed with 3 is a compound noun 'aspiring to be a diplomat' from a clause *Ozyoo-san ga gaikookan o siboo suru* 'His daughter aspires to be a diplomat.' The compound noun is analyzed as a non-adjectival nominal predicate.

The adjectival extension verb *rasii* 'to appear to be' also belongs to this subclass:

(26)

Ano	otoko	ga	hannin	rasii.
that	man	Nom	culprit	appears
1ndex	2ndex	3ndex	4ndex	5ndex
Det	+N	+P	+N	+V
			-djct	+nmnl
				+sttv
				+xtns
				-actn
				-crsp
				-lctn
				-mode
				-mprs
				-trns
				3 ([+Nom])
				3 [+PAT]
				3 [+actr]
				4 [+Acc]
				4 [+prdc]
				4 +prdc
				-djct

'That man appears to be the culprit.'

3.1.2.18 PVC-1-F7

The verbs in this class are characterized by the features
 [+nmnl, +sttv, +qnty, +xtns, -crsp, -lctn, -mode, -mprs, -trns].

(27) PVC-1-F7

Sono	koro	no	yuki	wa	1-zyo	aru.
that	time	Gen	snow	Tpc	10-feet	exists
1index	2index	3index	4index	5index	6index	7index
+Det	+N	+P	+N	+P	+N	+V
				+modl	+qnty	+nmnl
						+sttv
						+qnty
						+xtns
						-crsp
						-lctn
						-mode
						-mprs
						-trns
						5([+modl])
						5([+them])
						5[+PAT]
						5[+actr]
						5([+Nom])
						6[+Acc]
						6[+prdc]
						6 +prdc
						+qnty

'The snow would then be 10 feet deep.' (YU 70')

3.1.2.19 PVC-1-C'1

There are some impersonal extension verbs in my data. I first discuss non-stative impersonal extension verbs, a subtype of PVC-1-C' verbs. In this group of verbs there are some categories in my classification for which no examples are found: subtypes C'5 and C'6. I give example sentences for non-stative impersonal extension verbs below. Our first three examples (28), (29), and (30) refer to a meteorological conditions:

(28) PVC-1-C'1

Verbs in this class share a cluster of the following features: [-trns, -lctn, -crsp, -mode, +mprs, -sttv, +xtns]. The example below is an impersonal meteorological verb. In addition, the head verb *natta*, as an extension verb, bears the cluster of the features [-nfrm, -ctvt, -nmnl], a characteristic of type 1 extension verbs.

Taihen	samuku	natta.
very	cold	became
1ndex	2ndex	3ndex
+Adv	+V	+V
	+djct	+mprs
	-root	+xtns
		-crsp
		-ctvt
		-lctn
		-mode
		-nfrm
		-nmnl
		-sttv
		-trns
		0([+them])
		0[+PAT]
		0[+actr]
		0([+Nom])
		0(+Nom)
		-rfrn
		2[+prdc]
		2 +djct
		-root

'It became very cold.'

The regent *natta* in this sentence differs from *natta* in (3) in terms of personality. In (3) the head verb required a referential PAT, while in (28) this extension verb requires a non-referential PAT. The valence value ('arity'), however, is 2 for *natta* in (3) and (28). They both require a PAT and an extension predicate, which is a non-root form of an adjectival verb, as their complements. These verbs, therefore, belong to the third type of extension verb, and differ only with respect to the feature of personality.

3.1.2.20 PVC-1-C'2

Verbs in this class share a cluster of the following features: [-trns,-lctn,-crsp,-mode,+mprs,-sttv,+xtns]. The example below is an impersonal meteorological verb. In addition, the head verb *natta*, as an extension verb, bears the cluster of features [+ctvt,-nmnl,-nfrm], a characteristic of type 2 extension verbs.

(29)		
Yatto	Harumeite	kita.
Finally	spring like	came
Index	2ndex	3ndex
+Adv	+V	+V
	-djct	+ctvt
	-root	+mprs
		+xtns
		-crsp
		-lctn
		-mode
		-nfrm
		-nmnl
		-sttv
		-trns
		0([+them])
		0[+PAT]
		0[+actr]
		0([+Nom])
		0(+Nom)
		-rfrn
		2[+prdc]
		2 +djct
		-root

'It finally came to be like in the spring.'

3.1.2.21 PVC-1-C'3

Verbs in this class share a cluster of the following features: [-trns,-lctn,-crsp,-mode,+mprs,-sttv,+xtns]. The example below is an impersonal meteorological verb. In addition, the head verb *natta*, as an

extension verb, bears the cluster of features [-nmnl,+nfrm,-assn], a characteristic of type 3 extension verbs.

(30)

Arare	no	ato	wa	ame	ni ₁	natta.
hail	Gen	after	Tpc	rain	as	became
1index	2index	3index	4index	5index	6index	7index
				+N	+P	+V
					+xtns	+mprs
					-assn	+nfrm
						+xtns
						-assn
						-crsp
						-lctn
						-mode
						-nmnl
						-sttv
						-trns
						0([+them])
						0[+PAT]
						0[+actr]
						0([+Nom])
						0(+Nom)
						-rfrn
						6[+prdc]
						6 +xtns
						-assn

'A hail storm turned to rain.' (YU 38-modified)

In this sentence the regent verb *natta* has an adjunct phrase consisting of the first four words. The regent *natta* in this sentence differs from *natta* in (5) in terms of personality. In (5) the verb has a referential PAT, while in (30) the homophonous verb *natta* has a non-referential PAT. Both verbs require a complement headed by the non-association extension postposition *ni₁*. The valence value or 'arity' is 2 for *natta* in both (5) and (30). In (30) the head verb has

a non-referential PAT and an extension predicate *ame* 'rain' as its complements. The verb belongs to the impersonal extension verb class and expects a non-referential subject.

3.1.2.22 PVC-1-C'4

Verbs in this class share a cluster of the features [-trns, -lctn, -crsp, -mode, +mprs, -sttv, +xtns]. The example below is an impersonal meteorological verb. In addition, the head verb *natta*, as an extension verb, bears the cluster of the features [+assn, -nmnl, +nfrm,], a characteristic of type 4 extension verbs.

(31)

Hiru	kara	arasi	to ₁	natta
Noon	from	storm	as if	became
1ndex	2ndex	3ndex	4ndex	5ndex
+N	+P	+N	+P	+V
			+xtns	+assn
			+assn	+mprs
				+nfrm
				+xtns
				-crsp
				-lctn
				-mode
				-nmnl
				-sttv
				-trns
				0 ([+them])
				0 [+PAT]
				0 [+actr]
				0 ([+Nom])
				0 (+Nom)
				-rfrn
				4 [+prdc]
				4 +xtns
				+assn

'It turned into a storm in the afternoon.'

In (28) through (31), I have presented examples of non-stative impersonal extension verbs.

I have found no examples of subtypes C'5, C'6, and C'7 in the naturalistic data I examined. So far I have not been able to construct a plausible example of a non-stative impersonal extension verb that belongs to any of these three subtypes.

For stative impersonal extension verbs in verb classes PVC-1-F', subtypes F'1, F'2, and F'5 are available in the data. They all refer to meteorological conditions. Examples follow:

3.1.2.23 PVC-1-F'1

Verbs in this class share a cluster of the following features: [-trns, -lctn, -crsp, -mode, +mprs, +sttv, +xtns]. The example below is an impersonal meteorological verb. In addition, the head verb *datta*, as an extension verb, bears the cluster of the features [+,nfrm, -ctvt, -nmnl], a characteristic of type 1 extension verbs.

(32)
 Itu no ma ni ka yuuguretikaku datta.
 when Gen time in Sprt evening-near was
 'With his hardly having noticed, afternoon had drawn toward evening.'
 (YU38)

In (32) the first five lexical items, *Itu no ma ni ka*, constitute an adjunct. The word *yuuguretikaku* is a compound made of *yuugure* 'evening' and the [-root] form of an adjectival verb *tikai* 'near', *tikaku*. *Yuuguretikaku* is a complement to the copular verb. This head verb has a

cluster of the features

[-trns, -lctn, -crsp, -mode, +mprs, +sttv, +xtns, -nmnl, -ctvt].

3.1.2.24 PVC-1-F'2

Verbs in this class share a cluster of the following features:

[-trns, -lctn, -crsp, -mode, +mprs, -sttv, +xtns]. The example below is an impersonal meteorological verb. In addition, the head verb *natta*, as an extension verb, bears the cluster of features [+ctvt, -nmnl, -nfrm], a characteristic of type 2 extension verbs.

In (33) below the first four words with indices 1-4 constitute a conditional phrase for the main sentence. The 2ndex is assigned to the accusative locus introduced earlier in chapter 2. This postposition marks a LOC complement of *nukeru*, an intransitive locational verb. The regent of the main sentence is *atta*, which has a verbal complement *de*.

(33)

tonneru	o	nukeru	to ₁
tunnel	Acc	go through	as if
Index	2ndex	3ndex	4ndex
+N	+P	+V	+P
		+prdc	+xtns
		+root	+assn

yukiguni	de	atta.
snow country	be	existed
5ndex	6ndex	7ndex
+N	+V	+V
+prdc	-djct	+ctvt
	-root	+mprs
		+sttv
		+xtns
		-crsp
		-lctn
		-mode
		-nfrm
		-nmnl
		-trns
		0([+Nom])
		0(+Nom)
		-rfrn
		0[+actr]
		0[+PAT]
		6[+prdc]
		6 -djct
		-root

'(The train) came out of the tunnel into the snow country.' (YU1 modified)

Example (33) illustrates how the discourse has an effect on the interpretation of the subject of the adjunct phrase, *tonneru o nukeru to*. In the sentence *tonneru o nukeru*, while the LOC complement *tonneru* is explicitly stated and marked by the [+Acc] postposition *o*, the unlinked PAT actor must be interpreted on the basis of an available antecedent in discourse. In the lexical matrix for *nukeru*, the unlinked PAT actor, which was contextually interpreted, is given the index number *x* to indicate an external referent that cannot be recovered by purely grammatical means. Therefore, the fully specified matrix of the verb *nukeru* 'go through/comes out' in *Tonneru o nukeru* '(The train) comes out

of the tunnel' should include a PAT indexed with a 'x', among others, as

follows:

(34)
 Tonneru o nukeru.
 tunnel Acc comes out
 Index 2ndex 3ndex
 +V
 +lctn
 -crsp
 -mode
 -trns
 2[+LOC]
 2[+Acc]
 x([+Nom])
 x[+actr]
 x[+PAT]

There are two subtypes of extension postposition, [+P,+xtns], *to*₁, which is associative ([+assn]), and *ni*₁, which is non-associative ([-assn]). The associative extension postposition here forms an exocentric construction with the adjunct phrase, *tonneru o nukeru*. This postposition functions as a conditional marker, indicating 'when/as/if (the train) passes through the tunnel.' The regent verb *atta* is an example of a stative intransitive extension verb related derivationally to the verb *atta* in the non-extension class. It is also impersonal, expecting a non-referential PAT actor. The valence value of this verb is 2, since this verb *atta* must also have a verbal complement, *de* (= [-root] form of copular verb *da*). This copular verb is represented in the matrix as a non-adjectival verb.

The extension verb *aru* in this class may require a non-copular dependent as in (35) below.

(35)
 Mayugura wa sibaï nado ni mo tukaeru yoo ni₁
 cocoon-warehouse Tpc play etc. in Tpc usable manner as

katati bakari no nikai no kyakuseki ga tukete aru.
 form only Gen upstairs Gen seats Nom attach exists

'The cocoon-warehouse had a balcony that was little more than a perfunctory recognition of its duties as an auditorium.' (YU55-5)

In (35) the phrases preceding *katati* are adjuncts. The phrases *katati bakari no* and *nikai no* modify *kyakuseki* 'the seats'. Excluding the adjuncts, (35) has the following structure (36):

(36)
 mayugura wa kyakuseki ga tukete aru
 cocoon Tpc balcony Nom attach existed
 warehouse

Lee (1989:83) analyzes a similar construction (37) in the lexibase framework and proposed the concept of 'middle participle' for *tukete* in a similar construction: *terebi ga tsuke-te ar-u* 'The TV is switched on'. Lee's middle participle *tsuke-te* 'switch=on-GER' is a V dominated by a S node, which in turn is dominated by another S node. This S node, in her analysis, dominates the PP, *Terbi ga* and V *ar-u* 'exist-PRS'. Lee's analysis is cited below:

(37)

_____PP_____	S	S
		V
Terebi		ar-u
TV		exist-PRS
	V	
	tsuke-te	
	switch=on-GER	
	<middle participle>	

In this analysis the postposition *ga* is assumed to be [+Nom] and *aru* to be [-trns]. Applying this same approach, we interpret (37) as follows: *aru*, is an extension verb which requires a PAT, balcony seats, and *tukete*, a middle-participle, which is identical to the non-root form of the transitive verb *tukeru* 'attach', are complements.

The fact that regent *aru* is indeed impersonal is supported by the ungrammaticality of the following sentence:

(38)
 *Suzuki *ga* mayugura wa kyakuseki *ga* tukete aru.
 'The warehouse house had Suzuki attach a balcony.'

In (38) an addition of [+Nom] marked PAT to the regent *aru* is not permitted.

We have at least three examples, (39), (40), and (41) below, of such verbal complement constructions in the naturalistic data:

(39)
 Sinsetu *ga* hunde atta
 virgin snow Nom stamp existed
 'The virgin snow was stamped on.'

(40)
 Maku *ga* megurasete atta.
 curtain Nom hang around existed
 'The curtain was hung all around.'

(41)
 Sino *ga* tutunde atta
 Sino Nom wrap existed
 'A Sinoware (tea bowl for ceremony) was wrapped up.'

It should be noted that the head verbs in *atta* in these examples are derivationally related to the homophonous *atta* in Primary Verb Class

2, 3, and 5. These primary verb classes will be introduced in subsequent sections.

The extension verb *aru* in F'2 has the following features: [+mprs, +xtns, -trns, -lctn, -crsp, -mode, +sttv, -nmnl, -nfrm, +ctvt]. This *aru* is homophonous with the *aru* that was introduced earlier as a member of subclass E, which is characterized by the features [+ctvt, +sttv, -crsp, -lctn, -mode, -mprs, -trns, -xtns].

3.1.2.25 PVC-1-F'5

There have been no examples of PVC-1-F'3 and PVC-1-F'4 in the primary data. The subtype F'5 is characterized by the following features: [+mprs, +nmnl, +sttv, +xtns, -actn, -crsp, -lctn, -mode, -qnty, -trns]. An example is given in (42).

(42) PVC-1-F'6

Tukiyo	datta.
moon-night	was
index	2ndex
+N	+V
+djct	+mprs
	+nmnl
	+sttv
	+xtns
	-actn
	-crsp
	-lctn
	-mode
	-trns
	0[+PAT]
	0[+actr]
	0([+Nom])
	0(+Nom)
	-rfrn
	1[+Acc]
	1[+prdc]
	1 +prdc
	+djct

'The moon was bright.' (YA9-2)

In (42), the nominal predicate *tukiyo* is a complement to the stative extension verb *datta*. There is no referential PAT subject in this construction. Such nominal predicates, listed below in (43), seem to be quite limited in number, and refer to meteorological conditions.

(43)	
<i>kaminari</i>	thunder
<i>kazi</i>	fire
<i>coyuki</i>	snowing heavily
<i>zisin</i>	earthquake

Historically, some of them are Sino-Japanese compounds, while others are indigenous. Pragmatically, there is no control by human

beings on these events. Semantically, these nominals are non-quantity nominals. Syntactically, these nominals include in their internal form a transitive or intransitive PAT as illustrated in (44):

(44)
 kami nari god thunders
 ka zi fire event
 oo yukibig snow
 zi sin earth shake

In addition to the copular verb in (42), the extension verb *rasii* belongs to this class:

(45)
 Ooyuki rasii
 heavy snow appears
 'It appears to be snowing heavily.'

3.1.2.25 PVC-1-F'6

The subtype F'6 is characterized by the following features: [+actn, +mprs, +nmnl, +sttv, +xtns, -crsp, -lctn, -mode, -qnty, -trns]. An example is given in (46).

(46)	
Dansui	desu.
cut off water supply	is
index	2ndex
+N	+V
-djct	+actn
	+mprs
	+nmnl
	+sttv
	+xtns
	-crsp
	-lctn
	-mode
	-trns
	0[+PAT]
	0[+actr]
	0([+Nom])
	0(+Nom)
	-rfrn
	1[+Acc]
	1[+prdc]
	1 +prdc
	-djct

'There is no water supply.'

In (46), the non-adjectival predicate nominal *dansui* is a complement to the stative extension verb *desu*. There is no referential PAT subject in this construction. The PAT is incorporated in the nominal predicate in this Sino-Japanese compound: *dansui* is considered to be composed of the compounding of *dan* 'cut off' and *sui* 'water'. Such nominal predicates are limited in number but include such familiar words as *sessui* 'rationing of water supply' and *teiden* 'cut off from electric power supply'. These words are used as nominal predicates for C5 type extension verbs as well. In addition to the copular verb in

(46), the extension verb *rasii* belongs to this subtype: *Dansui rasii*

'There appeared to be no water supply.'

3.1.2.26 PVC-1-F'7

This subtype is characterized by the following features:

[+mprs,+nmnl,+qnty,+sttv,+xtns,-crsp,-lctn,-mode,-trns]. An example is given in (47).

(47)	
Sanzikan	tatta.
three hours	passed
index	2ndex
+N	+V
+qnty	+mprs
	+nmnl
	+qnty
	+sttv
	+xtns
	-crsp
	-lctn
	-mode
	-trns
	0 [+PAT]
	0 [+actr]
	0 ([+Nom])
	0 (+Nom)
	-rfrn
	1 [+Acc]
	1 [+prdc]
	1 +prdc
	+qnty

'Three hours passed by.'

In addition to the copular *da* and *rasii*, the following verbs belong to this subtype:

aru 'there exists (five minutes)'
 sugiru 'there passes by (seven days).'

In this section I have presented a detailed analysis of Primary Verb Class 1 (PVC-1). The verbs in this class share a cluster of features [-trns, -lctn, -crsp, -mode]. The six subtypes of non-impersonal PVC-1 verbs, subclasses A-F, have been described on the basis of the features [+sttv], [+xtns], [+telc], and [+ctvt]. The extension verbs, C and F, are further subcategorized by the type of complements required by the head verb: C1-7 and F1-7. These seven subtypes 1-7 are defined in terms of the features [+nmnl], [+nfrm], [+ctvt], [+assn], and [+qnty]. For impersonal PVC-1 verbs, I presented examples of verbs of meteorological conditions, PVC-1-C'1, PVC-1-C'2, PVC-1-C'3, PVC-1-C'4, PVC-1-F'-1, PVC-1-F'-2, PVC-1-F'-5, and PVC-1-F'6. We observed that the occurrences of impersonal extension verbs are far less numerous than those of corresponding personal extension verbs. The impersonal extension verbs occur with fewer subtypes of extension predicates and complements.

The following is a partial list of PVC-1-C, PVC-1-F, PVC-1-C', and PVC-1-F' verbs in the data in the order of the subtypes 1-7:

(48) PVC-1-C: [-trns, -lctn, -crsp, -mode, -mprs, -sttv, +xtns]

C1. [-nmnl, -nfrm, -ctvt]

<i>mieru</i>	look like, look as if
<i>naru</i>	become
<i>narikakaru</i>	to begin to turn (red)
<i>omoeru</i>	to be considered
<i>tuku</i>	to turn out
<i>ureru</i>	to sell (for a substantial sum)

- C2. [-nmnl, -nfrm, +ctvt]
- | | |
|---------------|------------------------------|
| <i>iku</i> | to go (on foot) |
| <i>kaeru</i> | to return (on foot) |
| <i>kureru</i> | to give a favor of (walking) |
| <i>kuru</i> | to come (on foot) |
| <i>mita</i> | to try (walking) |
| <i>oku</i> | to (walk) beforehand |
| <i>simau</i> | to finish (walking) |
- C3. [-nmnl, +nfrm, -assn]
- | | |
|----------------|--|
| <i>naru</i> | to become (a physician) |
| <i>kanziru</i> | to feel (the women's existence to have
a purifying/distilling effect) |
| <i>mieru</i> | to seem (brilliant white color) |
| <i>tuku</i> | to turn out (to be a costly venture) |
- C4. [-nmnl, +nfrm, +assn]
- | | |
|---------------------|---|
| <i>iwareru</i> | to be called (a specialist) |
| <i>mieru</i> | to appear to be (a doctor) |
| <i>naru</i> | to assume a role of (a doctor) |
| <i>nazukerareru</i> | to be called as (Tieko) |
| <i>suru</i> | as in <i>gyot to suru</i> , to be astonished at |
| <i>wakaru</i> | as in <i>hakkiri to wakaru</i> , to understand
clearly |
| <i>yobareru</i> | to be called (a liar) |
- C5. [+nmnl, -qnty, -actn]
- | | |
|---------------|-----------|
| <i>da</i> | to be |
| <i>rasii</i> | to appear |
| <i>sugiru</i> | to exceed |
- C6. [+nmnl, -qnty, +actn]
- | | |
|-------------|--|
| <i>suru</i> | as in <i>benkyoo suru</i> , to engage in
studying |
|-------------|--|
- C7. [+nmnl, +qnty]
- | | |
|---------------|-----------|
| <i>kakaru</i> | to take |
| <i>sugiru</i> | to exceed |
| <i>suru</i> | to cost |

- (49) PVC-1-F: [-trns, -lctn, -crsp, -mode, -mprs, +sttv, +xtns]
- F1. [-nmnl, -nfrm, -ctvt]
da to be (copular verb)
- F2. [-nmnl, -nfrm, +ctvt]
iru to exist
- F3. [-nmnl, +nfrm, -assn]
kawarinai to be no more than (a lie)
kanzirareru to be able to feel (transparent)
suginai to be no more than (part of a mob)
tigainai to be certain that (the woman is
professional)
tikai to be close (to the end)
- F4. [-nmnl, +nfrm, +assn]
kanzirareru to feel
omowareru to feel
- F5. [+nmnl, -qnty, -actn]
da to be
rasii to possess scharacteristics of
- F6. [+nmnl, -qnty, +actn]
da to be
rasii to possess characteristics of
- F7 [+nmnl, +qnty]
aru exist (PAT = inanimate)
iru exist (PAT = animate)

(50) PVC-1-C': [-trns, -lctn, -crsp, -mode, +mprs, -sttv, +xtns]

C'1. [-nmnl, -nfrm, -ctvt]

naru to become

narikakaru to begin to turn (chilly)

C'2. [-nmnl, -nfrm, +ctvt]

kuru to come (to be spring-like weather)

C'3. [-nmnl, +nfrm, -assn]

naru to become (rainy)

C'4. [-nmnl, +nfrm, +assn]

naru to turn into (the storm)1(51)

PVC-1-F': [-trns, -lctn, -crsp, -mode, +mprs, +sttv, +xtns]

F'1. [-nmnl, -nfrm, -ctvt]

da to be (copular verb)

rasii to have the characteristics of

F'2. [-nmnl, -nfrm, +ctvt]

aru to exist

F'5. [+nmnl, -qnty, -actn]

da to be

rasii to possess characteristics of

F'6. [+nmnl, -qnty, +actn]

da to be

rasii to possess characteristics of

F'7 [+nmnl, +qnty]

aru to exist (PAT = inanimate)

da to be

rasii to possess characteristics of

sugiru to exceed

tatu to pass

This concludes the section on PVC-1.

3.2 PRIMARY VERB CLASS 2 (PVC-2)

3.2.1 Subtypes

The verbs in this class share a cluster of five features:
[-trns, -lctn, -crsp, +mode].

These intransitive mode verbs are further subcategorized by the features association [+assn], extension [+xtns], and personality [+mprs], as shown in Figure 3.8 and Figure 3.9. In Figure 3.9 ** indicates that the subtype requires an extension predicate in addition to postpositions that mark a MNS complement. The single * in Figure 3.9 means that no actual or plausible examples have been found for the subtype.

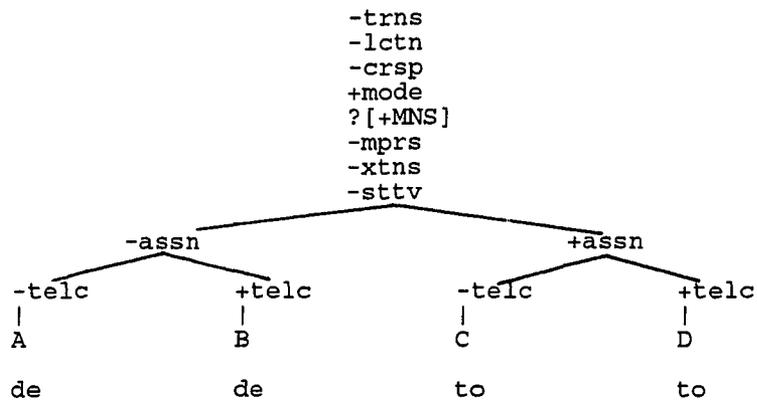


Figure 3.8 PVC-2 Subtypes (1)

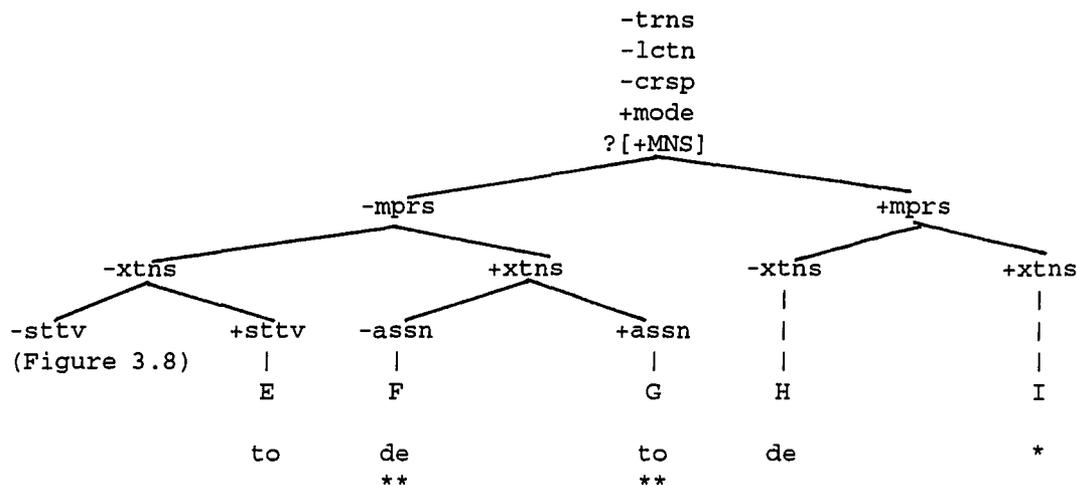


Figure 3.9 PVC-2 Subtypes (2)

In Figures 3.8 and 3.9, the postpositions that mark the MNS complement are listed below each of the subtypes of a PVC-2 verb. Subtype E in Figure 3.8, the non-impersonal, non-extension stative intransitive mode verbs, requires the postposition *to*. Subtype F requires the MNS complement be marked with *de*. In addition, as an extension verb it must have the postposition *ni*₁ [+P,+xtns,-assn] marking its [+prdc] complement. Subtype G is a non-impersonal extension association subtype with postpositions *to* as the MNS complement marker and *ni*₁ for its extension predicate. Subtype H in Figure 3.9, the impersonal non-extension verbs, requires the MNS complement be marked with the postposition *de*.

The non-impersonal, non-extension, non-stative intransitive mode verbs are either association or non-association. The non-association ([-assn]) PVC-2 verbs, or subtypes A and B, require the postposition *de* [+P,-drcn,+trmn] as dependent, while the association ([+assn]) PVC-2

verbs, subtypes C and D, require the postposition to_1 [+P,-xtns,+assn] as dependent.

The non-stative PVC-2 verbs are further divided by the feature telicity, which is tested by the attachment of the aspect-marking *-te iru* form. With this aspect-marking form the telic verbs, subtypes B and D, have a progressive interpretation, while atelic verbs, subtypes A and C, are interpreted resultatively. The *-te iru* form attached to verbs in B and D designates that the result incurred by the verb persists.

I present below each of the subtypes of PVC-2 verbs. I give an example with a matrix for the subtype first and then list verbs that come under the subtype. In order to distinguish a MNS complement from a MNS adjunct, I have used the question pull test along with other diagnostics, which were presented earlier in chapter 2, section 3.1.

3.2.2 Subtype A

Verbs in this class share a cluster of the following features: [-trns,-lctn,-crsp,+mode,-mprs,-xtns,-sttv,-assn,-telc].

(52) PVC-2-A

Huzi	ga	yuki	de	oowareta.
Mt. Fuji	Nom	snow	at	covered
1ndex	2ndex	3ndex	4ndex	5ndex
+N	+P	+N	+P	+V
			-drcn	+mode
				-assn
				-crsp
				-lctn
				-mprs
				-sttv
				-telc
				-trns
				-xtns
				2([+Nom])
				2[+actr]
				2[+PAT]
				4[+MNS]
				4(-drcn)
				-trmn

'Mount Fuji was covered with snow.'

The following verbs belongs to this subtype:

(53)

arasareru 'be devastated by'

Kono mati ga hariken Iniki de arasareta.

'This town was devastated by Hurricane Iniki.'

kimerareru 'be decided upon'

Syooheizai ga Kokkai de kimerareta.

'Consumer taxation was decided upon by the National Diet.'

siraberareru 'be examined by'

Ronbun ga iinkai de sireberaareta.

'The thesis was examined by the committee.'

We note that examples (52) and (53) have the following two

characteristics:

- (a): The MNS actant in these examples is either a natural phenomenon such as snow or a hurricane, or an institution. The PAT in these examples does not exercise any direct control over the MNS actant; and
 (b): The regent verbs in these examples are morphologically marked as passives.

Within the lexibase framework, no purely grammatical universal characterization of the traditional notional category 'passive' has been found. Instead, it can only be characterized using a partly semantic definition: 'passive' refers to a morphologically and/or syntactically marked class of intransitive verbs that are derivationally related to another class of verbs and that carry the meaning of undergoing an externally instigated process. Verbs in Japanese that satisfy this definition have a -(r)are suffix. Therefore, the analysis to distinguish non-association mode intransitives syntactically in terms of the feature telicity is independently confirmed in that the verbs in the subtype [-telc] are morphologically uniformly marked by the suffix -(r)are. It should be noted, however, that a -(r)are suffix by itself does not justify assuming the verb to have passive status. This is due to the fact that there are other homophonous suffixes that may mark honorific, potential, and spontaneous verbs in Japanese as well.

The PAT is not always overtly present, but must sometimes be interpreted anaphorically as in (54). Again, the PAT does not exercise any direct control over the MNS actant here:

(54)			
Minna	de		wamekareta
all	at		be shouted on
Index	2ndex		3ndex
+N	+P		+V
	-drcn		+mode
			-telc
			-sttv
			-assn
			-crsp
			-lctn
			-mprs
			-trns
			-xtns
			x([+Nom])
			x[+actr]
			x[+PAT]
			2[+MNS]
			2 -drcn
			-trmn

'(I) got shouted down by everyone.'

Since 'question pull' requires identification of the ones affected by the shouting, PAT is not non-referential. It is supplied contextually as indicated by index x in the matrix. That is, the regent *wamekareta* is non-impersonal.⁸ Further support for indexing PAT with 'x' comes from the grammatical sentences such as (55):

(55)			
minna ga			wamekareta
All	Nom		be shouted on
'All of them are shouted at.'			

The verb *wamekareru* in (55) is a passive form of *wameku* 'shout'. However, this verb lacks a MNS complement, and so belongs to the PVC-1 class of non-impersonal verbs with a semantic implication that the PAT has been affected in an adverse manner. The verbs *wamekareta* in (54) and (55) are derivationally related to each other, although there is no overt morphological marking to differentiate two verbs.

Some non-extension PVC-2 verbs are marked by the suffix *-(r)are*. The passive suffix itself does not justify the syntactic division defined in terms of the telicity feature, our PVC-2-A and PVC-2-B. The passive suffix, however, helps us to recognize the syntactically marked class of intransitive verbs, which are derivationally related to another class of verbs, and which carry the meaning of undergoing an externally instigated process.

In addition to the verbs presented in (52) and (53), the following morphologically complex verbs belong to PVC-2-A:

<i>hurareru</i>	to be jolted by
<i>katazukesaserareru</i>	to be forced to clean up
<i>tobasareru</i>	to be sent away

3.2.3 Subtype B

Verbs in this class share a cluster of the following features:

[-trns, -lctn, -crsp, +mode, -mprs, -xtns, -sttv, -assn, +telc].

(56) PVC-2-B

Suzuki	ga	nenzyuu	wahuku	de	toosita
	Nom	year	kimono	in	wore
		round			
1index	2ndex	3ndex	4ndex	5ndex	6ndex
+N	+P	+Adv	+N	+P	+V
				-drcn	+mode
					+telc
					-assn
					-crsp
					-lctn
					-mprs
					-sttv
					-trns
					-xtns
					2([+Nom])
					2[+PAT]
					2[+actr]
					5[+MNS]
					5(-drcn)
					+trmn
					3([+Adv])
					3([+time])

'Suzuki wore a kimono the year round.'

In addition to *toosita* in (56), the following verbs belong to this subtype:

(57)
 ahureru 'fill'
 Kuukoo ga kankookyaku de ahureta
 'The airport is filled with tourists.'

komu 'fill'
 Yokosukasen ga tuukinkyaku de kanda
 'The Yokosuka line was crowded with commuters.'

tirakaru 'be untidy'
 Kenkyuusitu ga purinto de tirakatta
 'The office had been messed up with printouts.'

tumaru 'fill'
 Paipu ga gomi de tumatta.
 'The pipe was filled with rubbish.'

It should be noted that verbs in (57) share the following metaphoric characteristics: the PAT in this group of verbs functions as a 'container' for the MNS actant. Similarly in (56), Suzuki can be considered as a special type of container for the kimono, which is required functionally to wrap around something: the PAT Suzuki is being wrapped around by the MNS actant kimono.

Not all the non-association, non-passive PVC-2 verbs, however, necessarily have the clear-cut metaphoric characteristics mentioned above. For example, the regent *deta* in (58) is a case in point.

(58)
 Ikka yonin de eiga no 'Kanzintyoo'
 family four with movie Gen
 1ndex 2ndex 3ndex 4ndex 5ndex 6ndex

 o mi ni deta.
 Acc see went out.
 7ndex 8ndex 9ndex 10ndex

'The four of them went out to see a movie version of the Kabuki play, Kanjincho.' (YA58-1)

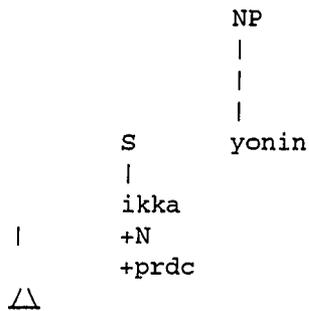
Since the words given 4ndex through 9ndex form an adjunct purpose phrase meaning 'In order to see the movie 'kanzintyoo', this part does not figure in subcategorization of the regent *deta*. I will repeat (58) excluding the adjunct phrase:

(58)'

Ikka	yonin	de	deta.
family	four	at	left
1ndex	2ndex	3ndex	10ndex
+N	+N	+P	+V
		-drcn	+mode
			+telc
			-assn
			-crsp
			-lctn
			-mprs
			-sttv
			-trns
			-xtns
			x([+Nom])
			x[+PAT]
			x[+actr]
			x(+Nom)
			-rfrn
			3[+MNS]
			3(-drcn
			+trmn

'The family, four of them went out.'

In (58)' I analyze *ikka* as a manner nominal. This nominal is predicate by an implied subject, indicated here by Δ , and this implied nominal is interpreted as coreferential with the regent *yonin* in accordance with the usual relative clause pattern:



The dependency structure illustrated above for the relative clause accounts for the lack of a case-marking postposition on *ikka*, and is also justified by the fact that both *Ikka ga yonin* and *Ikka wa yonin* are grammatical. Both phrases mean 'The family is four' or 'There are four in the family.' The details of dependency between nominals is, however, beyond the scope of the present study.

The noun marked by the postposition *de* in (58)' is the MNS complement to the head verb *deta*. There is no overtly mentioned PAT. The PAT, however, is recoverable from the context as seen from the following examples:

Otonari/Huhoonyugokkusya ga ikka yonin de deta.
 neighbor/undocumented aliens Nom family four at left
 'My neighbor/The undocumented aliens, the family of four, left.'

Therefore, the head verb *deta* in this example is [-mprs].

3.2.4 Subtype C

The third subtype of PVC-2 is the set of non-impersonal non-stative atelic association verbs, which are characterized by a cluster of the following features: [-trns, -crsp, -lctn, +mode, -mprs, -xtns, -sttv, +assn, -telc]. I give an analysis of an example of

such verbs in (59). In (60) below, I list selected examples of verbs in this class:

(59) PVC-2-C

Musuko	ga	hahaoya	to	totemo	nita.
my son	Nom	mother	with	much	resembled
1ndex	2ndex	3ndex	4ndex	5ndex	6ndex
+N	+P	+N	+P	+Adv	+V
			+assn		+assn
					+mode
					-lctn
					-mprs
					-sttv
					-telc
					-trns
					-xtns
					2 ([+Nom])
					2 [+actr]
					2 [+PAT]
					4 [+MNS]
					4 +assn
					5 ([+Adv])
					5 [+dgre]

'My son resembled his mother very much.'

In (59), the MNS actant is merely a frame of reference to assess the degree of resemblance. It is not perceived as an active participant in the activities defined by the regent. The following verbs belong to this subtype:

(60)

<i>tigau</i>	to differ from (the starlight in Tokyo)
<i>kasamaru</i>	to superimpose (the light off in the mountains with the face in the train window)
<i>tunagaru</i>	to connect (to the power)

3.2.5 Subtype D

Verbs in this class share a cluster of the following features: [-trns, -crsp, -lctn, +mode, -mprs, -xtns, -sttv, +assn, +telc]. The MNS actant of the verbs in this class actively participates in the activities

associated with the regent. The subtype D, therefore, contrasts semantically with the subtype C in this respect. An analysis of a sentence containing a verb in this class (61) is followed by (62), a selected list of verbs in this class.

(61)

Suzuki	ga	Tanaka	to	arasotta
	Nom		with	competed
1ndex	2ndex	3ndex	4ndex	5ndex
+N	+P	+N	+P	+V
			+assn	+assn
				+mode
				+telc
				-crsp
				-lctn
				-mprs
				-sttv
				-trns
				-xtns
				2 ([+Nom])
				2 [+actr]
				2 [+PAT]
				4 [+assn]
				4 [+MNS]

'Suzuki competed with Tanaka.'

The verbs listed in (62) below require a MNS complement as a co-instigator of the action denoted by the verb.

(62)

<i>aisiau</i>	to love each other
<i>au</i>	to meet
<i>butukaru</i>	to bump into
<i>hanasiau</i>	to communicate, talk to each other
<i>hururu</i>	to touch
<i>mukaiau</i>	to face each other
<i>siriau</i>	to become acquainted
<i>tukiau</i>	to associate
<i>wakaruru</i>	to divorce

Previous studies refer to these verbs as reciprocal verbs or symmetrical verbs.⁹ The verbs in this class are derivationally related to simple intransitive verbs with a selectional restriction imposed on the PAT: PAT must be distributed or PAT must be a plural entity. For

example, the verb *arasotta* in (61) is derivationally related to a PVC-1 verb *arasotta* in (63).

(63)
 Hutari ga arasotta
 two people Nom fought
 'The two had a fight.'

Within these reciprocal verbs, there are two subtypes: those verbs that are derivationally related to verbs in PVC-5 and those that are not so related. The verbs listed in (62), except for *aisiau* and *hanasiau*, are derivationally related to PVC-5-2. The verb *arasou* is not related to PVC-5-2.

3.2.6 Subtype E

Verbs in this class have the following features in common: [-trns, -crsp, -lctn, +mode, -mprs, -xtns, +sttv]. The MNS actant is merely a frame of reference to assess the stative activity. In this respect, the subtype E is similar to the subtype C and dissimilar to the subtype D where the MNS actant is perceived as an active participant in the activities defined by the regent.

(64)							
Itabuki	no	yane	mo	onsenmati	to	kawaranai	
Wooden	Gen	roof	Tpc	hotspring	with	unchanged	
				resort			
1ndex	2ndex	3ndex	4ndex	5ndex	6ndex	7ndex	
+N	+P	+N	+P	+N	+P	+V	
			+modl		+assn	+mode	
						+sttv	
						-crsp	
						-lctn	
						-mprs	
						-trns	
						-xtns	
						4([+Nom])	
						4([+them])	
						4[+modl]	
						4[+actr]	
						4[+PAT]	
						6[+assn]	
						6[+MNS]	

'The wooden roofs are similar to the ones in the hotspring resort.'
(YU50'3, modified)

Examples of verbs in this class are given in (65):

(65)		
<i>hitoshii</i>	to be identical to	
<i>sitasii</i>	to be close to (a person)	
<i>tigawanai</i>	to be unchanged, nondistinct from	

3.2.7 Subtype F

The extension verbs in the PVC-2 class require an extension predicate in addition to the postposition that marks the MNS complement. The examples are far fewer in comparison to the subtypes described so far. The verbs in Subtype F share a cluster of features [+mode,+xtns,-assn,-crsp,-lctn,-mprs,-trns]. The individual matrices differ depending on the types of complements required by the extension verb. There have been no examples located in my data so far of verbs in Subtype F. I give a plausible example of my own in (66). In (66), the MNS complement is marked by the postposition *de* [+P,-drcn,+trmn] and the

predicate nominal *konzatu* [+N,+prdc,-qnty,-djct] is the predicate complement.

(66)

Yokosukasen	ga	tuukinkyaku	de	konzatu	sita.
Yokosuka line	Nom	commuters	at	crowd	did
Index	2ndex	3ndex	4ndex	5ndex	6ndex
+N	+P	+N	+P	+N	+V
			-drcn	-djct	+mode
			+trmn		+xtns
					-assn
					-crsp
					-lctn
					-mprs
					-trns
					2([+Nom])
					2[+actr]
					2[+PAT]
					4[+MNS]
					4[+trmn]
					-drcn
					5[+prdc]
					5[+N]
					-djct

'Yokosuka line was crowded with commuters.'

3.2.8 Subtype G

In (67) below, the MNS complement is marked by the postposition *to* [+P,-xtns,+assn] and the postposition *ni*₁ [+P,+xtns,-assn] marks the predicate complement. This example, therefore, belongs to the subtype G presented in Figure 3.9.

(67) PVC-2-G

Musume	wa	Simamura	to	naname	ni ₁	mukaiatta
	Tpc		with	diagonal	as	faced
1ndex	2ndex	3ndex	4ndex	5ndex	6ndex	7ndex
+N	+P	+N	+P	+N	+P	+V
			+assn		+xtns	+assn
					-assn	+mode
						+xtns
						-crsp
						-mprs
						-lctn
						-trns
						2([+modl])
						2([+them])
						2[+actr]
						2[+PAT]
						2([+Nom])
						4[+MNS]
						4[+assn]
						6[+prdc]
						6 +xtns
						-assn

'The girl was diagonally opposite Simamura.' (YU2043-modified)

(68)

Suzuki	ga	Tanaka	to	tomodati	ni ₁	natta.
	Nom		with	friend	as	became
1ndex	2ndex	3ndex	4ndex	5ndex	6ndex	7ndex
+N	+P	+N	+P	+N	+P	+V
			+assn		+xtns	+assn
					-assn	+mode
						+xtns
						-crsp
						-mprs
						-lctn
						-trns
						2([+Nom])
						2[+actr]
						2[+PAT]
						4[+MNS]
						4[+assn]
						6[+prdc]
						6 +P
						+xtns
						-assn

'Suzuki became friends with Tanaka.'

Although there have been abundant examples of all seven types of extension predicates for regent verbs in the class of PVC-1-1, or simple intransitive verbs, there have been no examples in the primary data I

have examined so far of intransitive mode verbs that require an extension predicate.¹⁰ In (69) below is a list of schematic examples for each subtype of PVC-2-D verbs:

(69)

1. X ga Y to hitosiku kibisikatta
 equal strict
 'X was as strict as Y is.'
2. X ga Y to tomodati to natta.
 friend became
 'X assumed the role of being friends with Y.'
3. X ga Y to sanzikan arasotta.
 3-hours competed
 'X competed with Y for three hours.'

3.2.9 Subtype H

Here is an example of an impersonal intransitive mode verb with a cluster of features: [-trns, -lctn, -crsp, +mode, +mprs, -xtns]. The head verb in (70) below is impersonal since an addition of PAT to (70) will yield an ungrammatical construction, (71).

(70)

Kimi	no	hoo	de	kodawatta
you	Gen	side	at	made such an issue of it
Index	2ndex	3ndex	4ndex	5nde
+N	+P	+N	+P	+V
			-drcn	+mode
			+trmn	+mprs
				-assn
				-crsp
				-lctn
				-trns
				-xtns
				0([+them])
				0([+Nom])
				0(+Nom)
				-rfrn
				0[+actr]
				0[+PAT]
				4[+MNS]
				4 -drcn
				+trmn

'You made such an issue of it.' (YU2382-modified)

(71)

*Kimi no hoo ga kimi no hoo de kodawatta

	Nom	at
PAT	MNS	

Similarly, (72) is [+mprs], since (73) is ungrammatical. This impersonal mode intransitive verb is derivationally related to the simple intransitive class of verbs, our PVC-1 (74):

(72)

Minna de wameita

all at shouted

'With all of us (we) shouted.'

(73)

*Minna ga minna de wameita

(74)

Minna ga wameita.

3.3 PRIMARY VERB CLASS 3 (PVC-3)

Verbs in this class share a cluster of the contextual features [-trns,-lctn,+crsp,-mode]. In terms of the features [+xtns] and [+mprs], all verbs belong to one of four groups. They are non-extension non-impersonal, extension non-impersonal, non-extension impersonal, or extension impersonal. I therefore present the verbs in this class in the order of four groups established in terms of the features [+xtns] and [+mprs].

3.3.1 PVC-3 [-mprs,-xtns]

The verbs in this class share a cluster of the contextual features [-trns,-lctn,+crsp,-mode,-mprs,-xtns]. They are subcategorized further by the features stativity [+sttv], comparison [+cmpr], directionality [+drcn], and process [+prcs] as shown in Figure 3.10. The COR-marking postposition, either *ni* or *yori*, is listed for individual subtypes:

telicity. However, the same diagnostic as applied to PVC-3 verbs differentiates non-process verbs from process verbs.

In (73) below an analysis of a verb in Subtype A is presented. It is followed by (74), a partial list of additional verbs that belong to Subtype A. An analysis of a verb that belongs to Subtype B is given in (75), followed by a partial list (76) of additional verbs in Subtype B.

The non-stative comparative verbs are subcategorized further by the directionality feature, establishing Subtype C for non-directional non-stative comparative verbs. The directional non-stative comparative verbs are subcategorized further by the diagnostic of the *-te iru* attachment. If the *-te iru* form attached to a directional non-stative comparative verb yields a progressive interpretation, the verb has the feature [+prcs]. When the attachment of the same form to a directional non-stative comparative verb does not give such an interpretation, the verb is [-prcs]. We label non-process, directional, non-stative, comparative verbs as Subtype D and corresponding process verbs as Subtype E.

In (77) below an analysis of a verb in Subtype C is presented. It is followed by (78), a partial list of additional verbs that belong to Subtype C.

An analysis of a verb that belongs to Subtype D is given in (79), followed by a partial list (80) of additional verbs in Subtype D. An

analysis of a verb in Subtype E is given in (81), followed by a list (82) of verbs in the same subtype.

The stative correspondent intransitive verbs are divided further by the feature [+cmpr]. We establish those with [-cmpr] as Subtype F and those with [+cmpr] as Subtype G. The non-comparative stative verbs require their COR be marked with the postposition *ni* [+P,-assn] while comparative stative verbs require their COR be marked with the postposition *yori* [+P,+sorc,-trmn].

(73) PVC-3-A

Verbs in Subtype A have the features

[+crp,-cmpr,-lctn,-mode,-mprs,-prcs,-sttv,-trns,-xtns]. The COR is marked with the postposition *ni* [+P,-assn].

Singo	ni	yama	no	oto	ga	kikoeta
	by	mountain	Gen	sound	Nom	heard
1index	2ndex	3ndex	4ndex	5ndex	6ndex	7ndex
+N	+P	+N	+P	+N	+P	+V
	-assn					+crsp
						-cmpr
						-lctn
						-mode
						-mprs
						-prcs
						-sttv
						-trns
						-xtns
						2[+COR]
						2[-assn]
						6[+actr]
						6([+Nom])
						6[+PAT]

'Singo heard the sound of the mountain.' (YA7')

The verbs in this class invoke no change of state on the part of the PAT. The PAT-actr of these verbs exercises no control over the action. It is a spontaneous action on the part of COR as well. The verbs in a way focus on the moment of instantiation of such action. As the verb focuses on the instantiation, the progressive interpretation of the *-te iru* form is incompatible. The COR of these verbs is a non-active or passive participant in the action. Further examples of such verbs are listed below:

(74) PVC-3-A

<i>kikoeru</i>	COR hears PAT spontaneously Komako no sakebi ga Simamura ni kikoeta Gen cry Nom by heard 'Simamura heard Komako's cry.' (YU55-1)
<i>Kokoroutareru</i>	PAT is emotionally moved by COR Akanboo no me no kagayaki ni Singo wa baby Gem eyes Gen shine by Tpc kokoroutareta was hit at his heart 'Singo was moved emotionally by the baby's shining eyes.' (YA85-modified)
<i>mieru</i>	COR (Simamura) sees PAT (Komako) spontaneously
<i>mitukaru</i>	COR (teacher) finds PAT (mischief) spontaneously
<i>nomareru</i>	COR (darkness) swallows PAT (color of the snow)
<i>osowareru</i>	PAT (Singo) senses COR (the approach of unhappiness)
<i>taoreru</i>	PAT (the Chairman) is gunned down by COR (the right wing activist)
<i>tukamaru</i>	PAT (the newcomer) is captured by COR (the boss)
<i>ukaru</i>	PAT (the son) passes COR (the entrance examination)
<i>utareru</i>	PAT (Simamura) is surprised by COR (Komaka's statement)

(75) PVC-3-B

The verbs in this class share a cluster of the following features:

[+crsp, +prcs, -cmpr, -lctn, -mode, -mprs, -sttv, -trns, -xtns]. The COR is marked with the postposition *ni* [+P, -assn].

Kikuzi	wa	Tikako	no	musinkei	ni	odoroita
	Tpc		Gen	tactless	by	surprised
				ness		
1ndex	2ndex	3ndex	4ndex	5ndex	6ndex	7ndex
+N	+P			+N	+P	+V
	+modl				-assn	+crsp
						+prcs
						-cmpr
						-drcn
						-lctn
						-mode
						-mprs
						-sttv
						-trns
						-xtns
						2 [+modl])
						2 ([+Nom])
						2 ([+them])
						2 [+actr]
						2 [+PAT]
						6 [+COR]
						6 [-assn]

'Kikuzi was astonished at Tikako's tactlessness.' (SE1)

I have assigned COR complement status to the *ni*-marked actant based on our causative diagnostic that was introduced in chapter 2, section 3.1.4:

(75')

*Suzuki ga Kikuzi ni Tikako no musinkei ni odorokaseta.

(Suzuki caused Kikuzi to be astonished by Tikako's tactlessness.)

In (75') if we assume the *ni*-marked actant, *Tikako no musinkei* is a LOC complement, the addition of the COR complement *Kikuzi ni* should not violate the one per Sent principle and the sentence should be grammatical regardless of contexts. However, in order to have the causativized sentence accepted, we must provide a highly marked context such as Suzuki is the director of the movie and Kikuzi is an actor who is willingly being directed to act astonished at Tikako's lack of tact. Without such a context (75') is ruled out. Therefore, the ill-formedness is situational rather than grammatical, which would mean that the causative test supports LOC rather than COR. An alternative explanation is that there is a further derivation that derives the old COR as LOC in order to make room for the new COR introduced by causative derivation and allows for this new interpretation. I return to the issue of COR to LOC derivation with other PVC-3 verbs in this section.

The following verbs among others belong to PVC-3-B :

(76)

<i>akiru</i>	to be bored (with playing cards)
<i>hurueru</i>	to tremble (with rage)
<i>kizutuku</i>	to be hurt (by the remarks)
<i>kurusimu</i>	to suffer (with an illness)
<i>nayamu</i>	to be worried (about affairs)
<i>obieru</i>	to be troubled (with nightmares)
<i>odoroku</i>	to be startled (by her beauty)
<i>yorokobu</i>	to rejoice (at the news)

<i>arawareru</i>	to be washed (by waves of remorse)
<i>ikaseru</i>	to cause someone to go
<i>nayamasareru</i>	to be troubled (by the loud music)
<i>obiyakasareru</i>	to be intimidated (by the appearance)
<i>osowareru</i>	to be attacked (by the bad dream)
<i>sasowareru</i>	to be enticed (by the mountain)
<i>sarasareru</i>	to be assailed (by the emptiness)
<i>sirareru</i>	to be exposed (to the guild)
<i>torawareru</i>	to be captured (by the misbelief)
<i>tukareru</i>	to be tired
<i>tutumareru</i>	to be wrapped (in a soft happiness)

It should be noted that this list includes verbs that are morphologically complex. They are passive verbs marked by the affix *-(r)are* and causative verbs marked by the affix *-(s)ase*. These verbs, therefore, are derivationally related to respective intransitive or transitive verbs to which these affixes are appended.

(77) PVC-3-C

The verbs in Subtype C share a cluster of the features [+crsp, +cmpr, -drcn, -lctn, -mode, -mprs, -sttv, -trns, -xtns]. The COR is marked with the postposition *ni* [+P, -asn]. The *ni*-marked complement provides a frame of reference for the non-stative non-directional comparative verb, our PVC-3-C. For example the verb *yabureta* 'lost' in (77) below is stated in reference to *intaigo* '(=invincible master's) final match'. The verb in this subtype is indifferent to the actual process of action involved, e.g. 'defeating' in (77). The verb indicates the state as a result of such a action, which is encoded in reference to the frame of reference represented by the COR. The required frame of reference for Subtype C is provided by the

postposition *ni* for non-directional nonstative comparative verbs.

Comparative direction verbs, Subtypes D and E, require their frame of reference to be provided by a *yori*-marked complement.

'Huhai no Meizin'	wa	intaigo	ni	yabureta.
Invincible Master	Tpc	final match	by	lost
Index	2ndex	3ndex	4ndex	5ndex
+N	+P	+N	+P	+V
	+modl		-assn	+cmpr
				+crsp
				-drcn
				-lctn
				-mode
				-mprs
				-sttv
				-trns
				-xtns
				2([+modl])
				2([+Nom])
				2([+them])
				2[+actr]
				2[+PAT]
				4[+COR]
				4[-assn]

'The Invincible Master has lost in his final match.' (ME:162)

In (77) the implication is that other than his final match the master has not been defeated. I am using the term comparative [+cmpr] in a special sense of 'contrast' here. There is a sense of 'contrast' based on the COR (=the last match).

In (77), the *ni*-marked complement is analyzed as COR rather than LOC. This is due to the fact that we cannot have an additional COR in the corresponding causative sentence:

(77')

*Ootake ga huhai no meijin ni intaigo ni yaburesaseta.

PAT COR COR

'Ootake caused the invincible master to be defeated in the final match.'

Assuming that *intaigo* 'last match' is LOC, the addition of COR 'invincible master' should be permissible. However, (77') is ungrammatical. The alternative analysis of assigning COR to the same complement would predict the ungrammaticality of (77') on the basis of the one per Sent constraint, since causative derivation cannot introduce a new COR complement into a case frame that already contains one. By contrast, the *o*-causative sentence (77'') is grammatical, since it does not introduce a new COR and thus does not violate the one per Sent constraint:

(77'')
 Ootake ga 'huhai no meizin' o intaigo ni yaburesaseta.
 AGT PAT COR
 'Ootake caused the invincible master to be defeated in the final match.'

The verb *yabureta*, therefore, is [+crsp] instead of [+lctn].

Some verbs in class C, such as *masaru*, *niru*, *otoru*, and *sugureru*, do not have a progressive interpretation in the corresponding *-te iru* form, while others such as *katu*, *makeru*, and *tizimu* have both a progressive and a resultative interpretation. The former group of verbs therefore, are inherently low in an activity scale. In other words, the PAT of such verbs does not exercise control over the action. In dialogue, root forms of these verbs rarely appear. They are almost always used in the corresponding *-te iru* form.

(78) PVC-3-C

<i>heru</i>	PAT (the membership) decreases to COR (below 100)
<i>hikareru</i>	to be drawn (by the young lady)
<i>hueru</i>	PAT (books) increase to COR (more than 300)
<i>katu</i>	Actor PAT wins COR (chess match)
<i>makeru</i>	Actor PAT loses COR (opponent)
<i>muku</i>	to be inclined (to teaching profession)
<i>masaru</i>	PAT is superior to COR
<i>niru</i>	PAT (the son) resembles COR (his mother)
<i>otoru</i>	PAT is inferior to COR
<i>sugureru</i>	PAT (the young lady) excels in COR (music)
<i>tizimu</i>	PAT shrinks to COR
<i>ukaru</i>	to survive COR (difficult examination)

(79) PVC-3-D

There have been no examples found so far in the primary data of verbs in Subtype D. Verbs in Subtype D share a cluster of the features [+crsp,+cmpr,+drcn,-mprs,-lctn,-mode,-prcs,-sttv,-trns,-xtns]. The COR is marked with the postposition *yori* [+P,+sorc,-trmn]. The list of plausible verbs in Subtype D in (80) below includes verbs that are homophonous with Subtype C above. To distinguish these pairs of verbs, verbs in Subtype D are marked with '2' in (80).

(80)

<i>otoru₂</i>	PAT is inferior to COR
<i>masaru₂</i>	PAT is superior to COR
<i>otoru₂</i>	PAT is inferior to COR
<i>sugureru₂</i>	PAT surpasses COR

(81) PVC-3-E

There have also been no examples found so far in the primary data of verbs in Subtype E. Verbs in Subtype E have a cluster of the features [+crsp,+cmpr,+drcn,+prcs,-lctn,-mode,-mprs,-sttv,-trns,-xtns]. The COR is marked with the postposition *yori* [+P,-sorc,+trmn]. The list

of plausible verbs in Subtype E in (82) below includes verbs that are homophonous with Subtype C above. To distinguish these pairs of verbs, verbs in subtype E are marked with '2' in (82).

(82)
*heru*₂ PAT decreases from COR
*hueru*₂ PAT increases from COR
*tizimu*₂ PAT shrinks from COR

These verbs are termed directional, as they have a built-in directionality anchored at the abstract point of comparison. For example, the sentence *Taizyuu ga 100 pondo yori hetta* 'The weight decreased from 100 lbs' is acceptable when the current weight is less than 100 lbs. By contrast *Taizyuu ga 100 pondo yori hueta* 'The weight increased from 100 lbs' is grammatical when the current weight is more than 100 lbs.

(83) PVC-3-F

The intransitive correspondent verbs in Subtype F require their COR to be marked with the postposition *ni* and share a cluster of the features [+crsp, +sttv, -cmpr, -mprs, -lctn, -mode, -trns, -xtns].

Singo	wa	sono	hito	no	sugata	mo	omoidaseta.
	Tpc	that	person	Gen	figure	Tpc	was able to recall
1ndex	2ndex	3ndex	4ndex	5ndex	6ndex	7ndex	8ndex
+N	+P	+Det	+N	+P	+N	+P	+V
	+modl					+modl	+crsp
							+sttv
							-cmpr
							-mode
							-mprs
							-trns
							-xtns
							2([+modl]) ¹¹
							2([+them])
							2[+COR]
							2[-assn]
							7([+modl])
							7([+Nom])
							7([+them])
							7[+actr]
							7[+PAT]

'(In bed with the storm roaring about him,) Singo could see her (among the shelves of bonsai trees).' (YA44-modified)

It should be noted that in (83), the COR is the pertinent experiencer. The head verb is morphologically marked with the potential suffix -(r)er-. The verbs in Subtype F may not necessarily be marked morphologically. The selected list of verbs in Subtype F, (84) below, includes morphologically both marked as well as unmarked verbs. In (84), the verbs in Subtype F are listed in two groups: non-adjectival verbs, [+V,-djct], and adjectival verbs [+V,+djct].

(84)

[+V, -djct]

<i>aru</i>	COR (Simamura) possesses PAT (inheritance/fortune)
<i>dekiru</i>	COR (Syuuiti) is competent in PAT (French)
<i>iru</i>	COR (Suzuki) is in need of PAT (money)
<i>mieru₂</i>	COR (Simamura) is capable of seeing PAT (the train)
<i>tutomaru</i>	COR is capable of fulfilling PAT (position or role)
<i>wakaru</i>	COR (Simamura) is capable of recognizing/comprehending PAT (Komako)

[+V, +djct]

<i>akarui</i>	PAT (Komako) is knowledgeable about COR (neighborhood)
<i>karui</i>	COR (Simamura) is buoyed up PAT (his body)
<i>nai</i>	COR (Simamura) is not in possession of PAT (verbal response)
<i>sihaisarenai</i>	PAT (a long marriage) is beyond the control of COR (its origin)
<i>tikai</i>	PAT (the land of Tizimi) is near to COR (this hotspring)
<i>tuyoi</i>	PAT (this leaf) possesses resistance to COR (rain and wind)
<i>utoi</i> (currency)	PAT (Suzuki) is uninformed about COR
<i>warui</i>	PAT (the woman) is feeling bad for COR (the villagers)

The verbs listed in (84) include so-called 'dative subject' verbs. What we see here is that when COR carried the lexical feature [+humn] or when COR was the pertinent experiencer, it was singled out as a so-called 'dative subject' in early transformational studies, based apparently on the English translation rather than on any language-internal grammatical properties. Since I define 'subject' grammatically rather than translationally as the [+Nom] complement,

so-called dative cases are not compatible with assuming the function of 'subject' in our framework.

The verbs in (84) include morphologically complex verbs, the so-called potential verbs marked with affix *-(r)er-*. These verbs are derivationally related to their unaffixed intransitive or transitive counterparts. Besides the verbs listed in (84), there is a set of nouns that can function as predicates with the same syntactic properties.

Examples follow:

(84')	
<i>hituyoo</i>	necessity
<i>kiree</i>	prettiness
<i>kinodoku</i>	pity
<i>korigori</i>	being tired of (the person)
<i>sizuka</i>	quietness

(85) PVC-3-G

The verbs in the last subtype of non-impersonal, non-extension intransitive correspondent verbs, Subtype G, require their COR to be marked with the postposition *yorī* [+P,+sorc,-trmn] and share a cluster of features [+crsp,+sttv,+cmpr,-mprs,-lctn,-mode,-trns,-xtns]. The majority of verbs in the primary data I found so far of Subtype G are marked morphologically, e.g. adjectival verbs such as *minikui* 'ugly' (85a) and *hayai* 'fast' (85b). Additional examples of verbs in Subtype G are listed in (86) below.

(85a)				
Fusako	wa	hahaoya	yori	minikui.
	Tpc	mother	away from	ugly
1ndex	2ndex	3ndex	4ndex	5ndex
+N	+P	+N	+P	+V
	+mod1		+sorc	+cmpr
			-trmn	+crsp
				+sttv
				-lctn
				-mode
				-mprs
				-trns
				-xtns
				2 ([+mod1])
				2 ([+them])
				2 [+actr]
				2 ([+Nom])
				2 [+PAT]
				4 [+COR]
				4 +sorc
				-trmn

'Fusako is uglier than her Mother.' (YA104 modified)

(85b)				
Fumiko	ga	Kikuzi	yori	hayai.
	Nom		away from	fast
1ndex	2ndex	3ndex	4ndex	5ndex
+N	+P	+N	P	+V
			+sorc	+cmpr
			-trmn	+crsp
				+sttv
				-lctn
				-mode
				-mprs
				-trns
				-xtns
				2 [+actr]
				2 ([+Nom])
				2 [+PAT]
				4 [+COR]
				4 +sorc
				-trmn

'Fumiko is ahead of Kikuzi.' (SE85 modified)

(86)

<i>awai</i>	(the light) is dimmer than (on the night of the new moon)
<i>akarui</i> ₂	(the Milky Way) is brighter than (the brightest full moon)
<i>warui</i> ₂	(checking the content of the pocketbook) is worse than (stealing)

It should be noted that there have been homophonous verbs *akarui* and *warui* that belong to Subtype F. In order to distinguish these verbs in Subtype F from homophonous verbs in Subtype G, '2' is added for verbs in Subtype G. We expect that more of these homophonous verbs will turn up. In addition to the examples above, there is also a set of nouns that can function as predicates with the same syntactic properties: *ue* (higher than) and *sita* (lower than), among others. It should be noted that these are distinct in terms of syntactic properties from the relator nouns *ue* (above) and *sita* (below).

3.3.2 PVC-3 [-mprs,+xtns]

Compared to the non-extension non-impersonal verbs, their [+xtns] counterparts are far less frequent in occurrence in the primary data. I discuss them in the order of subtypes I established in Figure 3.11 by analogy to their non-extension counterparts. For example, A' in Figure 3.11 differs from A in (1) in terms of the feature [+xtns]. Otherwise subtypes A' and A share identical clusters of features.

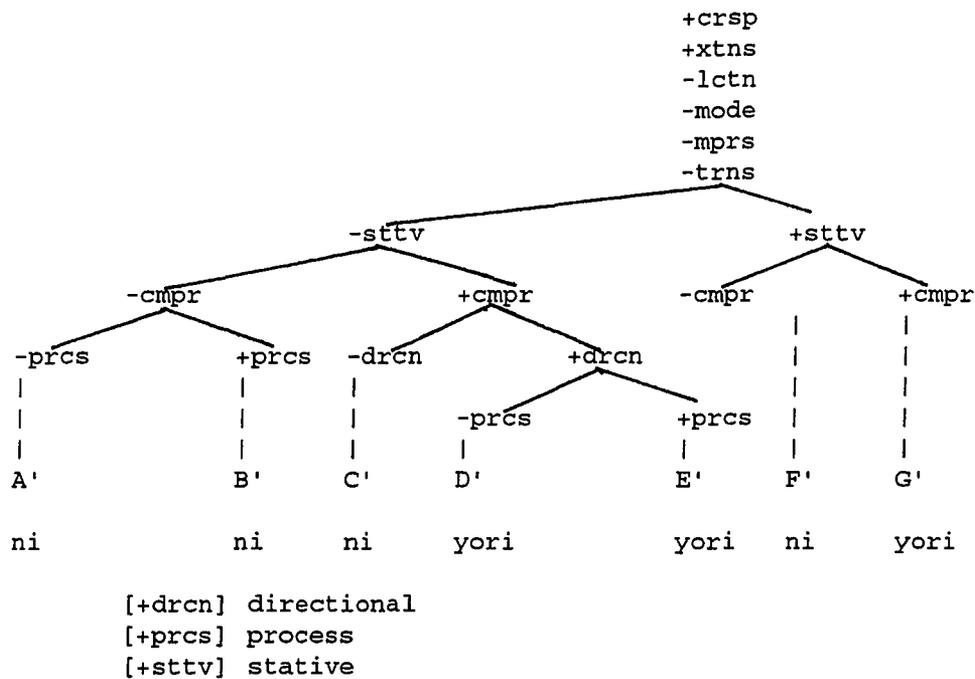


Figure 3.11 PVC-3 Subtypes [-mprs,+xtns]

It should be noted that there have been no examples found in the primary data so far of Subtype D', which is an expected outcome since there have been no examples in the primary data for the non-extension counterpart either. I discussed this discrepancy in (79).

In the following section, I will present analyses with case frames for verbs that belong to individual subtypes, followed by a discussion of these subtypes. I will not repeat the cluster of features for the subtypes or their COR marking postpositions, as they are clearly stated in Figure 3.11 and also in the individual case frames.

(87) PVC-3-A'

Fusako	ni	kodomo	ga	hutari	dekita
	by	child	Nom	two persons	was born
1ndex	2ndex	3ndex	4ndex	5ndex	6ndex
+N	+P	+N	+P	+N	+V
	-assn			+qnty	+crsp
					+nmnl
					+qnty
					+xtns
					-cmpr
					-lctn
					-mode
					-mprs
					-prcs
					-sttv
					-trns
					2[+COR]
					2[-assn]
					4([+Nom])
					4[+actr]
					4[+PAT]
					5[+Acc]
					5[+prdc]
					5 +prdc
					+qnty

'Husako has two children.' (YA4 modified)

In the case frame given with a fully specified lexical matrix for the head verb *dekita* and with linking indices, the two features [+nmnl] and [+qnty] identify the required complement type. The features on complement types have been introduced and discussed earlier in chapter 2, section 4.2.

(88) PVC-3-B'

The head verb *omowaseta* in (88a) is an extension verb that requires its complement be marked with the postposition *to*₁ [+P,+xtns,+assn].

(88a)

Temariuta no osanai hayakuti de ikiiki to hazunda tyoosi wa tui sakki no Yoko nado yume ka *to*₁ Simamura ni omowaseta.

'The quick lovely manner in which Yoko rolled off the nonsense words made Simamura wonder if he might have seen the earlier Yoko in the dream.' (YU50)

The PAT *tyoosi* 'manner' is topicalized by a modal postposition *wa*, the COR Simamura is marked by the postposition *ni*, and *to*₁ in *tui sakki no Yoko nado yume ka to*₁ is a 'complementizer', an [+xtns,+assn] postposition that forms an endocentric construction with the head verb *omowareta*. The *ka* is a sentential particle, or 'syuuziyosi', whose presence here identifies the complement clause as [+root]. A reduced form of the sentence is analyzed below. The features on complement types such as [+assn], [+nfrm], and [-nmnl] have been introduced and discussed earlier in chapter 2, section 4.2.

(88b)

tyoosi	wa	yume	ka	to ₁	Simamura	ni	omowaseta.
Manner	Tpc	dream		as if		by	wondered
1ndex	2ndex	3ndex	4ndex	5ndex	6ndex	7ndex	8ndex
+N	+P	+N	+P	+P	+N	+P	+V
	+modl			+xtns		-assn	+assn
				+assn			+crsp
							+nfrm
							+prcs
							+xtns
							-cmpr
							-lctn
							-mode
							-mprs
							-nmnl
							-sttv
							-trns
							2([+modl])
							2([+them])
							2([+Nom])
							2[+actr]
							2[+PAT]
							5[+prdc]
							5[+xtns
							+assn
							7[+COR]
							7[-assn]

'The manner made Simamura wonder if he might have seen [it] in the dream.' (YU50-modified)

(89) PVC-3-C'

There are more examples for verbs in Subtype C' than those found for A' and B'. The extension verb *uturu* 'appears to be' in (89a) below belongs to Subtype C'. Example (89a) includes the PAT *hito* 'person' and the COR *me* 'eyes' in addition to the required complement *ooganemoti no yoo* 'very wealthy-like', which is marked by the postposition *ni*₁ [+P,+xtns,-assn]:

(89a)

Sono hito wa kodomo no me ni wa ooganemoti no yoo ni₁
 that man Tpc child Gen eye by Tpc the rich Gen look as
 PAT COR
 ututta.
 appeared

'The man, in the child's eyes, appears to be very rich.'

The verb *natta* in (89b) below is a non-impersonal extension verb which belongs to Subtype C'.

(89b)

Saikun	ni	onna	ga	asobiaite	ni ₁	natta.
his wife	by	woman	Nom	companion	as	became
1ndex	2ndex	3ndex	4ndex	5ndex	6ndex	7ndex
+N	+P	+N	+P	+N	+P	+V
	-assn				+xtns	+cmpr
					-assn	+crsp
						+nfrm
						+xtns
						-assn
						-drcn
						-lctn
						-mode
						-mprs
						-nmnl
						-sttv
						-trns
						2[+COR]
						2[-assn]
						4([+Nom])
						4[+actr]
						4[+PAT]
						6[+prdc]
						6 +xtns
						-assn

'The woman became a good companion for his wife.' (YU2091m)

While head verbs in (89a) and (89b) require the same type of complement, specified by the features [-nmnl,+nfrm,-assn], the head verb

sita in (89c) requires yet another type of complement, which is specified by features [+nmnl,-qnty,-actn].

(89c)

Ano	ko	ni	kinodoku	sita	yo.
that	child	by	unfair	did	Sprt
1ndex	2ndex	3ndex	4ndex	5ndex	6ndex
+Det	+N	+P	+N	+V	
		-assn	+djct	+cmpr	
				+crsp	
				+nmnl	
				+xtns	
				-actn	
				-drcn	
				-lctn	
				-mode	
				-mprs	
				-qnty	
				-sttv	
				-trns	
				3 [+COR]	
				3 [-assn]	
				4 [+prdc]	
				4 [+Acc]	
				4 +prdc	
				+djct	
				x ([+Nom])	
				x [+actr]	
				x [+PAT]	

'I was not very nice to the poor girl.' (YU2111)

Unlike other verbs in Subtype C', the head verb *kasegu* 'to earn' in (89d) below requires a bare nominal complement with the feature [+qnty].

(89d)						
Komako	wa	tuki	ni	hyakuen	kasegu.	
	Tpc	month	by	100 yen	earn	
1ndex	2ndex	3ndex	4ndex	5ndex	6ndex	
+N	+P	+N	+P	+N	+V	
	+modl		-assn	+qnty	+cmpr	
					+crsp	
					+nmnl	
					+qnty	
					+xtns	
					-drcn	
					-lctn	
					-mode	
					-mprs	
					-sttv	
					-trns	
					2([+modl])	
					2([+Nom])	
					2[+actr]	
					2[+PAT]	
					4[+COR]	
					4[-assn]	
					5[+Acc]	
					5[+prdc]	
					5 +prdc	
					+qnty	

'Komako earns 100 yen a month.' (YU2342m)

(90) PVC-3-D'

As mentioned previously, there have been no examples found in the primary data of this subtype so far.

(91) PVC-3-E'

The head verb *sita* 'did' in (91) belongs to Subtype E' and requires a nominal, non-quantity action complement, *hatten*

'development'. As a member of the PVC-3-E' class, the verb requires its COR to be marked with the postposition *yor*.

Hokubu	<i>yor</i>	Nanbu	<i>ga</i>	hatten	<i>sita</i>
North	away from	South	Nom	develop	did
1index	2index	3index	4index	5index	6index
	+P		+P	+N	+V
	+sorc			-djct	+actn
	-trmn				+cmpr
					+crsp
					+drcn
					+nmnl
					+prcs
					+xtns
					-lctn
					-mode
					-mprs
					-qnty
					-sttv
					-trns
					2[+COR]
					2 +sorc
					-trmn
					4[+actr]
					4([+Nom])
					4[+PAT]
					6[+Acc]
					6[+prdc]
					6 +prdc
					-djct

'The South developed more than the North.'

The head verb *sita* is derivationally related to the PVC-1-C2 verb *sita* in: *Nanbu ga hatten sita* 'The South has developed.'

(92) PVC-3-F'

Example (92a) below illustrates a verb in the class of PVC-3-F'.

The head verb *kanzirareta* requires its complement to be marked with *ni*₁

[+P,+xtns,-assn]. This requirement is specified in the lexical matrix for the verb by the features [-nmnl,+nfrm,-assn].

(92a)

Singo	wa	Syuuiti	ga	zannin	ni ₁	kanzirareta
	Tpc		Nom	cruel	by	could sense
1ndex	2ndex	3ndex	4ndex	5ndex	6ndex	7ndex
+N	+P	+N	+N	+N	+P	+V
	+modl			+djct	+xtns	+crsp
					-assn	+nfrm
						+sttv
						+xtns
						-assn
						-cmpr
						-lctn
						-mode
						-mprs
						-nmnl
						-trns
						2([+modl])
						2([+them])
						2[+COR]
						2[-assn]
						4([+Nom])
						4[+actr]
						4[+PAT]
						6[+xtns]
						{-assn}
						6[+prdc]

'Singo was able to sense cruelty in Syuuiti.' (YA64)

While (92a) is an example of a head verb with the morphosyntactic feature [-djct], (92b) below is an example of a head verb with the morphosyntactic feature [+djct]. The head verb *tarinai* 'to be insufficient' requires a bare nominal with a feature [+qnty] as its complement.

(92b)						
Syuunyu	ga	zyuutaku	Roon	ni	sanman	tarinai.
income	Nom	mortgage		by	30,000	be short
1ndex	2ndex	3ndex		4ndex	5ndex	6ndex
+N	+P	+N		+P	+N	+V
				-assn	+qnty	+crsp
						-ctvt
						+nmnl
						+qnty
						+sttv
						+xtns
						-cmpr
						-lctn
						-mode
						-mprs
						-trns
						2 ([+Nom])
						2 [+actr]
						2 [+PAT]
						4 [+COR]
						4 [-assn]
						5 [+Acc]
						5 [+prdc]
						5 +prdc
						+qnty

'The income is short by 30,000 yen for the housing loan.'

(93) PVC-3-G'

There have been no occurrences of this subtype so far in the primary data.

We have observed in (87) through (93) that Subtypes A' through G' occur infrequently compared with their non-extension counterparts, Subtypes A through G. In fact, non-occurrence is observed only for Subtype D in the non-extension paradigm, while both Subtype D' and G' did not occur in the primary data. For complement types, extension

verbs failed to occur with the complement characterized with feature [-nmnl,-nfrm,+ctvt]. This contrasts with extension verbs in PVC-1. Since features have been established to have the positive value correspond to the more marked dimension, it is to be expected that verbs with more plus features, being more marked, will also be less frequent.

A summary of subtypes and their complement types is given below:

(94)

complement type	Subtypes in the primary data				
[+V,+djct]	-	-	-	-	-
[+V,-djct]	-	-	-	-	-
[+P,+xtns,-assn]	-	-	C'	-	-
[+P,+xtns,+assn]	-	B'	-	-	-
[+N,-qnty,+djct]	-	-	C'	-	-
[+N,-qnty,-djct]	-	-	-	E'	-
[+N,+qnty]	A'	-	C'	-	F'

3.3.3 PVC-3 [+mprs,-xtns]

There have been no examples found of verbs in this group in the primary data so far, and I have been unable to construct plausible examples for this group.

3.3.4 PVC-3 [+mprs,+xtns]

There are very few occurrences of verbs in this group. These verbs are the impersonal counterparts of Subtype C' and F'. I label them as Subtype C" and F", respectively. The verbs in Subtype C" therefore, have the following features: [+cmpr,+crsp,+xtns,-lctn,-mode,-mprs,-sttv,-trns,-drcn]. The verbs in Subtype F" share a cluster of features [+crsp,+mprs,+sttv,+xtns,-cmpr,-lctn,-mode,-trns].

The possible complement types required by the verbs in Subtype C" and F" are also limited: their complement must be marked with the postposition to_1 [+P,+xtns,+assn]. I discuss examples of verbs in Subtype C" in (95) and (96). Subtype F" is presented in (97) below.

(95) PVC-3-C"

The verbs in Subtype C" are not exempted from zero anaphora. The verb *wakatta* in (95) is an impersonal intransitive extension verb in the PVC-3 class that requires a complement characterized as [-nmnl,+nfrm,+assn]. While the PAT of the lower clause may be extrapolated to an external element (= the figure) as indicated in the translation, the PAT of the regent clause is impersonal with a '0' index. The MNS adjunct consists of words with indices 1 and 2. Example (95a) has a zero anaphor with a COR case relation.

(95a)

Hitome	de	sissin	site	iru	to ₁	wakatta
One		with un-	do	exists	as-if	knew
glance		conscious				
index	2ndex	3ndex	4ndex	5ndex	6ndex	7ndex
+N	+P	+N	+V	+V	+P	+V
	-drcn				+xtns	+assn
	-trmn				+assn	+crsp
						+mprs
						+nfrm
						+xtns
						-drcn
						-lctn
						-mode
						-nmnl
						-sttv
						-trns
						0 ([+Nom])
						0 ([+them])
						0 (+Nom)
						-rfrn
						0 [+actr]
						0 [+PAT]
						2 ([+MNS])
						2 (-drcn)
						-trmn
						6 [+prdc]
						6 +assn
						+xtns
						x [+COR]
						x [-assn]

'One knew immediately that the figure was unconscious.' (YU59)

(96) PVC-3-C"

The verb *sireta* in (96a) below is another example of Subtype C".

(96a)

Otokotati	no	atari		habakaranu	oogoe	de
men	Gen	surroundings		unmindful	loud voice at	
index	2ndex	3ndex		4ndex	5ndex	6ndex
Etigo	no	oku	no	momizi	to ₁	ireta.
	Gen	inward	Gen	maple		became known
7ndex	8ndex	9ndex	10nde	11index	12ndex	13ndex

'It became clear that (it is a) maple tree from the Etigo province by the loud conversation of these men.' (YA100)

(96b) is an analysis for a modified and simplified version of (96a).

(96b)

Oogoe	de	momizi	to ₁	sireta.
loud voice	at	maples	as if	became known
Index	2ndex	3ndex	4ndex	5ndex
+N	+P	+N	+P	+V
	-drcn		+xtns	+assn
	-trmn		+assn	+crsp
				+mode
				+mprs
				+nfrm
				+xtns
				-drcn
				-lctn
				-nmnl
				-sttv
				-trns
				x[+COR]
				x[-assn]
				0([+Nom])
				0[+PAT]
				0[+actr]
				2([+MNS])
				2 -trmn
				-drcn
				4[+prdc]
				4 +assn
				+xtns

'It became clear by loud conversations that it was a maple tree.'

(97) PVC-3-F"

Itudemo hoosin zyootai ni hairiyasui kare ni totte wa ano yuugeshiki no kagami ya asayuki no kagami ga hitobito no mono to₁ wa sinzirarenakatta.

'Always ready to give himself up to reverie, he could not believe that the mirror floating over the evening scenery and the other snowy mirror were really works of man.' (YU36)

The COR kare 'he' is marked by one of the complex case markers *ni* *totte*, which is topicalized and marked by the postposition *wa*. The PAT consists of two mirrors, or *kagami*. The postposition *to₁*

[+P,+xtns,+assn] that marks the complement here is also topicalized and marked additionally by the modal postposition *wa*.¹² There is no PAT for the head verb *sinzirarenakatta*. The nominal marked with *ga* [+P,+Nom] is the PAT of the lower clause. Therefore, this construction is impersonal.

There are similar constructions in typologically different languages such as in English and German:

English:

It was strange that he left.

German:

Es scheint, dass er sich geirrt hat.

'It seems that he made a mistake '

The verb *sinzirarenakatta* 'could not believe' (97) and the verb *omowaseta* 'caused to wonder' (88a) belong to the category of extension verbs characterized as [+xtns,-nmnl,+nfrm] from the point of view of lexical dependency analysis.

3.4 PRIMARY VERB CLASS 4 (PVC-4)

The verbs in PVC-4 share a cluster of the features [-trns,-lctn,+crsp,+mode]. There have been no examples of verbs in this class found so far in the primary data I examined, indicating that the verbs in this class are limited in occurrences in naturalistic data. It seems that an inverse relation obtains between the higher ratio of features marked with a plus sign in the case frame and the chances of occurrence of such verbs in naturalistic data, as it should if the positive values have been designed to encode the marked value of the feature. The analysis below is offered for plausible examples based on my own intuition.

The examples of verbs in this class are derivationally related to verbs in the Primary Verb Classes 1, 2, and 3.

3.4.1 [-mprs,-xtns]

Non-impersonal, non-extension PVC-4 verbs share a cluster of the features [+crsp,+mode,-lctn,-mprs,-trns,-xtns]. There are 10 subtypes presented in Figures 3.12, 3.13, and 3.14 below. In Figure 3.12 and 3.13, I have also listed the postpositions that mark their MNS and COR complements.

In Figure 3.12 and Figure 3.13, subtypes with the feature causative [+caus] are distinctively marked with the causative suffix *-(s)ase*, and subtypes with feature passive [+pasv], Subtypes C and H, are distinctively marked with passive suffix *-(r)are*. Subtypes E and J with the features [+caus,+pasv] are distinctively marked with the suffixes *-(s)ase-rare*. Subtypes A, B, F, and G are morphologically unmarked since they have neither causative nor passive suffixes, and they contrast with morphologically marked Subtypes, C, D, E, H, I, and J. Subtypes C and H are marked by the suffix *-(r)are*, Subtypes D and I are marked by *-(s)ase*, and Subtypes E and J are marked by *-(s)ase-rare*. Furthermore the morphologically unmarked Subtypes A and B are distinguished by the postpositions that mark their COR actants: The COR of verbs in Subtypes A and F is marked by *ni* while the COR of verbs in Subtypes B and G is marked by *yori*. The COR of Subtypes other than B and G are marked by *ni*. These markings are summarized in (98) below:

(98) Suffixes and postpositions of PVC-4 Subtypes

	postpositions			suffixes			
	COR		MNS				
	<i>ni</i>	<i>yori</i>	<i>de</i>	<i>to</i>	<i>-(s)ase</i>	<i>-(r)are</i>	<i>-(s)ase-rare</i>
A	+	-	+	-	-	-	-
B	-	+	+	-	-	-	-
C	+	-	+	-	-	+	-
D	+	-	+	-	+	-	-
E	+	-	+	-	-	-	+
F	+	-	-	+	-	-	-
G	-	+	-	+	-	-	-
H	+	-	-	+	-	+	-
I	+	-	-	+	+	-	-
J	+	-	-	+	+	+	+

While the majority of verbs in this group are marked morphologically by *-(s)ase* or *-(r)are* suffixes, there are a few verbs that have come to my attention that belong to Subtypes A, B, F, and G. Fully specified examples of a verb for each individual subtype are given with matrices, followed by a selected list of verbs that belong to individual subtypes.

3.4.1.2 Subtype A

(99) PVC-4-A

Sidooryoku	de	Tanaka	ga	Suzuki	ni	yabureta
leadership	with		Nom		by	lost
1ndex	2ndex	3ndex	4ndex	5ndex	6ndex	7ndex
+N	+P	+N	+P	+N	+P	+V
	-drcn				-assn	+crsp
	+trmn					+mode
						-assn
						-caus
						-cmpr
						-mprs
						-lctn
						-pasv
						-trns
						-xtns
						2 [+MNS]
						2 -drcn
						+trmn
						4 ([+Nom])
						4 [+actr]
						4 [+PAT]
						6 [+COR]
						6 [-assn]

'Tanaka lost to Suzuki in terms of leadership.'

While *yabureta* is a verb in Subtype A that is derivationally related to Subtype C of our PVC-3 verbs, *aru* below, among others, is a

verb in Subtype A of PVC-4 which is derivationally related to Subtype F of our PVC-3 verbs.

(100) Verbs in Subtype A, PVC-4

<i>aru</i>	PAT exists in COR (with 10,000 yen) e.g.: <i>Ikkai no gaisyoku ni 10,000 yen de oturi ga atta</i> 'For a restaurant meal, we received little change from our payment of 10,000 yen. '(=The loose change existed for 10,000 yen for a restaurant meal.)
<i>dekiru</i>	COR is competent in PAT without relying on others, e.g.: <i>Suzuki ni Doitugo ga dokugaku de dekita.</i> 'Suzuki could manage German on his own.'
<i>makeru</i>	Actor PAT loses COR (= race, opponent) (by physical strength)
<i>masaru</i>	Actor PAT is superior to COR (=human being) (in musical talent)
<i>niru</i>	PAT resembles COR (=PAT's father) (in inner strength)
<i>sugureru</i>	PAT excels over COR (in analytical skill)
<i>tutomaru</i>	COR is capable of fulfilling PAT (position or role) (without relying on others)
<i>tuyoi</i>	PAT is competent in COR (with abundant funding)
<i>wakaru</i>	COR is capable of recognizing/comprehending PAT (from PAT's appearance/style)
<i>yabureru</i>	PAT loses to COR (in endurance)

3.4.1.3 Subtype B

(101) PVC-4-B

Sidooryoku	de	Tanaka	ga	Suzuki	yor	ototta
leadership	with		Nom		away	was
					from	inferior
1ndex	2ndex	3ndex	4ndex	5ndex	6ndex	7ndex
+N	+P	+N	+P	+N	+P	+V
	-drcn				+sorc	+cmpr
	+trmn				-trmn	+crsp
						+mode
						-assn
						-caus
						-mprs
						-lctn
						-pasv
						-trns
						-xtns
						2[+MNS]
						2[+drcn
						+trmn
						4([+Nom])
						4[+actr]
						4[+PAT]
						6[+COR]
						6[+sorc]
						-trmn

'Tanaka was inferior to Suzuki in terms of leadership.'

(102) PVC-4-B verbs

<i>katu</i>	Actor PAT wins over human COR (with leadership)
<i>makeru</i>	Actor PAT loses to COR (with physical strength)
<i>masaru</i>	PAT is superior to COR (=human being) (in musical talent)
<i>sugureru</i>	PAT excels COR (in leadership)
<i>tuyoi</i>	PAT is stronger (in computer applications) than COR

These verbs in PVC-4-B are derivationally related to PVC-3-D and PVC-3-F verbs. They all share a feature comparative ([+comp]). There

is a semantic restriction between PAT and COR; the PAT actor and COR must be identical in semantic types. Some verbs in PVC-4-B are homophonous to those in PVC-4-A. It should be noted, however, that the range of verb types in Subtype B is more limited than those in Subtype A. The verbs in B are more stative in nature while those in Subtype A are not limited to stative verbs.

Having finished the discussion on morphologically unmarked non-association intransitive mode correspondent verbs, I present below morphologically complex non-association intransitive mode correspondent verbs, or verbs that appear in Subtypes C, D, and E.

3.4.1.4 Subtype C

(103) PVC-4-C.

Mazui	gei	de	kyaku	ni	kirawareru.
poor	skill	with	customer	by	is disliked
1ndex	2ndex	3ndex	4ndex	5ndex	6ndex
+V	+N	+P	+N	+P	+V
		-sorc		-assn	+cmpr
		+trmn			+crsp
					+mode
					-assn
					-caus
					-mprs
					-lctn
					-pasv
					-trns
					-xtns
					3[+MNS]
					3 -sorc
					+trmn
					5[+COR]
					5[-assn]
					x([+Nom])
					x[+actr]
					x[+PAT]

'(The entertainer) with his poor skill is disliked by customers.'

It should be noted here that the verb *kirawareru* has an unmarked counterpart *kirau* 'to dislike', which is a transitive verb to be discussed in chapter 4, section 1.

In (104) below additional verbs in Subtype C and their glosses are given. Also included are unmarked counterparts to these verbs and the primary verb classes to which these unmarked counterparts belong.

(104)

akirareru The audience (=COR) becomes bored with the entertainer (=PAT) due to the unsophisticated performance (=MNS) and the entertainer is affected by that. (*akiru* PVC-3)

akirerareru The entertainer (=PAT) astonishes the audience (=COR) by the unsophisticated performance (=MNS) and the entertainer is affected by that. (*akireru* PVC-3)

sugosareru The son (=PAT) is affected by his mother (=COR) wearing (cotton clothing) (*sugosu* PVC-2)

3.4.1.5 Subtype D

(105) PVC-4-D.

Suzuki	ga	tuma	ni	wahuku	de	sugosasete
	+Nom	wife	by	kimono	at	force to wear
1ndex	2ndex	3ndex	4ndex	5ndex	6ndex	7ndex
+N	+P	+N	+P	+N	+P	+V
			-assn		-drcn	+caus
					+trmn	+crsp
						+mode
						-assn
						-lctn
						-mprs
						-pssv
						-trns
						-xtns
						2 ([+Nom])
						2 [+actr]
						2 [+PAT]
						4 [+COR]
						4 [-assn]
						6 [+MNS]
						6 -drcn
						+trmn

'Suzuki made his wife wear traditional Japanese-style clothing.'

It should be noted in (106) below, the putative verb in the transitive class, *akisaseru*, the causative counterpart of the unmarked *akiru*, is not included, since a sentence such as *Tanaka ga mazuui gei de*

Suzuki ni akisaseta in the sense that 'Tanaka with his (=Tanaka's) unsophisticated performance made Suzuki bored' is ungrammatical.¹³ This type of phenomenon is treated as a lexical gap, something that is to be expected in a lexical derivation analysis though not in a transformational one.

(106) Verbs in PVC-4-D

akiresaseru to make someone astonished with (*akireru* PVC-3)

3.4.1.6 Subtype E

(107) PVC-4-E

Tanaka	ga	Suzuki	ni	wahuku	de	sugosaserareta
	+Nom		by	kimono	at	was forced to wear
1ndex	2ndex	3ndex	4ndex	5ndex	6ndex	7ndex
+N	+P	+N	+P	+N	+P	+V
			-assn		-drcn	+caus
					+trmn	+crsp
						+mode
						+pasv
						-assn
						-lctn
						-mprs
						-trns
						-xtns
						2([+Nom])
						2[+actr]
						2[+PAT]
						4[+COR]
						4[-assn]
						6[+MNS]
						6 -drcn
						+trmn

'Tanaka was forced by Suzuki to wear traditional Japanese style clothing.'

In (107), the implication is that Suzuki's forcing Tanaka to wear traditional clothing is not well received by Tanaka.

(108)

<i>toosaseru</i>	to be forced to wear cotton clothing (even in winter)
<i>akiresaserareru</i>	to be made to be astonished (by the unsophisticated entertainment)
<i>sugosaserareru</i>	to be made to wear (cotton clothing)

3.4.1.7 Subtype F

(109) PVC-4-F.

Suzuki	ga	senkyo	ni	Tanaka	to	kunda.
		election	by		with	teamed up
1ndex	2ndex	3ndex	4ndex	5ndex	6ndex	7ndex
+N	+P	+N	+P	+N	+P	+V
			-assn		+assn	+assn
						+caus
						+crsp
						+mode
						-lctn
						-mprs
						-pasv
						-trns
						-xtns
						2([+Nom])
						2[+actr]
						2[+PAT]
						4[+COR]
						4[-assn]
						6[+MNS]
						6[+assn]

'Suzuki teamed up with Tanaka for the election.'

Another plausible analysis for (109) is to assign LOC to 4ndex. I choose not to do so on the basis of the following grammatical sentence:
Suzuki ga kono tiku kara senkyo ni Tanaka to kunda. 'Suzuki teamed up

from this district with Tanaka for the election.' In this sentence the actant marked with the postposition *kara* is a LOC complement, while the actant marked with the postposition *ni* is COR. The head verb *kunda* in this construction will be discussed in section 3.8.

Another related example is (109a) below:

(109a)
 yamada ga Suzuki ni Tanaka to kumasita
 'Yamada let Suzuki team up with Tanaka'

In addition to *kunda* and *kumasita* the verbs listed in (109c) represent examples of verbs in Subtype F. Since Subtypes A through J have been subcategorized based on the presence or absence of the causative suffix *-(s)ase-*, the verbs which do not have the this suffix *-(s)ase-* must be accommodated either in Subtype F, G, or H. That is, verbs with an affix *-(s)as-*, since they do not have causative suffix *-(s)ase-*, must belong to either Subtype F, G, or H. Since a verb like *kumasita* in (109a) lacks a passive suffix, it cannot be a verb in Subtype H. Neither can the same verb be a member of Subtype G since (109b) below is ungrammatical:

(109b)
 *Yamadaga Suzuki yori Tanaka to kumasita

Therefore, *kumasita* is considered to be a member of Subtype F.

This analysis is further motivated by the semantic distinction between two verbs sharing the same root, *aruk-* 'walking' or *tabe-* 'eating', but having the different affixes, *-(s)as-* and *-(s)ase-* : *aruk-as-u* versus *aruk-ase-ru* and *tabe-sas-u* versus *tabe-sase-ru*. The

former implies an artificial or special means to carry out such action, while the latter has no such implication:

Kodomo ni arukasu
'(He) makes (his) child walk (in a walker, or by holding the child's hand).'

Kodomo ni arukaseta
'(He) lets (hi)s child walk around.'

kazoku ni tabesasu
'(He) makes it possible that (his) family eat (by gainfully employed)'

Kazaoku ni tabesaseru
'(He) lets (his) family eat

Based on these facts, I conclude that the verbs *arukasu* and *tabesasu* in these examples belong to Subtype F, while verbs *arukaseru* and *tabesaseru* belong to Subtype I.

In early transformational grammar, it was customary to refer to these causatives as 'morphological' causative forms. In my analysis, which is based on the dependency relationship that holds between the head of the construction and its complements, these verbs belong to a class of non-causative intransitive mode correspondent verbs, Subtype F.

A majority of verbs in Subtype F are affixial derivatives with *-(s)as-* as illustrated in (109).

(109c)

<i>aisiawasu</i>	to make COR and MNS love each other Sakka ga John ni Mary to aisiawaseta 'The author made John love Mary and Mary love John.' (John and Mary are both the author's protagonists).
<i>awasu</i>	to make someone meet with
<i>butukarasu</i>	to make someone bump into
<i>huresasu</i>	to make someone touch with
<i>mukaiawasu</i>	to make COR and MNS face each other
<i>syaberasu</i>	to make someone talk with
<i>tukiawasu</i>	to make someone be associated with
<i>tunagerasu</i>	to make someone connect with
<i>wakaresasu</i>	to make someone be divorced from.

3.4.1.8 Subtype G

(110) PVC-4-G

Suzuki	ga	Tanaka	yori	Yamada	to	sitasii.
	Nom		away from	with	is close	
1ndex	2ndex	3ndex	4ndex	5ndex	6ndex	7ndex
+N	+P	+N	+P	+N	+P	+V
			+sorc		+assn	+assn
			-trmn			+caus
						+crsp
						+mode
						-lctn
						-mprs
						-pasv
						-trns
						-xtns
						2([+Nom])
						2[+actr]
						2[+PAT]
						4[+COR]
						4[+assn]
						6[+MNS]
						6[+assn]

'Suzuki is more familiar with Yamada than he is with Tanaka.'

(111)

<i>tikai</i>	to be closer in distance than COR with reference to MNS
<i>tooi</i>	to be further in distance than COR with reference to MNS

3.4.1.9 Subtype H

(112) PVC-4-H

Yamada	ga	Suzuki	ni	Tanaka	to	arasowareta
	+Nom		by		with	was competed
1ndex	2ndex	3ndex	4ndex	5ndex	6ndex	7ndex
+N	+P	+N	+P	+N	+P	+V
			-assn		+assn	+assn
						+crsp
						+mode
						+pasv
						-caus
						-lctn
						-mprs
						-trns
						-xtns
						2 ([+Nom])
						2 [+actr]
						2 [+PAT]
						4 [+COR]
						4 [-assn]
						6 [+MNS]
						6 [+assn]

'Yamada was affected by Suzuki competing with Tanaka.'

(113)

<i>aisiawareru</i>	to have someone (=COR) love another (=MNS) (and this mutually reciprocal action between COR and MNS in turn affects the PAT)
<i>awareru</i>	to have someone meet with another
<i>butukarareru</i>	to be bumped into
<i>hurerareru</i>	to be touched with
<i>mukaiawareru</i>	to have someone face each other
<i>syaberareu</i>	to have someone talk with
<i>tukiawareru</i>	to be associated with
<i>tunagarareru</i>	to be connected with
<i>wakararereru</i>	to be parted from/ to be divorced from

3.4.1.10 Subtype I

(114) PVC-4-I.

Yamada	ga	Suzuki	ni	Tanaka	to	arasowasasete
	+Nom		by		with	made compete
1ndex	2ndex	3ndex	4ndex	5ndex	6ndex	7ndex
+N	+P	+N	+P	+N	+P	+V
			-assn		+assn	+assn
						+caus
						+crsp
						+mode
						-lctn
						-mprs
						-pasv
						-trns
						-xtns
						2([+Nom])
						2[+actr]
						2[+PAT]
						4[+COR]
						4[-assn]
						6[+MNS]
						6[+assn]

'Yamada made Suzuki compete with Tanaka.'

(115)

<i>aisiawasaseru</i>	to make someone (COR) and another (MNS) love each other
	Sakka ga John ni Mary to aisiawasasete.
	'The author made John love Mary and Mary love John.' (John and Mary are both the author's protagonists).
<i>awasaseru</i>	to make someone meet with
<i>butukaraseru</i>	to make someone bump into
<i>huresaseru</i>	to make someone touch with
<i>mukaiawaseru</i>	to make COR and MNS face each other
<i>syaberaseru</i>	to make someone talk with
<i>tukiawaseru</i>	to make someone be associated with
<i>wakaresaseru</i>	to make someone be divorced from

It should be noted that the verbs in (115) have an alternative form marked with the suffix *-(s)as-* instead of *-(s)ase-*.

3.4.1.11 Subtype J

(116) PVC-4-J

Yamada	ga	Suzuki	ni	Tanaka	to	arasowasaserareta
	+Nom		by		with	made compete
1ndex	2ndex	3ndex	4ndex	5ndex	6ndex	7ndex
+N	+P	+N	+P	+N	+P	+V
			-assn		+assn	+assn
						+caus
						+crsp
						+mode
						+pasv
						-lctn
						-mprs
						-trns
						-xtns
						2([+Nom])
						2[+actr]
						2[+PAT]
						4[+COR]
						4[-assn]
						6[+MNS]
						6[+assn]

'Yamada was made by Suzuki to compete with Tanaka.'

(117)

<i>aisiawaserareru</i>	to be made to love each other
<i>awaserareu</i>	to be made to meet with
<i>butukaraserareru</i>	to be made to bump into
<i>huresaserareu</i>	to be made to touch with
<i>mukaiawaserareu</i>	to be made to face each other
<i>syaberaserareu</i>	to be made to talk with
<i>tukiawaserareu</i>	to be made to be associated with
<i>tunageraserareu</i>	to be made to connect with
<i>wakaresaserareu</i>	to be made to be divorced from

In the analyses presented in (112), (114), and (116) we observed clear-cut examples of a derivational relationship between PVC-2 and PVC-4 verbs. For example, the verb *arasou* 'to compete' in *Suzuki ga Tanaka to arasou* 'Suzuki competes with Tanaka' is a verb in Subtype C of PVC-2, or an atelic non-impersonal, non-extension, association PVC-2 verb. The MNS actant of such verbs, we noted, is a situational co-instigator of the action. With the addition of a COR, we observe that the forms of the verbs change as follows:

(118)		
<i>arasowareru</i>		'to be competed with' (a PVC-4-C verb),
<i>arasowasaseru</i>		'to cause to compete' (a PVC-4-D verb)
<i>arasowasaserareru</i>		'to be caused to compete' (a PVC-4-E verbs)

When a verb in PVC-4 is morphologically marked as in (118), it compresses essential information regarding the interplay among complements and adjuncts. Not until we come to the very end of the morphological marking on the verb, is it possible to sort out the interactions among the constituents. It is sometimes difficult to give a single English gloss for the verb, since English verbal morphology is not capable of carrying this kind of complex information. Therefore, the glosses above often must be presented in the form of more than one sentence.

3.4.2 [-mprs,+xtns]

There are few plausible examples of non-impersonal extension PVC-4 verbs. They maintain a derivational relationship with Subtype D of PVC-2-D verbs.

(119) Subtype H'

Yamada	ga	Suzuki	ni	Tanaka	to	tomodati	ni ₁
	Nom		by		with		as
1ndex	2ndex	3ndex	4ndex	5ndex	6ndex	7ndex	8ndex
+N	+P	+N	+P	+N	+P	+N	+P
	+Nom		-assn		+assn	+prdc	-assn
			-xtns		-xtns		+xtns

narareta.
 was become
 9ndex
 +V
 +assn
 +caus
 +crsp
 +mode
 +nfrm
 +pasv
 +xtns
 -lctn
 -mprs
 -nmnl
 -trns
 2([+Nom])
 2[+actr]
 2[+PAT]
 4[+COR]
 4[-assn]
 6[+MNS]
 6[+assn]
 8[+prdc]
 8|+xtns|
 |-assn|

'Yamada was affected by Suzuki's becoming friends with Tanaka.'

The construction (119) is an example of a [-mprs,+xtns]
 counterpart corresponding to the Subtype H, which was discussed in
 (112). It is therefore labeled as Subtype H'.

(120) Subtype F'

Suzuki	ga	senkyo	ni	Tanaka	to	taiketu.
	Nom	election	by		with	opposition
Index	2ndex	3ndex	4ndex	5ndex	6ndex	7ndex
+N	+P	+N	+P	+N	+P	+N
			-assn		+assn	-djct

sita
 did
 8ndex
 +V
 +actn
 +assn
 +crsp
 +mode
 +nmnl
 +xtns
 -caus
 -lctn
 -mprs
 -pasv
 -qnty
 -trns
 2([+Nom])
 2[+actr]
 2[+PAT]
 4[+COR]
 4[-assn]
 6[+MNS]
 6[+assn]
 7[+Acc]
 7[+prdc]
 7|+prdc|
 |-djct|

'Suzuki opposed Tanaka in the election.'

Subtype I' and J' below in (121) and (122) are non-impersonal extension counterparts of subtypes I and J discussed in (141) and (116).

(121) Subtype I'

Yamada	ga	Suzuki	ni	Tanaka	to	tomodati	to
	+Nom		by		with	friend	as if
1index	2ndex	3ndex	4ndex	5ndex	6ndex	7ndex	8ndex
+N	+P	+N	+P	+N	+P	+N	+P
			-assn		+assn	-djct	+assn
							+xtns

narasetta.
 forced to become
 9ndex
 +V
 +assn
 +caus
 +crsp
 +mode
 +nfrm
 +xtns
 -lctn
 -mprs
 -nmnl
 -pasv
 -trns
 2([+Nom])
 2[+actr]
 2[+PAT]
 4[+COR]
 4[-assn]
 6[+MNS]
 6[+assn]
 8[+prdc]
 8|+xtns|
 |+assn|

'Yamada made Suzuki assume a role as Tanaka's friend.'

(122) Subtype J'

Yamada	ga	Suzuki	ni	Tanaka	to	sanzikan
	+Nom		by		with	three hours
1ndex	2ndex	3ndex	4ndex	5ndex	6ndex	7ndex
+N	+P	+N	+P	+N	+P	+N
			-assn		+assn	+qnty

arasowasaserareta
 was forced to compete
 8ndex
 +V
 +assn
 +caus
 +crsp
 +mode
 +nmnl
 +pasv
 +qnty
 +trns
 +xtns
 -lctn
 -mprs
 2([+Nom])
 2[+actr]
 2[+PAT]
 4[+COR]
 4[-assn]
 6[+MNS]
 6[+assn]
 7[+Acc]
 7[+prdc]
 7|+prdc|
 |+qnty|

'Yamada was forced by Suzuki to compete with Tanaka for three hours (and Yamada was affected in an adverse manner by that).'

In examples (119) through (122) we observe that there are at least four extension subtypes that occur with verbs in the class of PVC-4. From these plausible examples we can say that it is necessary to have at

least four different extension subtypes for non-impersonal extension verbs in PVC-4. Compared to verbs in PVC-1, which require seven different subtypes, this number four is considerably smaller.

These examples of non-impersonal extension PVC-4 verbs have an extremely high number of features marked with a plus sign. For example in (122), out of 11 contextual features nine are marked with the positive sign. The head verb in (122) is highly marked in terms of function, distribution, and meaning. For these Japanese constructions, it becomes increasingly difficult to provide English glosses in a single sentence.

3.4.3 [+mprs, -xtns]

There are even fewer instances of impersonal verbs that belong to PVC-4. One plausible example is given in (123) below. The regent *tarinai* in (123) below does not have a referential PAT actor in its case frame. This is supported by the fact (124) below is ungrammatical.

(123)

yatin	ni	\$500	de	wa	tarinai
rent	by		at	Tpc	insufficient

COR MNS

'\$500 is insufficient for monthly rent.'

(124)

*yatin	ga	yatin	ni	\$500	de	wa	tarinai
rent	Nom	rent by		at	Tpc		insufficient

PAT COR MNS

'\$500 is insufficient for monthly rent.'

The ungrammaticality of (124) indicates that the PAT actor and the COR cannot coexist with this verb. Therefore, the regent *tarinai* in (123) is [+mprs,-xtns]. To be more precise, this verb is an impersonal counterpart corresponding to Subtype A , PVC-4, which was introduced earlier.

(124) contrasts with (125) below:

(125)
 yatin ga \$500 de wa tarinai
 rent Nom with Tpc insufficient
 PAT MNS
 '\$500 is insufficient for monthly rent.'

The verb in (125) indicates that the regent in (123), a non-extension impersonal member of the PVC-4 class, is derivationally related to a non-extension, non-impersonal member of the PVC-2 class of verbs.

3.4.4 [+mprs,+xtns]

There have been no examples of verbs in this class in the data. And I have not come across plausible examples elsewhere.

3.5 PRIMARY VERB CLASS 5 (PVC-5)

3.5.1 PVC-5 subtypes

3.5.2 [-mprs, -xtns]

Verbs in this class share a cluster of the features [-trns, +lctn, -crsp, -mode]. They are further divided into fifteen major subgroups by three features: stativity [+sttv], directionality [+drcn], traversality [+trvs], telicity [+telc], source [+sorc], and goal [+goal]. They are presented in Figures 3.15, 3.16, and 3.17 together with postpositions that mark their LOC complements, and are followed by subcategorization rules in (126).

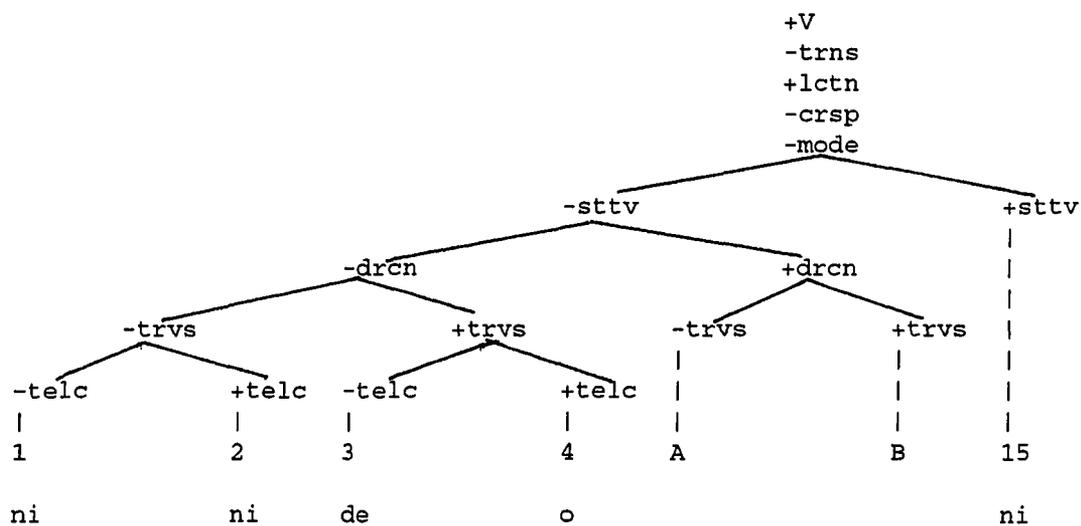


Figure 3.14 PVC-5 Subtypes (1)

The PVC-5 verbs with a cluster of the features [-sttv, +drcn, -trvs] (A in Figure 3.14 above) are further divided as in Figure 3.15 below

according to telicity and the localistic features source [+sorc] and goal [+goal]:

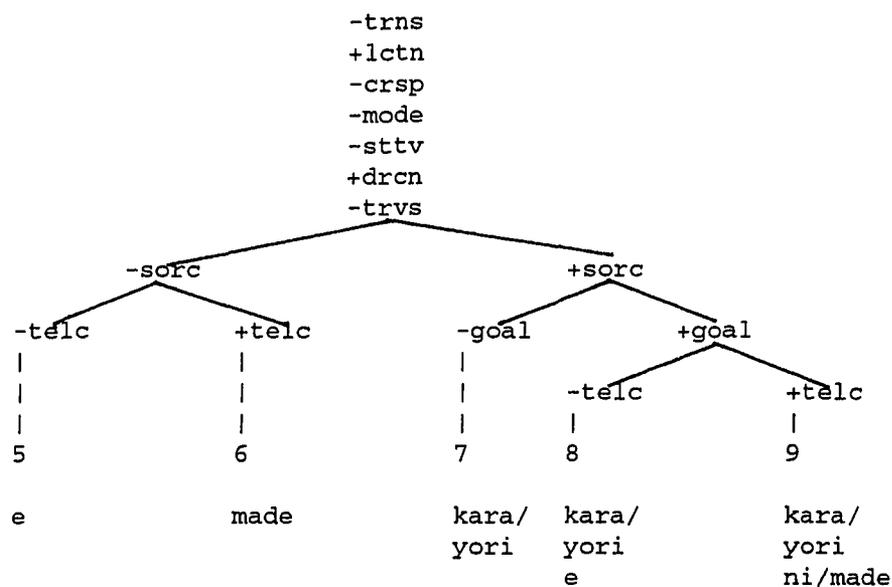


Figure 3.15 PVC-5 Subtypes (2)

The PVC-5 verbs with a cluster of the features [-sttv,+drcn,+trvs] verbs, B in Figure 3.15 above) are further divided as in Figure 3.16 on the next page:

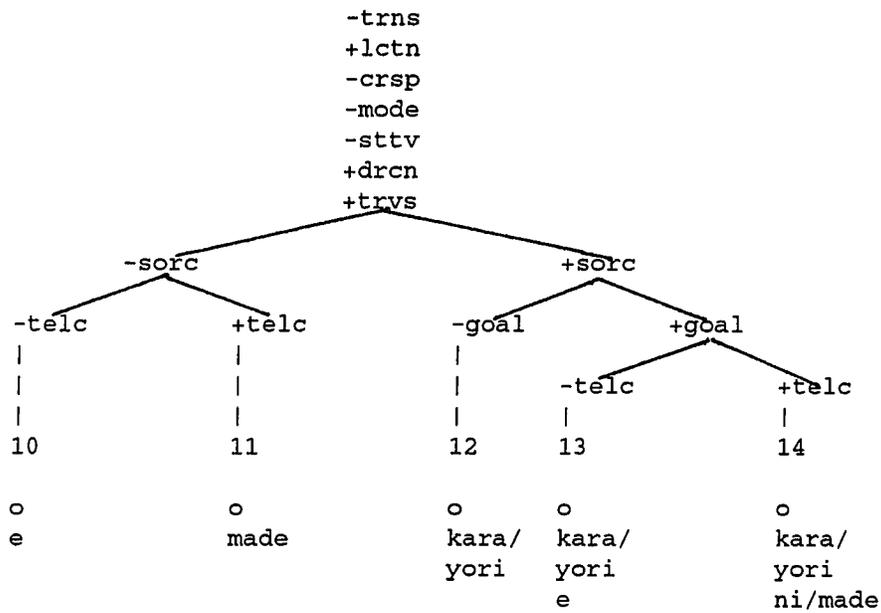


Figure 3.16 PVC-5 Subtypes (3)

The subtypes in Figures 3.14, 3.15, and 3.16 are governed by the following subcategorization rules:

(126)

a	[+V]	->	[+sttv]
b	[-sttv,+lctn]	->	[+drcn,+trvs]
c	[+drcn]	->	[+sorc]
d	[-sorc]	->	[+telc]
e	[+sorc]	->	[+goal]
f	[+goal]	->	[+telc]

The dependent postpositions for the 15 subgroups of locational intransitive verbs are listed in (127) below:

(127)

subcategory	postpositions			
PVC-5-1	ni			
2	ni			
3	de			
4	o			
5	e			
6	made			
7	kara/iori			
8	kara/iori	e		
9	kara/iori	made		
10	o	e		
11	o	made		
12	o	kara/iori		
13	o	kara/iori	e	
14	o	kara/iori	made	
15	ni			

In the remainder of this section I present examples of verbs from my data in the proposed 15 categories.

The feature stativity for PVC-5 verbs is determined by the attachment of an aspect-marker *-te iru*. Non-stative verbs co-occur with this aspect marker, while stative verbs do not. The non-stative, non-extension, non-directional, non-traversal PVC-5 verbs are either atelic (1) or telic (2). The distinction between these two types can be established by a test in which an aspectual marker *-te iru* is attached to the stem of the head verb. For PVC-5-1 verbs the attachment of this aspect marker entails progressive interpretation, whereas for PVC-5-2 verbs such entailment is not present. Instead, when we attach the same aspect marker to PVC-5-2 verbs, it indicates that the result of such

activity designated by the verb continues. In the following example (128), the regent verb *yobikakeru* 'call on' in (128) is an atelic, non-traversal, non-directional, non-stative PCV-5; while regent verb *mitiru* 'fill' in (130) is a telic, non-traversive, non-directional, non-stative PCV-5. Further examples of these two types of verbs are given in (129) and (131), respectively:

3.5.2.1 Subtype 1

(128) PVC-5-1

Kanozyo	ga	ekityoo	ni	yobikakeru
She	Nom	station master	by	calls
1index	2ndex	3ndex	4ndex	5ndex
+N	+P	+N	+P	+V
			-assn	+lctn
				-crsp
				-drcn
				-mode
				-sttv
				-telc
				-trns
				-trvs
				2([+Nom])
				2[+actr]
				2[+PAT]
				4[-assn]
				4[+LOC]

'The girl calls to the station master.' (YU2058)

(129) PVC-5-1 verbs

au	to see (human beings)
ataru	to shine (on the screen)
inoru	to pray
kakaru	to receive (a phone call) ¹⁴
kayou	to go (to the doctor's)
kigaeru	to change clothes
mitoreru	to be fastened on (the bright red color)
muragaru	to swarm (in the market)
noru	to ride (on the train)
sigamituku	to cling (to the door)
suwaru	to sit (on the mat)
tatu	to stand (in the shadow of cedar trees)

3.5.2.2 Subtype 2

(130) PVC-5-2

Mabataku	to	Amanokawa	ga	me	ni	mitita
blink	when	Milky Way	Nom	eyes	by	filled
1ndex	2ndex	3ndex	4ndex	5ndex	6ndex	7ndex
		+N	+P	+N	+P	+V
					-assn	-trns
						+lctn
						-crsp
						-drcn
						-mode
						-sttv
						+telc
						-trns
						-trvs
						4 ([+Nom])
						4 [+actr]
						4 [+PAT]
						6 [-assn]
						6 [+LOC]

'(He blinked, and) the Milky Way came to fill his eyes.' (YU2536) (The words with indices 1 and 2 are adjuncts. They form a conditional sentence.¹⁵)

(131) PVC-5-2 verbs

<i>ahureru</i>	to fill (PAT=tear, LOC=eyes)
<i>arawareru</i>	to emerge from
<i>hureru</i>	to touch (the hands)
<i>kaburituku</i>	to bite (at her arm)
<i>kakeru</i>	to want (in affection)
<i>kanzirareru</i>	to feel (PAT=malice, LOC=human being)
<i>kikoeru</i>	to be heard (PAT=sound) in the distance
<i>mitukaru</i>	to find PAT (=chestnuts) at the edge of water
<i>muragatta</i>	to be swarming (at the light)
<i>nazimu</i>	to be familiar with
<i>nokoru</i>	to linger (in the ear)
<i>norikomu</i>	to come aboard (LOC=train)
<i>simiru</i>	(The warm red of the under-Kimono) sinks its way (into the half-frozen Simamura)
<i>tobituku</i>	to jump (at the taxi)
<i>tukamaru</i>	to put (his arms) arms (around a persimmon tree)
<i>tuku</i>	to arrive (at the inn)
<i>tuku</i>	to be aware of (PAT=attention)
<i>tutawaru</i>	to come across
<i>uturu</i>	to reflect (in the mirror)
<i>uzumoreru</i>	to be buried in (the snow)

3.5.2.3 Subtype 3

Non-stative, non-directional, traversal PVC-5 verbs are either telic or atelic. Atelic, non-stative, non-directional, traversal PVC-5-3 verbs are marked by the postposition *de* which was introduced in chapter 1. It should be noted that the traversality at issue here is in terms of 'temporal' locus rather than 'spatial' locus.

(132) PVC-5-3

Bosuton	de	kurasu.
	at	live
1index	2ndex	3ndex
+N	+P	+V
	-drcn	+lctn
	+trmn	+trvs
		-crsp
		-drcn
		-mode
		-sttv
		-telc
		-trns
		2[+LOC]
		2 -drcn
		+trmn
		x([+Nom])
		x[+actr]
		x[+PAT]

'We live in Boston.'

(133) PVC-5-3 verbs

<i>kieru</i>	to disappear (in the sky)
<i>kurasu</i>	to make a living (in the village)
<i>sugosu</i>	to pass time (in the foreign country)
<i>hataraku</i>	to be employed (at the research institute)
<i>tobiagaru</i>	to jump up from the chair

3.5.2.4 Subtype 4

(12) PVC-5-4

While atelic, non-stative, non-directional traversal, PVC-5-3 verbs are focusing on a 'temporal' locus rather than a 'spatial' locus, the telic counterpart, PVC-5-4 represents activities focusing on the 'spatial' locus: the area being traversed during the activities designated by the verb. The telic, non-stative, non-directional, traversal PVC-5-4 verbs are marked by the [+Acc] postposition *o*, that

was introduced in chapter 1 section 4.2.4. The examples are repeated in (134) below, and (135) is an analysis. Examples of verbs in this category are given in (136).

(134) PVC-5-4

toorinuketa
 Kisya ga tonneruo toorinuketa
 train Nom tunnel passed through
 'The train came out of the tunnel.'

hassita
 Uma ga soogen o hassita.
 horse prairie ran
 'The horse ran on the prairie.'

itta
 Wakamidori no mati o kuruma wa itta
 Young green Gen city cab went
 'The cab traveled in the city surrounded by green shoots' (K111)

(135) PVC-5-4

Komako	wa	kaidan	o	agatta.
	Tpc	stairways	+Acc	ascended
index	2ndex	3ndex	4ndex	5ndex
+N	+P	+N	+P	+V
	+mod1			+lctn
				+telc
				+trvs
				-crsp
				-drcn
				-mode
				-sttv
				-trns
				2 ([+mod1])
				2 ([+Nom])
				2 ([+them])
				2 [+actr]
				2 [+PAT]
				4 [+Acc]
				4 [+LOC]

'Komako climbed up the stairs.' (YU2182)

(136) PVC-5-4 verbs

<i>aruku</i>	to walk
<i>deru</i>	to slip (from the house)
<i>kakeru</i>	to run (up the wide road)
<i>koeru</i>	to cross (the tracks)
<i>mawaru</i>	to surround
<i>noboritumeru</i>	to climb (up the slope)
<i>oriru</i>	to descend (the steps)
<i>tatu</i>	to depart
<i>tobimawaru</i>	to circle (the light bulb)
<i>toorinukeru</i>	to pass by (the children's pillows)
<i>toorisugiru</i>	to pass through (the earthen floor)
<i>wataru</i>	to ferry, go across, wade (the river)
<i>yuretooru</i>	to flicker (over the white face)

3.5.2.5 Subtype 5

The fifth type of PVC-5 verbs shares a cluster of the features: [+drcn, -trvs, -sorc, -telc]. The postposition *e* marks a LOC complement. An example of PVC-5-5 verb in (137) is followed by a list of selected verbs in this category in (138).

(137) PVC-5-5

Hutari	wa	heya	no	hoo	e	arukidasita
twosome	Tpc	room	Gen	direction	toward	began walking
1ndex	2ndex	3ndex	4ndex	5ndex	6ndex	7ndex
+N	+P	+N	+P	+N	+P	+V
	+modl				-sorc	+drcn
					-trmn	+lctn
						-crsp
						-mode
						-sorc
						-sttv
						-telc
						-trns
						-trvs
						2([+Nom])
						2([+them])
						2[+actr]
						2[+PAT]
						6 -sorc
						-trmn]
						6[+LOC]

'The two of them walked off toward his room.' (YU18)

(138) PVC-5-5 verbs

<i>deru</i>	(the drunkenness) comes (out on the face)
<i>hairu</i>	(the woman) enters (into the cedar grove)
<i>hasiru</i>	to run (toward the darker mountain)
<i>hurimuku</i>	to look (toward Simamura)
<i>iku</i>	to go (into the village)
<i>kuru</i>	to come (toward the cold region)
<i>moreru</i>	(the voice) leaks (in all directions)
<i>nagarekomu</i>	to pour (into the room)
<i>tikazuku</i>	to go closer (to the moon)
<i>tobikomu</i>	to plunge (into the bath)
<i>sasoikomareru</i>	to be lead (into the other world)
<i>ukiagaru</i>	to float (into the Milky Way)

3.5.2.6 Subtype 6

The sixth type of PVC-5 verb has a cluster of the features [+drcn,-trvs,-sorc,+telc]. The LOC complement is marked by the postposition *made*, which was introduced in chapter 1, section 4.1. Examples in (139) and (140) are followed by a list of such verbs in (141).

(139) PVC-5-6

Eki	made	iku.
station	to	go
1ndex	2ndex	3ndex
+N	+P	+V
	-sorc	+drcn
	-trmn	+lctn
		+telc
		-crsp
		-mode
		-sorc
		-sttv
		-trns
		-trvs
		2 -sorc
		-trmn
		x([+Nom])
		x[+actr]
		x[+PAT]

'(We'll) go to the station.' (YU2513)

(140)

Rosia onna no monouri ga konna inaka made kuru
 Russian woman Gen peddler Nom such country to come
 'You find a white Russian woman peddler even in these mountains.'
 (YU29'2)

(143b)
 Komako ga Simamura no soba kara/*yori tobidasita
 Nom Gen side from/*away from broke away
 'Komako broke away from Simamura.' (YU2556)

The LOC complements in (142a) and (142b) refer to a specific, concrete, and point-like locus, rather than an abstract location. The postposition *kara* in these examples may not be replaced by *yori*. On the other hand, we may replace *kara* by *yori* when the dependent noun in the LOC complement refers to an abstract and less point-like location. Moreover, the *yori*-marked LOC complement given in Tanaka (1977:377) has an abstract dependent noun such as court, viewpoints, economic developments, justice, ruling classes, research, and investigations. This indicates that the choice of the postposition *kara* over *yori* is governed not by the regent verb, but by the noun that is the dependent of the postposition in the LOC complement. Therefore, the postposition *yori* versus *kara* as a source locus marker does not mark a grammatically significant environment in terms of subcategorization of the regent verb.¹⁶

3.5.2.7 Subtype 7

The seventh type of PVC-5 verb is a non-stative, directional, non-traversal, source verb, which has an additional feature [-goal]. The LOC complement is marked by the postposition *kara*. An example is given in (143), followed by list of verbs in this class in (144).

(143) PVC-5-7

Eiga	no	firumu	kara	hi	ga	deta
movie	Gen	film	from	fire	Nom	started
1ndex	2ndex	3ndex	4ndex	5ndex	6ndex	7ndex
+N	+P	+N	+P	+N	+P	+V
			+sorc		+Nom	+drcn
						+lctn
						+sorc
						+telc
						-crsp
						-goal
						-mode
						-sttv
						-trns
						-trvs
						5[+sorc]
						5[+LOC]
						6([+Nom])
						6[+actr]
						6[+PAT]

'The fire had started at the projector.' (YU54'2)

(144) PVC-5-7 verbs

<i>agaru</i>	to come in (from the back)
<i>deru</i>	to come (out of the bath/entrance)
<i>dekiru</i>	to make (out of rice)
<i>hanareru</i>	to slip away (from a person/place)
<i>hurikaeru</i>	to turn around (from the mirror)
<i>kaeru</i>	to return (from somewhere)
<i>kakinoboru</i>	(Komako) fights her way up (from the cedar grove)
<i>kikoeru</i>	to be heard (PAT = the carpenter's plane) in (a ski shop)
<i>kirawareru</i>	(The rich) are disliked by (the poor)
<i>mieru</i>	to be seen (PAT = the stars) through (the trees at their crest)
<i>moetuku</i>	(LOC = film) catches (PAT = fire)
<i>otiru</i>	to fall (from the balcony)

<i>sameru</i>	to wake up (from the dream)
<i>siru</i>	to realize (from the appearance)
<i>tobidasu</i>	to break away (from the side of a person)
<i>tukureru</i>	to be able to make (from rice)
<i>umareru</i>	(his sad little dream world) springs (from such a pleasure)
<i>ukabiagaru</i>	(The face) rises from (the bushes)
<i>wakaru</i>	to be apparent (from the manner of talking)

It should be noted that among PVC-5-7 verbs, *deru*, *hanareru*, and *tobidasu* are derivationally related to PVC-5-4; *kirawareru* and *mieru* are derivationally related to PVC-3-A; and *dekiru*, *sireru*, *tukureru*, and *wakaru* are derivationally related to PVC-2 verbs.

3.5.2.8 Subtypes with a macro-locus

(145) PVC-5-8, 9, 10, 11, 12, 13, and 14

The verbs in these seven classes include a macro-locus. The term 'macro-locus' refers to an abstract or concrete location linguistically encoded as two or more individual LOC complement chunks. For example, the macro-locus referring to the path from Tokyo to Yokohama can be conceptually segmented and encoded as a source LOC 'Tokyo' marked by *kara*, an accusative traversal LOC 'Toomei Koosoku' marked by *o*, and a goal LOC 'Yokohama' marked by a non-terminus postposition *e*:

(146)

Toomei Koosoku o Tokyo kara Yokohama e hasiru.

Highway Acc from toward run

'(The bus) runs on Toomei Highway from Tokyo to Yokohama.'

The goal LOC complement may be encoded with a terminus postposition *made* as in (147):

(147)
 Toomei Koosoku o Tokyo kara Yokohama made hasiru.
 Highway Acc from to runs
 '(The bus) runs on Toomei Highway from Tokyo up to Yokohama.'

The traversal LOC may not be encoded explicitly, as in (148) and
 (149) below:

(148)
 Tokyo kara Yokohama e hasiru.
 from toward run
 '(The bus) runs from Tokyo to Yokohama.'

(149)
 Tokyo kara Yokohama made hasiru.
 from to runs
 '(The bus) runs from Tokyo up to Yokohama.'

Regent verbs in examples (146), (147), (148), and (149) above
 represent verbs in PVC-5-13, PVC-5-14, PVC-5-8, and PVC-5-9,
 respectively. Furthermore, encoding of the same traversal path may be
 accompanied by goal LOC complements but not by source LOC complements.
 Such goal LOC complements may be marked either by non-terminus or
 terminus postpositions as in (150) and (151):

(150)
 Toomei Koosoku o Yokohama e hasiru
 '(The bus) runs on Toomei Highway to Yokohama.'
 (151)
 Toomei Koosoku o Yokohama made hasiru
 '(The bus) runs on Toomei Highway up to Yokohama.'

Regent verbs in examples (150) and (151) represent verbs in
 PVC-5-10 and PVC-5-11, respectively. When the source LOC, not the goal
 LOC complement is encoded for the same path, we obtain (152), which
 constitutes an example for verbs in PVC-5-12.

(152)
 Toomei Koosoku o Tokyo kara hasiru
 '(The bus) runs on Toomei Highway from Tokyo.'

On the surface, sentences (146) to (152) seem to violate the one per Sent requirement of the lexicase version of the dependency grammar. However, this is a principled violation: as long as these LOC complements refer to a macro-locus, the regent may have more than two LOC complements. The examples (146) to (152) clearly support this position.

Illustration (153) below is a list of seven intransitive macro-locus locational verbs with their features. The subtypes are followed by the numbers that identify the sentence that includes such a verb. These sentences, (146)-(152), each include a regent verb with more than one LOC complement. Goal LOC complements in such examples are marked by the postposition *e* or *made*. The feature 'telic' or [+telc] refers to the fact that the goal locus is terminus, marked by the postposition *made*. The non-telic goal locus, on the other hand, is marked by the postposition *e*.

(153) Intransitive macro-locus locational verbs:

PVC-5-8 (148)

[+drcn,+goal,+lctn,+sorc,-crsp,-mprs,-mode,-sttv,-telc,
-trns,-trvs,-xtns]

PVC-5-9 (149)

[+drcn,+goal,+lctn,+sorc,+telc,-crsp,-mprs,-mode,-sttv,
-trns,-trvs,-xtns]

PVC-5-10 (150)

[+drcn,+goal,+lctn,+sorc,+trvs,-crsp,-mprs,-mode,-sttv,
-telc,-trns,-xtns]

PVC-5-11 (151)

[+drcn,+goal,+lctn,+sorc,+telc,+trvs,-crsp,-mprs,-mode,
-sttv,-trns,-xtns]

PVC-5-12 (152)

[+drcn,+lctn,+sorc,+trvs,-crsp,-goal,-mprs,-mode,-sttv,
-trns,-xtns]

PVC-5-13 (146)

[+drcn,+lctn,+sorc,+trvs,-crsp,+goal,-mprs,-mode,-sttv,
-telc,-trns,-xtns]

PVC-5-14 (147)

[+drcn,+lctn,+sorc,+telc,+trvs,-crsp,+goal,-mprs,-mode,
-sttv,-trns,-xtns]

In the actual data, however, one rarely sees the segmentation of a macro-locus encoded by three LOC complements such as illustrated in examples (25) and (26). For example, in the sample verbs taken from Kawabata's *Snow Country*, a majority of the locational intransitive verbs have a single LOC complement, a few verbs occur with two LOC complements, and none with three LOC complements. Those with two LOC complements are PVC-5-8 verbs with a source LOC complement marked by the postposition *kara* and a goal LOC complement marked by the postposition *e*. An example of PVC-5-8 with its matrix is given in (154) followed by a list of verbs in the same class in (155). The regent verb *otita* in

example (156) is an exception in that its goal LOC complement is marked by the postposition *ni* rather than by *e*. I will discuss this exception in (156).

(154)

Nanokaburi	de	yama	kara	onsenba	e	orita.
7 days	at	mountain	from	hot spring	toward	descended
1ndex	2ndex	3ndex	4ndex	5ndex	6ndex	7ndex
+N	+P	+N	+P	+N	+P	+V
	-drcn		+sorc		-sorc	+drcn
	+trmn		+trmn		-trmn	+goal
						+lctn
						+sorc
						-crsp
						-mode
						-sttv
						-telc
						-trns
						-trvs
						4 [+sorc]
						4 [+LOC]
						6 -sorc
						-trmn
						6 [+LOC]
						x ([+Nom])
						x [+actr]
						x [+PAT]

'(He) had come down to the hot spring (village) after (wandering for) seven days in the mountains.' (YU22-modified)

In (154), the words with index numbers 1 and 2 are adjuncts, which are omitted in the matrix. The verb *oriru* in (154) involves gradual and atelic vertical movement.¹⁷

(155) PVC-5-8 verbs

<i>hipparareru</i>	(PAT=yarn) is reclaimed (from the younger girl to the older)
<i>hirogaru</i>	(PAT=the Milky Way) spread (higher into the sky from the skirt of the mountain)
<i>sagaru</i>	(PAT=a string) runs (from the ceiling to the pillow)

The verbs *hirogaru* and *hipparu* in (154) refer to essentially atelic horizontal movements of PAT. Therefore, the goal complement is marked by the non-terminus postposition *e* ([+P, -sorc, -trmn]). The verb *sagaru* in (155) refers to a string running vertically from the ceiling to a location above Komako's pillow, and there is no contact between the string and the pillow. Therefore, the goal complement of this atelic event, the pillow, is marked by the non-terminus postposition *e*. The macro-locus in (156) below includes the goal LOC complement marked by the postposition *ni*, not by *made*.

(156)

Yuki no katamari ga sugi no eda kara
snow Gen concentration Nom cedar Gen branches from

kyoodooyu no yane ni otita.
public bath Gen roof at fell.

'The snow fell from the cedar branches to the roof of the public bath.'
(YU2168)

It seems that the directionality is lost for the goal LOC in this example. The contact of the snow with the roof as a completed telic

event takes precedence over the goal LOC that is to be marked by the postposition *made*. This is the only example in Kawabata's *Snow Country* where the postposition *ni* is used as a goal LOC marker of a PVC-5-9 verb. Since *otita* in (156) refers to a completed or telic vertical movement where the snow and the roof did come into contact, we expect the goal locus of this telic event to be marked with the postposition *made* instead of *ni*. It appears that the *ni*-marking of a goal LOC complement may be a more constrained case of vertical movement for which the contact of the PAT and the LOC complement as the result of a completed telic event takes precedence over the goal complement of the same telic event.

The *ni*-marked goal locus in (35) is a terminus locus where the movement has been completed. It is telic in this sense. Therefore, the regent verb should be marked with [+telc]. This seems to call for Figure 3.15 to be revised to include a *ni*-marked LOC complement in the PVC-5-9 class.

I will not pursue a discussion of the foregoing at this time based on the following facts. First, (156) is the only such example in Kawabata's *Snow Country*. Second, there is a question to be raised regarding the productivity of *ni*-marking of goal LOC complements for PVC-5-8 and PVC-5-9 verb classes. For example, during my cursory check with four native speakers, ages 27 to 58, all four of them marked the goal LOC complement in (156) with non-terminus postposition *e*, not by *ni*. Only one informant mentioned that she would 'accept' *ni*-marking as

well. For movement includes horizontal transfer of the PAT such as *hasiru* (148) and *hipparareru* (155), the goal LOC complement is marked by *e* by all the informants. For the verb *oriru* in (154), which includes both horizontal and vertical movement, three out of four informants marked the goal LOC complement by the non-terminus postposition *e*, while one informant marked it by the postposition *ni*. In marking the goal LOC complement for the verb *sagaru* (155) all informants used postposition *ni* assuming that the surface of the pillow was in contact with the string running from the ceiling. This indicates that there may indeed be a default LOC goal complement for verbs such as *sagaru* with vertical and downward movement: the goal LOC complements of such verbs are in contact with PAT. Furthermore, verbs of the PVC-5-8 class with a goal LOC complement marked by *ni* seem to focus on the destination itself rather than the process involved for the PAT to come into contact with the destination. This seems to contrast with the PVC-5-9 verb class. The verbs in PVC-5-9, such as *hasiru* in example (149), encode source and exact goal, thus explicitly marking the traversal process by which the PAT reaches the goal. At any rate it is premature to establish any conclusive statement from a small sample of PVC-5-8 and PVC-5-9 verbs. Therefore, I will simply note these observations and possibilities for further research at this point.

There are no examples of PVC-5 subcategories 9 through 14 in the samples of verbs in the *Snow Country*. I will keep them as is since examples that come under these subcategories have been introduced in examples (146) through (152) in conjunction with the discussion on

'macro-locus' and have been summarized in (153) above. The example (157) below is a modified version of (146).

(157)

Basu ga Toomei Koosoku o Yokohama kara Hamamatu e/made hasitta.

'The bus ran Toomei highway from Yokohama to/as far as Hamamatu.'

Construction (157) gives an example for subcategories 13 and 14, respectively. If we drop the *kara*-marked LOC complement, we obtain 10 and 11. If we drop the *made/e*-marked LOC complement, we obtain 12. This amounts to saying that we have at least 5 homophonous *hasitta* 'ran' corresponding to the five subtypes of PVC-5 verbs.¹⁸

3.5.2.9 Subtype 15

The last category of PVC-5 verbs, PVC-5-15, is characterized by the feature [+sttv]. An example is given in (158), followed by a list of verbs in (159). The LOC complement in PVC-5-15 is a possessor of the PAT of the regent.

(158)

Singo	ni	itinan itizyo	ga	aru
	by	a-boy a-girl	Nom	exists
1ndex	2ndex	3ndex	4ndex	5ndex
+N	+P	+N	+P	+V
	-assn			+lctn
				+sttv
				-crsp
				-mode
				-trns
				2[+LOC]
				2[-assn]
				4([+Nom])
				4[+actr]
				4[+PAT]

'Singo has a son and a daughter.' (YA4-modified)

(159) PVC-5-15 verbs

<i>iru</i>	to be located (in front of the house)
<i>itai</i>	to be painful as in: <i>Haha no kogoto ga mimi ni itai</i> (Mother's scolding hurts).
<i>nai</i>	to lack
<i>ooi</i>	to be abundant
<i>sukunai</i>	to be scarce
<i>surudo</i>	to be clever (in business)
<i>tumetai</i>	to be cruel (to women)
<i>tobosii</i>	to be scarce (in resources)
<i>usui</i>	to be thin (in friendship)
<i>yoi</i>	to be good-natured (to others)

3.5.3 [-mprs,+xtns]

There are few examples of non-impersonal extension PVC-5 verbs.

Example (160) represents a non-impersonal extension PVC-5-1 verb, while (161) represents a non-impersonal extension PVC-5-2 verb. The postpositions for LOC complements in examples (160) and (161), *ni*, may be replaced by *de*. This type of PVC-5 verb is, therefore, derivationally related to impersonal extension PVC-2 verbs.

(160) PVC-5-1 [-mprs,+xtns]

Simamura	no	kotoba	ni	onna	wa	usuwarai	sita
	Gen	words	by	woman	Tpc	vague	did
						laught	
1ndex	2ndex	3ndex	4ndex	5ndex	6ndex	7ndex	8ndex
+N	+P	+N	+P	+N	+P	+N	+V
			-assn		+modl	-djct	+lctn
							+nmnl
							+xtns
							-crsp
							-drcn
							-mode
							-mprs
							-sttv
							-telc
							-trns
							-trvs
							4[-assn]
							4[+LOC]
							6([+modl])
							6([+Nom])
							6([+them])
							6[+actr]
							6[+PAT]
							7[+Acc]
							7[+prdc]
							7 +prdc
							-djct

'The woman smiled vaguely at Simamura's words.' (YU2504-modified)

(161) PVC-5-2 [-mprs,+xtns]

Barakku	ga	yamasuso	ni	parapara	to ₁	tirabaru
Barracks	Nom	mountain	by	sparing	as if	scatter
		skirt				
1ndex	2ndex	3ndex	4ndex	5ndex	6ndex	7ndex
+N	+P	+N	+P	+N	+P	+V
			-assn	+prdc	+xtns	+assn
					+assn	+lctn
						+nfrm
						+xtns
						-drcn
						-mprs
						-nmnl
						-sttv
						-telc
						-trns
						-trvs
						1([+Nom])
						1[+actr]
						1[+PAT]
						4[+LOC]
						4[-assn]
						6[+prdc]
						6[+xtns]
						+assn

'The barrack-like buildings are scattered up on the slope of the mountain.' (YU2037-modified)

There is one case of an incorporated argument verb in the data which belongs to the class of impersonal, extension, locational, intransitive verbs.

(161)'

Semete	sinda	hito	ni	wa	hakkiri
At least	dead	person	by	Tpc	clearly
1index	2ndex	3ndex	4ndex	5ndex	6ndex
+Adv	+V	+N	+P	+P	+N
			-assn	+modl	+djct

sitoku no yo.
 do-put Sprt Sprt
 7ndex 8ndex 9ndex
 +V
 +actn
 +lctn
 +nmnl
 +telc
 +xtns
 -crsp
 -drcn
 -mode
 -mprs
 -sttv
 -trns
 -trvs
 5([+them])
 5[+LOC]
 5[-assn]
 6[+Acc]
 6[+prdc]
 6|+prdc|
 |+djct|
 x([+Nom])
 x[+actr]
 x[+PAT]

'I want at least to be honest with him now that he is dead.' (YU119)

Words with indices 1, 8, and 9 do not figure in the dependency analysis of the regent. The word with index number 1 is a sentential adverb, while the words with indices 8 and 9 are sentential particles typical in women's speech. The word with index 6 is analyzed here as a predicate nominative as it is possible to have such a sentence as: Iro

ga hakkiri da 'The color is clear.'¹⁹ This example includes the topicalization of a postpositional phrase that is mediated by theme.

The regent *sitoku* is a fused lexical item composed of the non-root forms of *suru* 'do', *site*, and *oku*. In other words, *site* and *oku* are fused in *sitoku*. As such, the regent may be considered as an incorporated-argument verb. In the corresponding sentence with an unfused regent, *oku*, the construction is impersonal extension. However, in the case frame of the fused *sitoku*, the construction is non-impersonal extension, as analyzed in (161)'. Such phenomena are not rare in casual speech in Japanese. Extension verbs which mark aspects, e.g. *iru*, *oku*, and *simau*, among others, seem especially susceptible to this process of argument incorporation in Japanese.²⁰ For example, *site* and *iru* are incorporated to *siteru*; *site* and *simau* to *sitimau* or to *sityau*. These incorporations are not confined to the non-adjectival, non-root verb form of predicates in PVC-5. Predicates in other primary verb classes may incorporate arguments of aspect-marking extension verbs. 21

The regents in (162), (163), (164), and (165) below are examples of non-impersonal extension verbs in classes PVC-5-6, PVC-5-7, PVC-5-8, and PVC-5-9, respectively.

(162)	PVC-5-6	[-mprs,+xtns]			
Oto	wa	tooku	no	yamayama	made
notes	Tpc	afar	Gen	mountains	to
1ndex	2ndex	3ndex	4ndex	5ndex	6ndex
+N	+P	+N	+P	+N	+P
	+modl				-sorc
					+trmn

massugu	ni	hibiite	itta
straight	as	sound	went
7ndex	8ndex	9ndex	10ndex
+N	+P	+V	+V
	+xtns	-djct	+ctvt
	-assn	-root	+drcn
			+lctn
			+telc
			+xtns
			-crsp
			-mode
			-mprs
			-nfrm
			-nmnl
			-sorc
			-sttv
			-trns
			-trvs
			2([+Nom])
			2([+them])
			2[+actr]
			2[+PAT]
			6 -sorc
			+trmn
			6[+LOC]
			9[+prdc]
			9 -djct
			-root

'The notes went out (crystalline into the clean winter morning) to sound on the far (snowy) peaks.' (YU2312)

The following verbs belong to the same class as *itta* in (162):

<i>kareru</i>	(All the branches on the north side) wither
<i>tooru</i>	(the stopped nose) clears (to the middle of his head)

(163) PVC-5-7 [-mprs,+xtns]

Suzuki	ga	ani	kara	
	+Nom	brother	from	
1ndex	2ndex	3ndex	4ndex	
+N	+P	+N	+P	
			+sorc	
	gakusi	o	dasite	moratta
	tuition	Acc	pay	received favor
	5ndex	6ndex	7ndex	8ndex
	+N	+P	+V	+V
			-djct	+ctvt
			-root	+drcn
				+lctn
				+sorc
				-trns
				+xtns
				-crsp
				-goal
				-mode
				-mprs
				-nfrm
				-nmnl
				-sttv
				-trvs
				2 ([+Nom])
				2 [+actr]
				2 [+PAT]
				4 [+sorc]
				4 [+LOC]
				7 [+prdc]
				7 -djct
				-root

'Suzuki received a favor that his brother put out the tuition.'
 (Suzuki's brother paid Suzuki's tuition as a favor.)

In (163), the words indexed with numbers 5 and 6 are dependents of *dasite*, the extension predicate indexed with 7. This means that *moratta* is an intransitive locational extension verb that requires a PAT,

Suzuki, and an extension predicate that is a non-root form of the verb *dasu*. In addition, as a PVC-5-7 verb, it requires a source LOC complement marked by the postposition *kara*. The extension verb *moratta* 'receive a favor' as [-trns] contrasts with the non-extension *moratta* 'received' which is [+trns].²² This analysis requires a provision for a new control rule: upper LOC identified with the lower actor. In other words, Suzuki's brother (=upper LOC complement) controls the actor of the non-root form of the predicate (=AGT of the transitive clause).

An alternative analysis would be to assume that there is no control involved and that this non-root form of the predicate *dasite* is [+mprs]. In this alternative analysis, the structure of the sentence is:

[Suzuki ga [ani kara gakusi o dasite] moratta]

It is plausible to assume that lower clause *dasite* is impersonal. The impersonality ([+mprs]) of *dasite* is supported by the fact that the two sentences below are ungrammatical:

*Ani ga ani kara gakusi o dasita
 *Suzuki ga ani kara gakusi o dasita.²³

Furthermore, the occurrences of the 'impersonal predicate' such as *dasite* as proposed here happen in other languages. For example, in the English sentence below, 'appears' is [+mprs] because of the pleonastic subject 'There'.

There appears to be a mouse in the rice.

In the above example, the implied subject of the verb 'be' is 'There', since the control rule provides that the upper PAT 'There' is the actor of the lower clause. Therefore, the lower verb 'be' is impersonal. As a result, the predicate nominative 'a mouse' is a dependent of a verb that is [+mprs].

If we follow this course of analysis, we need to provide impersonal predicates for multitudes of predicates in the lexicon. For example, *mite* and *waratte* in the two sentences below must be analyzed as such impersonal predicates.

John ga kono isya kara Mary o mite moratta
 Nom this physician from Acc examine received favor
 'John had this doctor examine Mary.'

John ga Mary ni waratte moratta.
 Nom at laugh received favor
 'John had Mary laugh.'

The analysis I chose for (163) provides a better solution, since we can do away with [+mprs] predicates:

[Suzuki	ga	ani	kara	[gakusi	o	dasite]	moratta]		
PAT			LOC			+V			
						+prdc			
						-djct			
						-root			

[John	ga	kono	isya	ni	[Mary	o	mite]	moratta	
PAT			LOC			+V			
						+prdc			
						-djct			
						-root			

John		ga		Mary		ni	
				[waratte]			
PAT		LOC		+V			
				+prdc			
				-djct			
				-root			

In this analysis, regardless of the membership in the primary class of the lower predicate, the control rule at work remains the same: the upper LOC is the lower actor. In addition, the regent *moratta* belongs to the PVC-5 verb class that contains the features [-mprs,+xtns].

(164) PVC-5-8 [-mprs,+xtns]

Yama	kara	sato	e	dete	kuru
mountain	from	village	toward	leave	comes
1ndex	2ndex	3ndex	4ndex	5ndex	6ndex
+N	+P	+N	+P	+V	+V
	+sorc		-sorc	-djct	+ctvt
	+trmn		-trmn	-root	+drcn
					+goal
					+lctn
					+sorc
					+xtns
					-crsp
					-mode
					-mprs
					-nfrm
					-nmnl
					-sttv
					-telc
					-trns
					-trvs
					2[+sorc]
					2[+LOC]
					4 -sorc
					-trmn
					4[+LOC]
					5[+prdc]
					5 -djct
					-root
					x([+Nom])
					x[+actr]
					x[+PAT]

'(The man) comes out of the mountains into the village.' (YU2083 modified)

(165) PVC-5-9 [-mprs,+xtns]

Tyabudai	kara	tatami	no	ue	made
table	from	tatami	Gen	surface	to
1ndex	2ndex	3ndex	4ndex	5ndex	6ndex
+N	+P	+N	+P	+N	+P
	+sorc				-sorc
	+trmn				+trmn

komakai	hamusi	ga	otite	kita
tiny	winged insect	Nom	fall	came
7ndex	8ndex	9ndex	10ndex	11ndex
+A	+N	+P	+V	+V
			-djct	+ctvt
			-root	+drcn
				+goal
				+lctn
				+sorc
				+telc
				+xtns
				-crsp
				-mode
				-mprs
				-nfrm
				-nmnl
				-sttv
				-trns
				-trvs
				2 +sorc
				+trmn
				2[+LOC]
				6 -sorc
				+trmn]
				6[+LOC]
				9([+Nom])
				9[+actr]
				9[+PAT]
				10[+prdc]
				10 -djct
				-root

'A swarm of tiny winged insects fell from the table to the floor.'
(YU2302-modified)

It should be noted here that in terms of complement types, some non-impersonal, intransitive, locational, extension verbs such as *hibiku* 'to sound', *morau* 'to receive' and *kuru* 'to come' occur with the non-root form of a non-adjectival verb, as in examples (162), (163) and

(165). Others such as *tirabaru* 'to scatter' occur with an association postposition *to* as in example (161). Finally, the non-impersonal intransitive, locational, extension verb *suru* in example (160) occurs with a non-adjectival, non-quantity predicate nominative. In other words, the subcategories of extension verbs established for non-locational, intransitive, extension verbs are maintained for locational, intransitive, extension verbs. It should be noted that so far there has been no occurrence of the non-action nominal type of extension verbs in PVC-5 in the examples I have examined in my naturalistic data.

3.5.4 [+mprs,+xtns]

There is an example of an impersonal extension verb *kita*, the past tense form of verb *kuru* 'to come' as in (166) below. This verb may be considered to be an impersonal extension counterpart to a PVC-5-6 verb.

(166)

Soo	suru	uti	ni
so	do	within	by
1ndex	2ndex	3ndex	4ndex

heya	no	naka	made	akarunde	kita
room	Gen	inside	to	lighten	came
5ndex	6ndex	7ndex	8ndex	9ndex	10ndex
+N	+P	+N	+P	+V	+V
			-sorc	-djct	+ctvt
			+trmn	-root	+drcn
					+goal
					+lctn
					+mprs
					+xtns
					-crsp
					-mode
					-nfrm
					-nmnl
					-sorc
					-sttv
					-telc
					-trns
					-trvs
					0 ([+them])
					0 ([+Nom])
					0 (+Nom)
					-rfrn
					0 [+actr]
					0 [+PAT]
					8 -sorc
					+trmn
					8 [+LOC]
					9 [+prdc]
					9 -djct
					-root

'Presently the room was so bright.' (YU2169)

In (166), the words with indices 1-4 are adjuncts. Words with indices 1 and 2 form a conditional sentence that is headed by a relator noun *uti* 'inside', which forms a nominal construction. This relator noun and postposition *ni* form a postpositional phrase that is an adjunct. This impersonal extension verb is a meteorological verb. This semantic characteristic is identical to those of verbs observed for the class of non-locational, simple intransitive, impersonal, extension verbs, PVC-1-F'5.

3.6 PRIMARY VERB CLASS 6 (PVC-6)

The verbs in PVC-6 have a cluster of the features [-trns,+lctn,-crsp,+mode]. The examples of verbs in this class are quite limited in occurrence in the primary data. There have been but two examples of verbs in this class found in the primary data I examined. The analysis below is offered for the plausible examples based on my intuition as well as these two examples, and is limited to non-impersonal, non-extension verbs in this class. The verbs in this class are derivationally related to verbs in PVC-2, 5, 13, and 14, among others.

3.6.1 Subtypes

I establish the following subtypes as presented in Figure 3.17. The postpositions that mark the MNS and LOC complements are listed for the each of the subtypes for PVC-6 verbs.

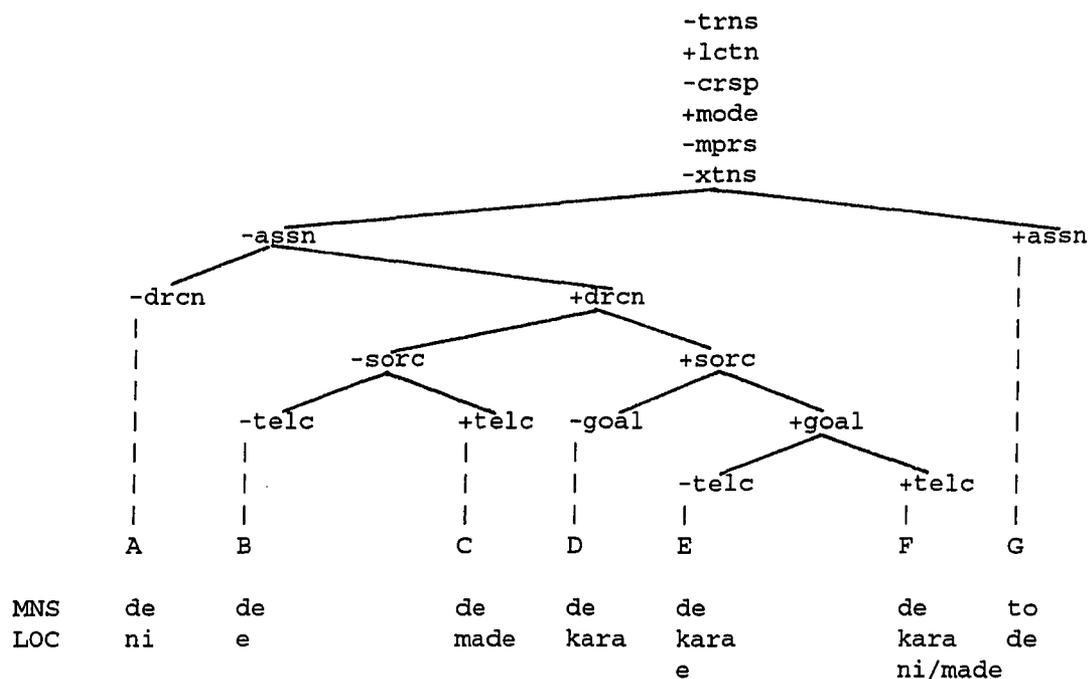


Figure 3.17 PVC-6 Subtypes

The localistic features in this classification differ from the features that have been established earlier for verbs in PVC-5. In PVC-5 [-drcn] verbs are divided further by the telicity feature: telic directional and atelic directional. It should be noted, however, that [-drcn] verbs in PVC-6 are not subcategorized any further by the features [-telc] and [+telc]. The telicity feature used to establish subtypes of non-directional verbs in PVC-5 is not needed for verbs in PVC-6. Therefore, (2) does not include the bifurcation by the telicity feature under [-drcn]. I present an example for each of these subtypes in the following sections. The analysis of verbs in PVC-6 with matrices is provided for the two examples located in the primary data, Subtypes C and D. Otherwise, examples are given with English glosses without the matrices.

3.6.2 PVC-6-A

Verbs in Subtype A share the cluster of the features [+lctn,+mode,-assn,-crsp,-drcn,-mprs,-trns,-xtns]. The head verb *deru* 'to come out' and *tunagareru* 'to be fastened' in (167) and (168), respectively, belong to this subtype.

(167)

Wakkusude	sukii	ni	tuya	ga	deta.
Wax	at	ski	by	shine	Nom came out
MNS	LOC		PAT		

'With wax the ski became shiny.'

(168)

Kaiinu	ga	kusari	de	ki	ni	tunagareta.
dog	Nom	chain	at	trees	by	was fastened
PAT		MNS		LOC		

'The dog was fastened to the tree by the owner.'

3.6.3 PVC-6-B

Verbs in Subtype B share a cluster of the features: [+drcn,+lctn,+mode,-assn,-crsp,-mprs,-sorc,-telc,-trns,-xtns]. The examples in this subtype are limited in number. Examples are given in (169) below.

(169)

Papaiya	ga	tokubetuki	de	Tookyoo	e	okuridasareta
papayas	Nom	chartered	at		toward	were sent
		plane				
PAT		MNS		LOC		

'Papayas were sent toward Tokyo in a chartered plane.'

3.6.4 PVC-6-C

Verbs in Subtype C share a cluster of the features: [+drcn,+lctn,+mode,+telc,-assn,-crsp,-mprs,-sorc,-trns,-xtns]. In

examples (170)) and (171), LOC and MNS complements are marked with the postpositions *made* [+P,-sorc,+trmn] and *de* [+P,-drcn,+trmn] respectively.

(170)

Zibun	no	kotoba	no	egaku	mono	de
self	Gen	words	Gen	describe	thing	by
1ndex	2ndex	3ndex	4ndex	5ndex	6ndex	7ndex
+N	+P	+N	+P	+V	+N	+P
						-drcn
						+trmn

karada	made	atatahatta.
body	till	warmed up
8ndex	9ndex	10ndex
+N	+P	+V
	-sorc	+drcn
	+trmn	+lctn
		+mode
		+telc
		-crsp
		-mprs
		-sorc
		-sttv
		-trns
		-trvs
		7[+MNS]
		7 -drcn
		+trmn
		9[+LOC]
		9 -sorc
		+trmn
		x([+Nom])
		x[+actr]
		x[+PAT]

'Things described (by Komako) in (her) own words have warmed up (Komako's) body.' (YU2143-modified)

In (170) words with indices 1 through 4 are dependents of 6, and the word with index 5 also is a dependent of 6. The MNS complement to the regent is the postpositional phrase, 1-7. The LOC complement to the regent is the postpositional phrase 8-9. In the matrix, these grammatical relations with the regent are coded by the direct dependents, the postpositions 7 and 9. The words with indices 7 and 9 are direct dependents of the regent.²⁴ Again, the actor PAT is to be filled in contextually. This regent is derivationally related to PVC-2-A *atamatta* and to PVC-5-6 *atamatta*.

(171)
 Huzi ga yuki de sangoome made oowareta
 Mt. Fuji Nom snow at 3rd camp to was covered
 PAT MNS LOC
 'Mt. Fuji was covered by the snow to the third camp.'

3.6.5 PVC-6-D

Verbs in Subtype D share a cluster of the features:

[+drcn,+lctn,+mode,+sorc,+telc,-assn,-crsp,-goal,-mprs,-trns,-xtns].

The LOC and MNS complements are marked with postpositions *kara*

[+P,+sorc,+trmn] and *de* [+P,-drcn,+trmn], respectively.

(172)
 Siro ga hori de gaiteki kara mamorareta
 castle Nom moat at enemy from was protected.
 PAT MNS LOC
 'The castle was protected from the enemy by the moat.'

3.6.6 PVC-6-E

Verbs in Subtype E share a cluster of the features:

[+drcn,+goal,+lctn,+mode,+sorc,-assn,-crsp,-mprs,-telc,-trns,-xtns].

The verbs in Subtype E have multiple localistic features, reflected by the co-occurring postpositions *kara* [+P,+sorc,+trmn] and *e* [+P,-sorc,-trmn]. These two location-marking postpositions encode a macro-locus, or a range of the location: a terminus source and a non-terminus goal. The MNS complement is marked with *de* [+P,-drcn,+trmn].

(173)

Mado	kara	hadaka	de	yuki	e	tobikomū.
window	from	naked	as	snow	to	jump
1ndex	2ndex	3ndex	4ndex	5ndex	6ndex	7ndex
+N	+P	+N	+P	+N	+P	+V
	+sorc		-drcn		-sorc	+drcn
	+trmn		+trmn		-trmn	+goal
						+lctn
						+mode
						+sorc
						-crsp
						-mprs
						-sttv
						-telc
						-trns
						-trvs
						2[+LOC]
						2 +sorc
						+trmn
						4[+MNS]
						4 -drcn
						+trmn
						6[+LOC]
						6 -sorc
						-trmn
						x[+PAT]
						x([+Nom])
						x[+actr]

'(Boys at the Middle School in the next town) jump naked from the window (on the second floor of the dormitory) to the snow (in the school yard and walk around in the snow in a heavy snowfall).' (YU2267-modified)

In (173) the two LOC complements constitute a macro-locus. The regent *tobikomū* in (9) is derivationally related to the two homophonous verbs: *tobikomū* (PVC-2-A) and *tobikomū* (PVC-5-8).

3.6.7 PVC-6-F

Verbs in Subtype F share a cluster of the features [+drcn,+goal,+lctn,+mode,+sorc,+telc,-assn,-crsp,-mprs,-trns,-xtns]. The verbs in Subtype F have multiple localistic features, reflected by the co-occurring postpositions *kara* [+P,+sorc,+trmn] and *made* [+P,-sorc,+trmn]. These two location-marking postpositions encode a macro-locus, or a range of the location: a terminus source and a terminus goal. The MNS complement is marked with the postposition *de* [+P,-drcn,+trmn].

(174)

Sake	ga	soko	kara	zitaku	made	takkyubin	de	todoita
salmon	Nom	there	from	home	to	delivery	at	reached
						service		
PAT		LOC		LOC		MNS		

'The salmon got from there to my house by the delivery service.'

3.6.8 PVC-6-G

Verbs in Subtype G share a cluster of the features [+assn,+lctn,+mode,-crsp,-mprs,-trns,-xtns]. The verbs in Subtype G require that their MNS complement be marked with *to* [+P,-xtns,+assn] and their LOC complement be marked with the postposition *de* [+P,-drcn,+trmn].

(175)

Akebono	ga	Konishiki	to	dohyoo	de	kisoiatta
	Nom		with	ring	at	compete with
						each other

PAT		MNS		LOC		
'Akebono wrestled against Konishiki in the (sumo) ring.'						

(176)

Sinkan	ga	Honkan	to	renraku tuuro	de	tunagaru.
new	Nom	main	with	pass way	at	connects
building		building				

PAT		MNS		LOC		
'The new building connects the main building at the pass way.'						

It should be noted that in the data I examined there were no instances of PVC-6 verbs occurring as impersonal or extension verbs. Furthermore, these plausible examples given for non-impersonal, non-extension PVC-6 verbs are highly marked cases in distribution and function.

3.7 PRIMARY VERB CLASS 7 (PVC-7)

3.7.1 [-mprs, -xtns]

Non-impersonal, non-extension PVC-7 verbs share a cluster of the features: [-trns, +lctn, +crsp, -mode]. The examples in the primary data of the unmarked form of the verbs in this category are extremely limited in number. These examples are given in (177) and (179) below, followed by a few more plausible examples based on my intuition. There are too few examples to formulate a subcategorization scheme that is distinctive to this class. From the limited number of examples available, the contextual features are a union of the features presented for verbs in PVC-3 and PVC-5.

The verbs in PVC-7, which lack affixation features such as [+caus] and [+pasv] seem to share the contextual feature [+sttv]. The verbs in these examples are derivationally related to verbs in classes PVC-2 and PVC-3. This point is explained further for each of the two examples.

3.7.1.1. Examples

(177)

Onna	wa	kare	yoru
Woman	Tpc	he	away from
1index	2index	3index	4index
+N	+P	+N	+P
			-sorc
			-trmn

Haiyuu	no	geihuu	ni	kuwasikatta
actor	Gen	style	at	knew well
5ndex	6ndex	7ndex	8ndex	9ndex
+N	+P	+N	+P	+V
			-assn	+crsp
				+djct
				+lctn
				+sttv
				+cmpr
				-impr
				-mode
				-trns
				-xtns
				2([+Nom])
				2([+them])
				2[+actr]
				2[+PAT]
				4[+COR]
				4 +sorcl
				+trmn
				8[+LOC]
				8[-assn]

'The woman knew more about actors' style than he did.' (YU20-modified)

The regent *kuwasikatta* in (177) is derivationally related to PVC-3-6, which is a stative comparison subtype of the intransitive correspondent verb. The addition of a LOC complement to PVC-3-6 will derive the regent in (177), or conversely the deletion of the same LOC complement will derive the regent *kuwasikatta*, which is a member of PVC-3-6.

The verbs in (178) below belong to the same class as (177):

(178)	
tobosii	(This district) is less abundant in (natural resources) than (that district)
akarui	(Suzuki) is more informed in (current affairs) than (his brother)

(179)

Simamura	wa	kata	kara	momo	made
	Tpc	shoulder	from	thigh	to
1ndex	2ndex	3ndex	4ndex	5ndex	6ndex
+N	+P	+N	+P	+N	+P
	+modl		+sorc		-sorc
			+trmn		+trmn

samusa	ni	sibireta
cold	at	became numb
7ndex	8ndex	9ndex
+N	+P	+V
	-assn	+crsp
		+drcn
		+goal
		+lctn
		+prcs
		+sorc
		+telc
		-cmpr
		-mode
		-mprs
		-sttv
		-trns
		-trvs
		-xtns
		2 ([+Nom])
		2 ([+them])
		2 [+actr]
		2 [+PAT]
		4 [+LOC]
		4 +sorc
		+trmn
		6 [+LOC]
		6 -sorc
		-trmn
		8 [+COR]
		8 [-assn]

'Simamura was numb from his shoulder to his thighs because of the cold (air)' (YU39-modified)

Two LOC complements in (179) specify a macro-locus. Therefore, strictly speaking this sentence violates the one per Sent constraint. However this is a principled exception to the one per Sent constraint of the lexicase version of dependency grammar. The regent *sibireta* in (179) is derivationally related to *sibireta* in (180):

(180)
 Simamura wa kata kara momo made samusa de sibireta
 LOC LOC MNS

The regent verb in (180) belongs to the PVC-6 class, where *samusa* is a MNS complement rather than a COR.

The regent *wakaru* in the following sentence is another example where a similar derivational relationship is observed.

(181)
 Suzuki no hyoozyoo kara Tanaka ni
 Gen expression from by
 Index 2ndex 3ndex 4ndex 5ndex 6ndex
 +N +P +N +P +N +P
 +sorc -assn
 +trmn

zizyoo	ga	wakatta
situation	Nom	comprehended
7ndex	8ndex	9ndex
+N	+P	+V
		+crsp
		+drcn
		+lctn
		+sorc
		-caus
		-cmpr
		-goal
		-mode
		-mprs
		-pasv
		-sttv
		-trns
		-trvs
		-xtns
		4 [+LOC]
		4 +sorc
		+trmn
		6 [+COR]
		6 [-assn]
		8 ([+Nom])
		8 [+actr]
		8 [+PAT]

'From Suzuki's expression, Tanaka comprehends the situation.'

The regent *wakatta* in (181) is derivationally related to *wakatta* in

(182), a member of the PVC-6.

(182)

Suzuki	no	hyoozyoo	de	Tanaka	ni
	Gen	expression	at		by
		MNS		COR	

sono	kawa	ga	oyogeta
that	river	Nom	was able to swim
5ndex	6ndex	7ndex	8ndex
+Det	+N	+Nom	+V
			+crsp
			+drcn
			+lctn
			+telc
			-caus
			-cmpr
			-mode
			-mprs
			-pasv
			-sorc
			-sttv
			-trns
			-trvs
			-xtns
			2[+LOC]
			2 -sorc
			-trmn
			4[+COR]
			4[-assn]
			7([+Nom])
			7[+actr]
			7[+PAT]

'I could swim that river to the other side of the bank.'

In (185) below, both the COR and the PAT of the regent are to be filled in contextually.

(185)

Doma			e	hairu	to,	
earthen	floored	hallway	to	enter	as	
1ndex			2ndex	3ndex	4ndex	
+N			+P	+V	+P	
nani	mo	mienai		de	iru	uti ni
nothing	Tpc	unable to see		in	exists	inside by
5ndex	6ndex	7ndex		8ndex	9ndex	10ndex 11ndex
+N	+P	+V		+P	+V	+N +P

hasigo	o	noboraserareta.
ladder	Acc	was made to climb up
12ndex	13ndex	14ndex
+N	+P	+V
		+caus
		+crsp
		+lctn
		+pasv
		+telc
		+trvc
		-drcn
		-mode
		-mprs
		-sttv
		-trns
		-xtns
		13[+Acc]
		13[+LOC]
		x([+Nom])
		x[+actr]
		x[+PAT]
		y[+COR]
		y[-assn]

'As (Simamura) entered the earthen floor hallway, (Simamura) was led up a ladder (by Komako) before his eyes had become accustomed to the darkness.' (YU33-modified)

In (185), words with indices 1 through 11 constitute adjuncts.²⁵ In the matrix the actor PAT is indexed by an 'x', which is contextually interpreted as Simamura. Similarly, COR, indexed by 'y', is interpreted contextually as Komako. The regent *noboraserareta* in (185) is derivationally related to *noboraserareta*, a member of the PVC-4-E class, and vice versa.

Example (186) includes two COR, one complement and one adjunct. In (186), words with the indices 7 and 8 are adjuncts that form the COR,

while words with indices 1 and 2 form the COR complement. Words with indices 3 and 4 form a topic phrase that is interpreted as PAT by way of theme. Words with indices 5 and 6 form a goal LOC complement. In the matrix, *yuusyoku ni* is marked as an adjunct by its inclusion in parentheses. The regent *manekareta*, which is a PVC-7, is derivationally related to PVC-3 by way of the addition of a LOC complement.

(186)

Mizuki	ni	Takitiroo	wa	Saami	e
	by		Tpc		to
1index	2ndex.	3ndex	4ndex	5ndex	6ndex
+N	+P	+N	+P	+N	+P
	-assn		+modl		-sorc
					-trmn

yuusyoku	ni	manekareta
supper	by	was invited
7ndex	8ndex	9ndex
+N	+P	+V
	-assn	+crsp
		+drcn
		+lctn
		+nfrm
		+pasv
		+xtns
		-caus
		-mode
		-mprs
		-nmnl
		-sorc
		-sttv
		-telc
		-trns
		-trvc
		2[+COR]
		2[-assn]
		4([+Nom])
		4([+them])
		4[+actr]
		4[+PAT])])
		6[+LOC]
		6 -sorc
		-trmn
		8([+COR])
		8[-assn]

'Takitiroo was invited by Mizuki to the Saami for dinner.' (KO15-modified)

3.7.2 [+mprs, -xtns]

I found no examples of impersonal extension PVC-7 class verbs. Furthermore, I found no example of impersonal counterparts in the PVC-7 class.

Examples for non-impersonal PVC-7 verbs are mostly marked morphologically by derivational affixes: potential as in (183) and (184), causative passive as in (185), or passive as in (186). Exceptions to this morphological marking are limited to a handful of verbs such as *kuwasikatta* (177), *sibireta* (179), and *wakatta* (181).

3.8 PRIMARY VERB CLASS 8 (PVC-8)

3.8.1 Plausible example

There were no examples in this class in the naturalistic data represented by Kawabata's *Snow Country*. PVC-8 verbs, if located in naturalistic data, are the most complex and saturated in the intransitive class in terms of case frame features. When we mark more case frame-related features as positive in the verb's matrix, the matrix comes closer to the saturation point. For example, non-impersonal, non-extension, non-stative, atelic, simple, intransitive verbs, or verbs in our PVC-1-A class, have eight features all preceded by a negative sign: [-trns, -lctn, -crsp, -mode, -mprs, -sttv, -xtns, -telc]; while our PVC-8 verbs must have at least three case frame-related features preceded by a positive sign: [+lctn], [+crsp], and [+mode]. Therefore, PVC-8 verbs are more saturated in terms of matrix compared with PVC-1-A verbs.

One plausible example of a class PVC-8 verb based on my intuition is offered as (187) below:

(187)

Suzuki	ga	kono	mati	kara	senkyo	ni
	Nom	this	town	from	election	by
Index	2ndex	3ndex	4ndex	6ndex	7ndex	8ndex
				-sorc		-assn
				+trmn		

Tanaka	to	kunda
	with	teamed up
9ndex	10ndex	11ndex
	+assn	+V
		+assn
		+crsp
		+drcn
		+lctn
		+mode
		+sorc
		+telc
		-caus
		-goal
		-mprs
		-pasv
		-sttv
		-trns
		-xtns
		2 ([+Nom])
		2 [+actr]
		2 [+PAT]]
		6 [+LOC]
		6 +sorc
		+trmn
		8 [+COR]
		8 [-assn]
		10 ([+MNS])
		10 [+assn]

'Suzuki teamed up from this district with Tanaka for the election.'

The regent *kunda* is marked functionally and distributionally. It is used only for teaming up with someone to compete, or to campaign together.

Some likely regents in this class provided by native speakers, such as *tatakawaseta* in (188) below, lack conclusive evidence for the

complementhood of the MNS actant: that is, in (188) either Suzuki or Yamada or even Tanaka may be unarmed.

(188)
 Sude de Suzuki ga Tanaka ni Yamada to
 bare hand with Nom by with
 MNS PAT COR MNS

tatakawaseta
 caused to fight each other

'Suzuki caused Tanaka to fight Yamada with bare hands.'

Therefore, *sude de* cannot be a complement.

3.8.2 Saturation in matrices

Due to processing difficulty or tracking complexity of multiple contextual features, it is likely there is a saturation point with respect to the number of complement case relations in a matrix that one can process. It is also possible that the saturation point has some connection with the number of case forms available in the language to distinguish different case relations, and with the strategies we invoke in order to process derived verbs.²⁶

NOTES

¹According to the current formalisms presented in Starosta 1993, the features required in the matrix of the regent for the linking are called *tobiishi* 'stepping stone' features. In example (1), the following features belong to this *tobiishi* feature type:

```
4(|+P |)
  |+Nom|
4|+Nom |
  |+actr|
4|+PAT |
  |+actr|
```

²An analysis of topicalization in Japanese in the lexicase version of dependency analysis was presented in Springer 1992. The term 'operator' used in this earlier version corresponds to 'theme' in the current version of lexicase notation.

³Rosen gives the following definitions. These words refer to strata, not to clauses:

A transitive stratum is one that contains a 1-arc and a 2-arc. An unergative stratum is one that contains a 1-arc and no 2-arc. An unaccusative stratum is one that contains a 2-arc and no 1-arc.

The last two types are both said to be intransitive. The name 'unaccusative hypothesis' denotes the claim that there exist clauses in which the initial stratum is unaccusative (Rosen 1984:43).

⁴The features [5[+prdc]] and [5[+djct,-root]] will uniquely specify the required properties of the bare non-root verbal complement, *siroku*. Since all verbs are predicates, the feature [+prdc] is excluded from the matrix of this complement as redundant. In the matrix of the regent *natta*, in order to link the complement to the regent, we will need the following features: 5([+V]), 5[+V,+prdc], 5[+prdc], 5[+prdc,-root], 5[+djct,-root] as *tobiishi* 'stepping stone' features. Since the issues surrounding linking and semantic interpretation are beyond the scope of the current study, I use the minimal notation required to uniquely specify the complement type required by the regent: [5[+prdc]] and [5[+djct,-root]] for a bare non-root adjectival complement of extension verbs.

⁵The word 'benkyoo' in (12) is a nominal predicate. As a noun it should have a case form. This case form, however, cannot be [+Nom]. Let us note this case form as [+Acc]. For a fully specified matrix of the regent verb *suru*, this case form should be included with index number 3 as 3[+Acc] together with a skeletal feature 3([+N]). This case

form [+Acc] will be linked to a [+N] skeletal feature as other case relations are. For the sake of brevity, the matrix in the abbreviated form in (12) does not include these features. Neither does it include the tobiishi features required for linking. The fully specified matrix for (12) should also include the following features given below. The numbers in parentheses are added to indicate the linking process. The skeletal feature (1) links to (2) and (6); the tobiishi feature (2) links to (3); and finally, mediated by the feature [+prdc] in (6), (5) is linked to the index number 3.

3([+N])	(1)
3 +N	(2)
+Acc	
3[+Acc]	(3)
3 +Acc	(4)
+prdc	
3[+prdc]	(5)
3 +prdc	(6)
-djct	

⁶With regard to the grammatical status of (12e2p), my analysis has the following explanation. Since *benkyoo* in (12e2) is a transitive predicate, it requires a nominative actor, AGT. Since *benkyoo* is [-fint], this nominative AGT actor cannot appear overtly. The PAT of the higher intransitive clause *musuko* controls the missing actor, following the regular control rule: upper PAT is the lower actor. Therefore, (12e2p) is grammatical. As for the preposing of the lower PAT, *hooritu*, it is a matter of discourse governed phenomena, which is beyond the scope of this thesis.

⁷I have been assuming that the predicate feature is assigned by a regent. In an independent sentence like *Kyoo wa Kayoobi* 'It is Tuesday today', however, the noun *Kayoobi* 'Tuesday' would also need to have its own [+root] and [+prdc] features in order to account for the presence of a subject, and since this word *Kayoobi* 'Tuesday' is not dependent to any other words, there is no regent to assign these features. They would have to be marked as inflectional features on the noun *Kayoobi*.

⁸In a situationally based Fillmorean or Chomskyan analysis, the MNS actant in (54), as an animate instigator, would be assigned a role of agent. However, applying grammatical rather than extralinguistic situational criteria requires passive 'agents' to be analyzed as MNS.

⁹Martin discusses these verbs under the label of 'reciprocal valences' (Martin 1975:201-205). The term 'symmetrical verbs' is found in Nitta (Nitta 1988:36). Teramura (1983) and Moriyama (1988) briefly mentioned these reciprocal verbs in Japanese. Comrie gives examples from English, Swedish, and Turkish reciprocal verbs (Comrie 1985:326).

¹⁰In general, MNS complements are much harder to locate than MNS adjuncts. This contributes to the fact we have very few verbs in

Primary Verb Class 2. For our plausible example (68), however, an alternative analysis is possible. In this alternative analysis, we could assume that the MNS complement is a complement of the predicate nominative *tomodati*, rather than of the regent verb. Therefore, in this alternative analysis, the regent *natta* in (68) may be analyzed as a simple intransitive extension verb. Indeed this analysis is in some ways better than the other analysis. The alternative proposed here will give us a uniform account for the extension verb *natta* as [-trns, -lctn, -crsp, -mode, +xtns].

¹¹The topic-marking modal postpositions *wa* 'as for' and *mo* 'also' have the following feature specifications:

wa [+P, +modl, -cmbn, -xcls]
mo [+P, +modl, +cmbn, -ngtv, -xcls]:

Suzuki wa dekaketa. 'As for Suzuki, he went out.'
Suzuki mo dekaketa. 'Suzuki also went out.'

In the case frame these detailed feature specifications are omitted, since they have no direct relevance for subcategorization.

¹²The details of linking for multiple topicalization are not within the scope of this dissertation.

¹³The verb *akisaseta* in the intransitive class is ungrammatical. The verb *akisaseta* in the following sentence is not a member of the intransitive class: *Tanaka ga mazui gei de Suzuki o akisaseta.* 'Tanaka with his unsophisticated entertainment made Suzuki bored.'

The head verb *akisaseta* in this construction belongs to the transitive class and should be kept distinct from the homophonous verb in the intransitive class. The transitive verb *akisaseta* is grammatical. This verb will be discussed in chapter 4, section 2 in conjunction with PVC-10.

¹⁴The verb *kakaru* below requires a receiver of the phone call as its LOC and the phone call as its PAT. This construction has some similarity to so-called dative verbs in German.

Suzuki ni denwa ga kakaru.
 by telephone Nom receive
 'Suzuki receives a phone call.' (lit.= At Suzuki a phone call receives.)

¹⁵The details of conditionals are beyond the scope of this thesis.

¹⁶ The fact that Kawabata's examples of *yori*-marked complements are COR and not LOC verifies Tanaka's statement. Tanaka observed that the use of the postposition *yori* is primarily for the abstract basis of comparison. Other usages of this postposition, such as *yori* marking our

LOC complement, are limited to stylized speech or sermons. Such usages are not found in daily conversation. (Tanaka 1977:377)

¹⁷ In (154) the difference in the relative vertical distance between the mountain and the village is not at issue. Rather the horizontal distance from the mountain to the village covered by the PAT is in focus: It has taken seven days for Simamura to come down to the village. Furthermore, the village at that time was not intended to be Simamura's final destination. In other words, the regent *orita* represents an atelic event.

¹⁸ To be more precise, in addition to the homophonous verbs given here, we have *hasitta* in PVC-5-3 (*Undoozyoo de hasitta* 'ran in the athletic field'), PVC-5-4 (*Undoozyoo o hasitta* 'ran through the athletic field'), PVC-5-5 (*Undoozyoo e hasitta* 'ran to the athletic field'), PVC-5-6 (*Undoozyoo made hasitta* 'ran as far as the athletic field'), PVC-5-7 (*Undoozyoo kara hasitta* 'ran from the athletic field'), PVC-5-8 (*Undoozyoo kara kyoositu e hasitta* 'ran from the athletic field to the classroom'), PVC-5-9 (*Undoozyoo kara kyoositu made hasitta* 'ran from the athletic field as far as the class room')

¹⁹ Words such as *hakkiri* in (40)' and *parapara* in (40) are considered to be adverbs in a prescriptive grammar. However, in a dependency analysis, they are nominal predicates. This analysis is confirmed by the fact that they can occur with a *na* postposition as a modifier of another noun, e.g.:

kotobazukai ga hakkiri na kodomo
speech Nom clear child
'the child with clear speech'

tatemno ga parapara na oka
buildings Nom sparing hill
'the hill with few buildings'

Matsushita as early as 1930 noted the predicative characteristics of these words and singled them out as a subclass of verbs, called *syookei doosi* (Matsushita 1972: 295-296).

²⁰ It has been reported that incorporated argument verbs also occur in Thai and Mandarin. The case frame of such verbs in Thai and Chinese is said to be fused or melted together.

According to Stanley Starosta and Amara Prasithrathsint (personal communication), incorporations in Thai have been noted for objects and degree adverbs, as indicated by the following examples. The diacritics indicate tone marks as follows: unmarked = mid, ` = low, ^ = falling, ' = high, and v = rising. The glottal stop is indicated by `?'

kháa-hàk	`leg-broken'
khâw-cay	`enter-heart' = `understand'
kin khâaw	`eat rice'
phûut-maak	`speak much'
kin-cù?	`eat much'

Examples of incorporated argument verbs in Chinese have been discussed transformationally under the term merger in Chang 1991.

²¹For example the regent in sentence (a) *sitoku* incorporates *site* and *oku* in (b). In (a) *sitoku* is a transitive verb to be discussed in the PVC-9 section. In (b) *site* is a transitive predicate and *oku* is a intransitive non-impersonal extension verb, the class of verbs discussed as [-mprs,+xtns] counterparts of PVC-1.

- (a) Suzuki ga syukudai o sitoku.
 Nom homework Acc has finished doing
 'Suzuki has his homework done.'
- (b) Suzuki ga syukudai o site oku
 Nom homework Acc do put
 'Suzuki has his homework done.'

²²The details of non-extension, non-impersonal, transitive locational verbs are discussed in the PVC-13 section.

²³It should be noted that the ungrammaticality of these examples is also nicely explained by the first alternative: both sentences are ungrammatical since upper the LOC is not coreferential to the lower actor.

²⁴According to Stanley Starosta (Personal communication), 'direct dependent' is a loose term describing dependency trees. It means a word that depends on another word with no intervening nodes, e.g.

dog

the

Direct dependents are those that are indexed in the regent's lexical matrix. They are divided into complements and adjuncts. Indirect dependents are dependents of direct or indirect dependents, and have no grammatical relation with the regent.

²⁵The first four words constitute a conditional phrase headed by an extension association postposition 4, while the words with indices 5 to 11 are a temporal locative phrase headed by non-extension, non-association postposition 11. Both postpositional phrases are adjuncts to the regent *noboraserareta*.

²⁶This statement at this point is merely a speculation. A well-designed experimental study is necessary to confirm or disconfirm such a connection at the level of sentence processing. This topic, therefore, is left for research in the future.

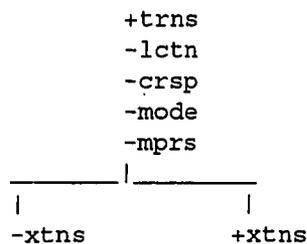
CHAPTER 4. SYNTACTIC SUBCATEGORIZATION OF JAPANESE TRANSITIVE**VERBS****(PRIMARY VERB CLASSES 9-16)**

This chapter consists of eight sections and presents a subcategorization of Japanese transitive verbs into the eight primary classes established in chapter 2 based on their syntactic distributions. In the course of the analysis of transitive verbs I note the fit I have achieved between their semantic and syntactic properties. I discuss the details of the fit for each of the primary classes in this chapter and generalize across the transitive and intransitive classes. I also find a high degree of symmetry throughout the system, most notably in the distribution of verbal and LOC complements. I discuss this symmetry in conjunction with verbs in Primary Verb Classes 9-16 in this chapter and note the extent to which it generalizes across intransitive verbs as well.

4.1 PRIMARY VERB CLASS 9 (PVC 9)

The verbs in this class share a cluster of four features: [+trns, -lctn, -crsp, -mode]. There have been no examples of impersonal PVC-9 verbs located so far in the data. The discussion below, therefore is limited to non-impersonal verbs in this class.

Verbs in this class are either extension or non-extension:



I discuss non-extension verbs in 4.1.2 followed by extension verbs in 4.1.3 below.

4.1.2 [-mprs, -xtns]

4.1.2.1 Subtypes

The simple non-impersonal non-extension transitive verbs are further subcategorized by the features construction ([+cnst]), contact ([+cntc]), reversibility ([+rvrs]) stativity ([+sttv]), telicity ([+telc]), and extension ([+xtns]). These subtypes are shown in Figure 4.1 with relevant features. I discuss each subtype of non-impersonal, non-extension PVC-9 verbs individually below.

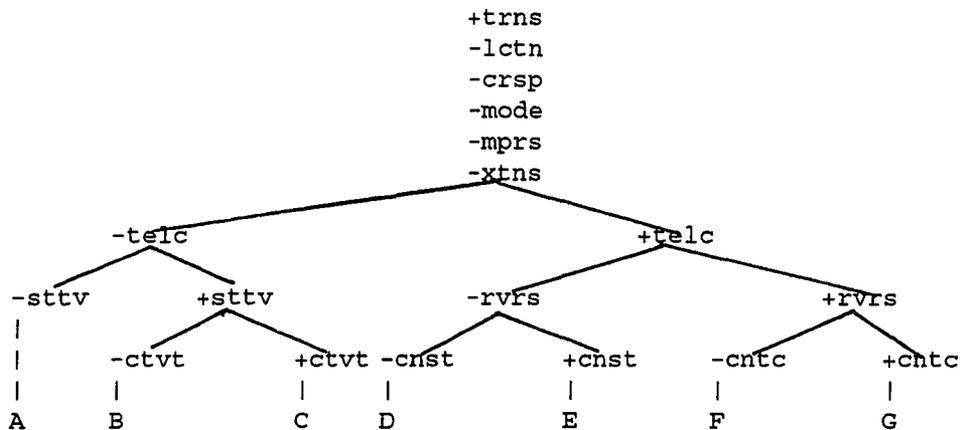


Figure 4.1 Non-impersonal, Non-extension Verbs in PVC-9

The non-impersonal, non-extension PVC-9 verbs are either atelic or telic ([+telc]). The distinction between these two types can be established by a semantic test in which an aspectual marker *-te simau* is attached to the stem of the regent verb. For telic verbs, Subtypes D through G, the attachment of this aspect marker entails a perfective interpretation, whereas for atelic verbs, Subtypes A through C, such an entailment is not present. Instead, when we attach the same aspect marker to atelic verbs, it indicates that the result of the activity designated by the verb has been done inadvertently. Furthermore, the attachment of the same aspect marker to some atelic verbs yields ungrammatical sentences. These atelic verbs are morphologically marked with an *-i* ending, which is an inflectional morpheme for adjectival ([+djct]) verbs.¹ We call these verb adjectival atelic verbs.

The non-adjectival atelic verbs are further subcategorized by the feature stativity. We will distinguish stative verbs from non-stative verbs by attaching another aspect-marker *-te iru* to the stem of the regent. As we observed earlier in the section on the subcategorization of the simple transitive verbs, our PVC-1, non-stative verbs with this aspect marker entail a progressive or stative interpretation for simple intransitive verbs. We have also observed that when we attach the same aspect marker *-te iru* to stative regent verbs it indicates that the result of such activity designated by the regent verb continues. Similarly, the attachment of this marker to the stem of some transitive verbs

entails a progressive interpretation. We label these verbs as Subtype A in the Figure 4.1 and assign features [-telc,-sttv].

We observed that with some atelic verbs, the attachment of the same aspect marker to the stem yields ungrammatical sentences. These verbs are also morphologically marked with an inflectional affix *-i*.

These adjectival verbs are inherently stative. We call these verbs Subtype B with features [-telc,+sttv,-ctvt]. We label other atelic verbs, which entail a resultative interpretation of *-te iru* marker, as Subtype C in the Figure 4.1 and assign the features [-telc,+sttv,+ctvt]

The telic transitive verbs are further subcategorized on the basis of the feature reversibility ([±rvrs]).² The reversible ([+rvrs]) verbs designate activities that can be reversed, while activities designated by non-reversible ([-rvrs]) verbs cannot be reversed. The AGT of [-rvrs] regent verbs is incapable of removing PAT from the affected state. Although this feature is primarily motivated by semantics and pragmatics of the verb, there is a syntactic test to distinguish non-reversible [-rvrs] verbs from reversible [+rvrs] verbs. I will call this diagnostic locative replacement. The locative replacement amounts to applying a derivational process that downgrades the PAT to a terminus LOC. The regent verb, which permits this locative replacement, is a non-reversible verb [-rvrs]. For example, the PAT *seetaa* 'sweater' in *seetaa o amu* 'to knit a sweater' may be

downgraded to a terminus LOC as in *seetaa ni amu* 'to knit something into a sweater.'

- (1) *Onna ga seetaa o anda.*
 Woman Nom sweater Acc knitted
 'The woman knitted a sweater.'

Onna ga seetaa ni anda.
 'The woman knitted (something) into a sweater.'

Therefore the regent verb *amu* 'knit' in *seetaa o amu* is a [-rvrs] verb.

However such downgrading is not allowed for regent verb *amu* 'knit' in *keito o amu* 'knit yarn':

- (2) *Onna ga keito o anda.*
 Woman Nom yarn Acc knitted
 'The woman knitted the yarn.'

**Onna ga keito ni anda.*
 *'The woman knitted into the yarn.'

The verb *anda* in the above example, therefore, is not [-rvrs] but [+rvrs].

Pragmatically, it is possible to reverse the knitted yarn back to the unknitted state by undoing the knitted portion. We have to beware of analyzing situations instead of language. The important thing is perception here: the speaker perceives the sweater as coming into existence in these examples; you could not unravel it, reknit it, and then say it was the same sweater. The yarn is not perceived as changed in this process: the yarn existed before and after the knitting, and it would still be the same yarn if you unraveled the sweater and used the yarn to make socks. Therefore, *amu* in 'knitting a sweater' is non-reversible [-rvrs]

class of verb, while *amu* in 'knit yarn' is a reversible [+rvrs] class of verb.

It should be noted that this diagnostic has a limited use in that some non-reversible verbs escape this test, as we observe below.

Non-reversible telic transitive verbs are further subcategorized by the feature construction ([+cnst]). The construction verbs refer to activities expecting a construction of objects: material or non-material. Non-construction (-cnst) verbs do not entail such objects as their outputs. The subtype C refers to simple telic non-reversible, non-construction verbs, while the Subtype D stands for simple, telic, non-reversible, construction verbs. The utility of the locative replacement diagnostic for [-rvrs] verbs is limited to verbs with the feature [+cnst]. Non-reversible verbs with the feature [-cnst] escape this diagnostic. For example, *usinau* 'lose', a non-reversible, non-construction verb in (10) below, does not permit its PAT to downgrade to a terminus LOC:

- (3) Kitamoto ga sannin no musuko o usinata.
 Nom thee Gen son Acc lost
 'Kitamoto lost three sons.'
 *Kitamoto ga sannin no musuko ni usinata.

The telic, reversible, transitive verbs are further subcategorized by the feature contact ([±cntc]). The contact verbs, identified by the feature [+cntc], designate activities in which the PAT of the regent comes into contact with the AGT of the

regent, while non-contact ([-cntc]) verbs designate activities in which the PAT and the AGT of the regent do not come into contact. The Subtype E stands for simple, telic, reversible, non-contact verbs, while Subtype F stands for simple, telic, reversible, contact verbs. Later in this chapter, I present examples of subtypes of non-extension, simple, transitive verbs.

4.1.2.2 Subtype A

The verbs in this class have a cluster of the following features: [-trns, -lctn, -crsp, -mode, -xtns, -telc, -sttv]. Subtype A, therefore, contains the least marked, simple, transitive verb.

(4)

Yakoo doobutu	ga	asa	o	osoreru
nocturnal beast	Nom	morning	Acc	fears
1ndex	2ndex	3ndex	4ndex	5ndex
+N	+P	+N	+P	+trns
				-crsp
				-lctn
				-mode
				-mprs
				-sttv
				-telc
				-xtns
				2 ([+Nom])
				2 [+actr]
				2 [+AGT]
				4 ([+Acc])
				4 [+PAT]

'A nocturnal beast fears the approach of the morning.' (YU2163)

The following verbs belong to this category:

(5)

(5.1)

awaremu to pity (oneself)
iyagaru to dislike (the practice)
kanziru to sense (the sadness. the chill)
kirau to dislike (the cold drink)
konomu to favor, like (the sharpness)
saketagaru to dislike (talking about Yukio)

(5.2)

arawasu to symbolize (nationality)
erabimayou to try to decide (on the summer resort)
kurikaesu to repeat (the process automatically)
omoidasu to think of (the children at home)
tadayowaseru to lend (a certain soft balance and harmony)
tukareru to be struck in the chest
yobimawaru to keep calling out (the name of a relative)

The verbs in this category refer to a PAT, which is typically not under control of the AGT, such as emotive activities as in referring to one's primary sense (5.1), or spontaneous activities where an end point is not an issue (5.2).

4.1.2.3 Subtype B

The verbs in this class have a cluster of the features [-trns, -lctn, -crsp, -mode, -xtns, -telc, +sttv, -ctvt]. Subtypes B and C below differ from A in terms of stativity. Subtype B differs from C in terms of activity: while B verbs are non-activity [-ctvt], C verbs below are marked with the feature [+ctvt]. As was mentioned earlier, verbs in Subtype B class are morphologically marked: they are adjectival verbs with the ending *-i*. Illustration (6) below gives an example of a Subtype B verb.

(6)

Teisyu	wa	nyooboo	ga	kowai
husband	Tpc	wife	Acc	is afraid of
1ndex	2ndex	3ndex	4ndex	5ndex
+N	+P	+N	+P	+V
	+modl			+sttv
				+trns
				-crsp
				-ctvt
				-lctn
				-mode
				-mprs
				-telc
				-xtns
				2([+modl])
				2([+Nom])
				2([+them])
				2[+actr]
				2[+AGT]
				4([+Acc])
				4[+PAT]

'The husband is afraid of his wife.' (YA50-modified)

In (6), the case marker *ga* is an accusative postposition that marks the PAT of a stative transitive verb. This *ga* is homophonous with the nominative case form which marks the macrorole actor, e.g. the PAT of the intransitive verb and the AGT of the transitive verb. The following verbs with morphological

feature [+djct] in (7) belong to this category. They refer to an internal state on the part of the AGT:

(7) [+V,+djct]
hazukasii to be ashamed of (his rudeness on the train)
hosii to want (this woman)
kawaii to be fond of (this grandchild)
kowai to be scared of (his wife)
nomitaito want to drink (a glass of water)

Verbs with the feature [+djct] may undergo a lexical derivational process by suffixation of *-garu*. The derived verbs, *hazukasigaru*, *hosigaru*, *kawaigaru*, and *nomitagaru* belong to Subtype A above. The PAT of the derived verbs, therefore, must be marked by the accusative postposition *o*:

(8)
 Simamura ga hirei ga hazukasii.
 rudeness be ashamed of
 'Shimamura is ashamed of his rudeness.'
 *Simamura ga hirei ga hazukasigaru.
 Simamura ga hirei o hazukasigaru.
 'Shimamura appears to be ashamed of his rudeness.'

Incidentally there are two homophonous *-garu* suffixes in Japanese.³ I will call them *-garu₁* and *-garu₂*. The *-garu₁* refers to the affix which derives a non-stative, atelic transitive verbs, our Subtype A, by suffixation to the stem of a [+djct] stative, atelic, transitive verbs as in (9). This is the 'appearance-*garu*'. When the AGT is identical to the speaker, the appearance-*garu* derivation is not acceptable:

(9)
 *watasi ga zisin o kowagatta.
 Nom earthquakes Acc be scared
 I appeared to be scared of earthquakes.

As we cannot experience the inner psychological state on the part of some other AGT, we observe such a state from the appearance of the AGT. The appearance is marked by *-garu₁*. *-Garu₂* is the affix which adds a semantic content 'pretend to be'. I call this the 'pretence *-garu*'. Some [+djct] verbs may occur with both, while others occur with one and not with other. So-called attributive adjectives do not occur with *-garu*; some verbs such as *wakai* 'young', *tuyoi* 'strong' and *isogasii* 'busy' occur with the pretence *-garu* but not with the descriptive or appearance *-garu*. The semantic features that determine the derivability with respect to these three types of *-garu*, however, are beyond the scope of the dependency analysis of the regent verb being undertaken here. It should be noted that the lexical derivation presented in (8) refers to the affixation of *-garu₁*, the appearance *-garu*.

4.1.2.4 Subtype C

The verbs in this class have a cluster of features: [+trns, -lctn, -crsp, -mode, -mprs, -xtns, -telc, +sttv, +ctvt]. Subtype C differs from A in terms of stativity and differs from B in terms of activity. Illustration (10) below gives an example.

(10)					
Syuuiti	wa	Furansugo	ga	dekiru.	
	Tpc	French	Acc	knows	
1ndex	2ndex	3ndex	4ndex	5ndex	
+N	+P	+N	+P	+V	
	+modl			+ctvt	
				+sttv	
				+trns	
				-crsp	
				-lctn	
				-mode	
				-mprs	
				-telc	
				-xtns	
				2([+modl]	
				2([+Nom])	
				2([+them])	
				2[+actr]	
				2[+AGT]	
				4(+Acc)	
				+sorcl	
				4[+PAT]	

'Syuuiti knows French.' (YA40)

In (10), as in (6), the case marker *ga* is an accusative postposition which marks the PAT of the stative transitive verb. This *ga* is homophonous with the nominative case form that marks the macrorole actor, e.g. the PAT of the intransitive verb and the AGT of the transitive verb. The verbs in (11) below belong to this subtype. They refer to an internal state, including a mental or physical capacity on the part of the AGT. Verbs in Subtype C differ from verbs in Subtype B in that Subtype C verbs are not marked morphologically with a feature [+djct]. Verbs in Subtype C are non-adjectival verbs:

(11) [+V, -djct]

<i>kikoeru</i>	to be able to hear (the sound)
<i>nomikomeru</i>	to be able to swallow/comprehend (the plot)
<i>taberareru</i>	to be able to eat (rice)
<i>wakaru</i>	to comprehend (the novel)

Among the verbs given in (11), *kikoeru*, *nomikomeru*, and *taberareru* represent morphologically complex verbs, marked by the so-called potential marker *-er-*. The appearance *-garu* verbs may not be attached to the stem of the C-verbs:

(12) **Syuuiti wa Furansugo o dekgaru.*

4.1.2.5 Subtype D

The verbs in this class have a cluster of the features [+trns, -lctn, -crsp, -mode, -mprs, -xtns, +telc, -rvrs, -cnst]. Subtypes D through G differ from Subtypes A, B, and C in terms of telicity. Illustration (13) is an example of Subtype D:

(13)

Kitamoto	mo	sannin	no	musuko	o	usinatta
	Tpc	three	Gen	sons	Acc	lost
1ndex	2ndex	3ndex	4ndex	5ndex	6ndex	7ndex
+N	+P	+N	+P	+N	+P	+V
	+mod1					+telc
						+trns
						-cnst
						-crsp
						-mprs
						-lctn
						-mode
						-rvrs
						-xtns
						2([+mod1])
						2([+Nom])
						2([+them])
						2[+actr]
						2[+AGT]
						6([+Acc])
						6[+PAT]

'Kitamoto also had lost three sons.' (YA66)

In (13) the words with indices 1, 2, 5, and 6 are dependent on the head verb. The indices 3 and 4 mark dependents of the nominal head *musuko*. Therefore, they do not appear in the matrix of the

regent *usinatta*. The actant headed by the modal postposition *mo* is linked to the AGT nominal slot in the verb's matrix by way of a theme. The verbs in (14) belong to this subtype:

(14)	
<i>damasu</i>	to deceive (the woman too easily)
<i>kiru</i>	to saw down (the tree)
<i>musiru</i>	to pluck (petals of flowers)
<i>nomu</i>	to drink up (the water)
<i>tukau</i>	to use up (the sum of money)

The AGT of each verb in (14) brings about a change of state on the part of the PAT. Moreover the change is non-reversible and non-constructive.

4.1.2.6 Subtype E

The verbs in this class have a cluster of the features [+trns, -lctn, -crsp, -mode, -mprs, -xtns, +telc, -rvrs, +cnst]. Subtypes D and E contrast in terms of the construction feature. The AGT constructs the PAT as a result or during the process of activities designated by the regent. The PAT of Subtype E verbs may be downgraded to a terminus LOC by locative replacement derivation. Illustration (15) is an example of Subtype E. Verbs in the same category are given in (16).

(15)

Kikuzi	wa	iyana	kao	o	sita
	Tpc	uncomfortable	face	Acc	made
1ndex	2ndex	3ndex	4ndex	5ndex	6ndex
+N	+P	+A	+N	+P	+V
					+cnst
					+telc
					-crsp
					-lctn
					-mode
					-rvrs
					-trns
					-xtns
					2([+modl])
					2([+Nom])
					2([+them])
					2[+actr]
					2[+AGT]
					5([+Acc])
					5[+PAT]

'Kikuzi looked uncomfortable.' (SE72)

(16)

<i>ageru</i>	to achieve (a high performance level)
<i>amu</i>	to knit (a sweater)
<i>hukiageru</i>	(A new burst of flame) sends up (its columns of sparks)
<i>suru</i>	to hold (a hasty conference)
<i>tukeru</i>	to write (a diary)
<i>ukaberu</i>	to reveal (a faint smile)
<i>utau</i>	to sing (a song)

4.1.2.7 Subtype F

The verbs in this class have a cluster of the features [+trns, -lctn, -crsp, -mode, -mprs, -xtns, +telc, +rvrs, -cntc]. Subtypes F and G below are not eligible for locative replacement. Subtypes F and G contrast in terms of the contact feature. The AGT of Subtypes F and G verbs instigates a reversible activity which involves the PAT. The PAT is indifferent to the AGT in Subtype F verbs, which require that the AGT and PAT not be in close contact. This contrasts with Subtype G verbs below, as Subtype G verbs specifically require that the AGT be in contact with the PAT. A

majority of transitive verbs in my data belong either to Subtype F or G below. Item (17) is an example of a Subtype F verb. I give a selected list of such verbs in (18).

(17)

Simamura	wa	sugi	no	kozue	o	miageta
	Tp	cedar	Gen	branches	Acc	looked up
1index	2ndex	3ndex	4ndex	5ndex	6ndex	7ndex
+N	+P	+N	+P	+N	+P	+V
	+modl					+rvrs
						+telc
						+trns
						-cntc
						-crsp
						-lctn
						-mode
						-mprs
						-xtns
						2([+modl])
						2([+Nom])
						2([+them])
						2[+actr]
						2[+AGT]
						6([+Acc])
						6[+PAT]

'Shimamura looked up at the cedar branches.' (YU29)

(18)

(18.1) action

(18.1.1) non-punctual action:

<i>kakusu</i>	to hide (the figures)
<i>kiku</i>	to listen to (the tinkling of the bell)
<i>matu</i>	to await (a train)
<i>torikakomu</i>	to envelope (the two people)
<i>tuzukeru</i>	to continue (the pampering)
<i>ukeru</i>	to receive (tea service)

(18.1.2) punctual action:

<i>hanasu</i>	to pull away (the face)
<i>hurimuku</i>	to turn and look at (Simamura)
<i>kesu</i>	to extinguish (the light)
<i>matagu</i>	to step lightly (over the box)
<i>morau</i>	to receive (a blade)
<i>okuru</i>	to send (a guest)
<i>otosu</i>	to drop (the window)
<i>suru</i>	to mention (a name)
<i>yobu</i>	to call (Komako)

(21)		
dasu		to say something in a loud voice
iu		to tell (a lie)
hanasu		to tell (her life story)
tutaeru		to relay (the message)
uttaeru		to communicate (her pain)

It must be noted, however, that these communicative verbs have a property that also characterizes the Subtype D. In other words, the PAT of these communicative verbs is constructed as the result of the activity specified by the regent verb. The difference, however, between these verbs and Subtype E verbs is syntactic: these verbs do not trigger locative replacement derivation as Subtype E verbs do.

4.1.2.8 Subtype G

As I mentioned earlier in conjunction with the discussion of PVC-9 Subtype E, the verbs in Subtype G have a cluster of the features [+trns, -lctn, -crsp, -mode, -mprs, -xtns, +telc, +rvrs, +cntc]. The AGT of Subtype G verbs instigates a reversible activity which involves the PAT. The PAT in Subtype G verbs must maintain a contact with the AGT. This connectivity distinguishes the Subtype G verbs from Subtype F verbs, which require that the AGT and the PAT not be in close contact. An example of Subtype G verbs in (22) is followed by a selected list of such verbs in (23).

(22)					
Simamura	wa	Komako	o	daita.	
	Tpc		Acc	held	
1ndex	2ndex	3ndex	4ndex	5ndex	
+N	+P	+N	+P	+V	
	+mod1			+cntc	
				+rvrs	
				+telc	
				+trns	
				-crsp	
				-lctn	
				-mode	
				-mprs	
				-xtns	
				2([+mod1])	
				2([+Nom])	
				2([+them])	
				2[+actr]	
				2[+AGT]	
				4([+Acc])	
				4[+PAT]	

'Shimamura held Komako.' (YU2521)

In this example the AGT, Simamura is in contact with the PAT Komako as the activity designated by the head verb is in effect. The PAT Komako is alienable from the AGT. Examples in (23) include instances for the inalienable PAT as well as the alienable PAT. The former type of PAT refers typically a subcomponent of the AGT, such as body parts or items possessed by the AGT. The verb *kosuru* in the data occurs with the alienable PAT 'the glass' in one instance (YU13') and with the inalienable PAT 'his forehead' in another. (YU12-1). The verbs listed under the inalienable PAT are all used with an alienable PAT with one exception, *aku*, which is discussed below:

(23)

inalienable PAT:

<i>ageru</i>	to raise (her left hand)
<i>akarameru</i>	to redden (face)
<i>aku</i>	to open (eyes)
<i>butukeru</i>	to shove (the body)
<i>huku</i>	to wipe (her forehead)
<i>huru</i>	to shake (her head)
<i>huruwaseru</i>	to tremble (the shoulders)
<i>kosuru</i>	to rub (his forehead)
<i>masu</i>	to increase (the brightness of the color)
<i>osaeru</i>	to put her hands (to her eyes)
<i>tuburu</i>	to close (her eyes)

alienable PAT:

<i>hipparu</i>	to pull (Simamura)
<i>humu</i>	to stamp on (the snow)
<i>kiru</i>	to wear (a blue cape)
<i>kaburu</i>	to wear (a hat)
<i>kakeru</i>	to wear (eyeglasses)
<i>kosuru</i>	to rub (the glass)
<i>mutiutu</i>	to whip (the person)
<i>nigiru</i>	to take (his hand) in her hands
<i>oboeru</i>	to remember (you)
<i>suikomu</i>	to pull (his gaze) into
<i>tukamu</i>	to clutch at (Simamura's hands)
<i>tukeru</i>	to light (a match)
<i>turanuku</i>	to pierce (Simamura)
<i>tumamiageru</i>	to clutch at (her skirt)
<i>utu</i>	to strike at (the shell of Simamura's heart)

The verb *aku* appears in the sentence below:

(24)

Akuru asa me o aku to
 following morning eyes Acc open when

Komako ga tukue no mae ni kitin to suwatte
 Nom desk Gen front at prime as sit-GER

hon o yonde ita.
 book Acc read-GER existed

'When he awoke the next morning, Komako was sitting primly beside the table, a book open before her.' (YU42)

I analyze *aku* in the temporal phrase of the preceding example as a transitive verb with the accusative PAT 'eyes'. This

verb has a selectional restriction on its PAT. The PAT must be inalienable:

(25)

*Kodomo ga hako o aku.
child Nom box Acc open
'The child opens a box.'

Kodomo ga kuti o aku.
 mouth
'The child opens his mouth.'

There is a homophonous verb (a member of our PVC-1) that is intransitive. The PVC-1 *aku* imposes no alienability selectional restriction on its subject:

(26)

Hizyoguti/hako ga aku.
emergency exit/box Nom open
'The emergency exit opens.'

Among the verbs listed above, *akameru* is morphologically complex, consisting of the stem of the PVC-1 verb *akamu* and a transitiviser suffix *-er*: *akam-er-u*.

(27)

Kao ga akamu.
face Nom reddens
'The face reddens.'

Onna wa kao o akameru.
womanTpc face Acc reddens
'The woman reddens her face.'

This concludes the discussion of non-extension, simple, transitive verbs.

4.1.3 [-mprs,+xtns]

4.1.3.1 Subtypes

An outline of the subtypes of non-impersonal, extension verbs in PVC-9 is presented in Figure 4.2 below. It should be noted that the symmetrical subtypes have been found and discussed in chapter 3, section 3.1. for verbs in PVC-1.

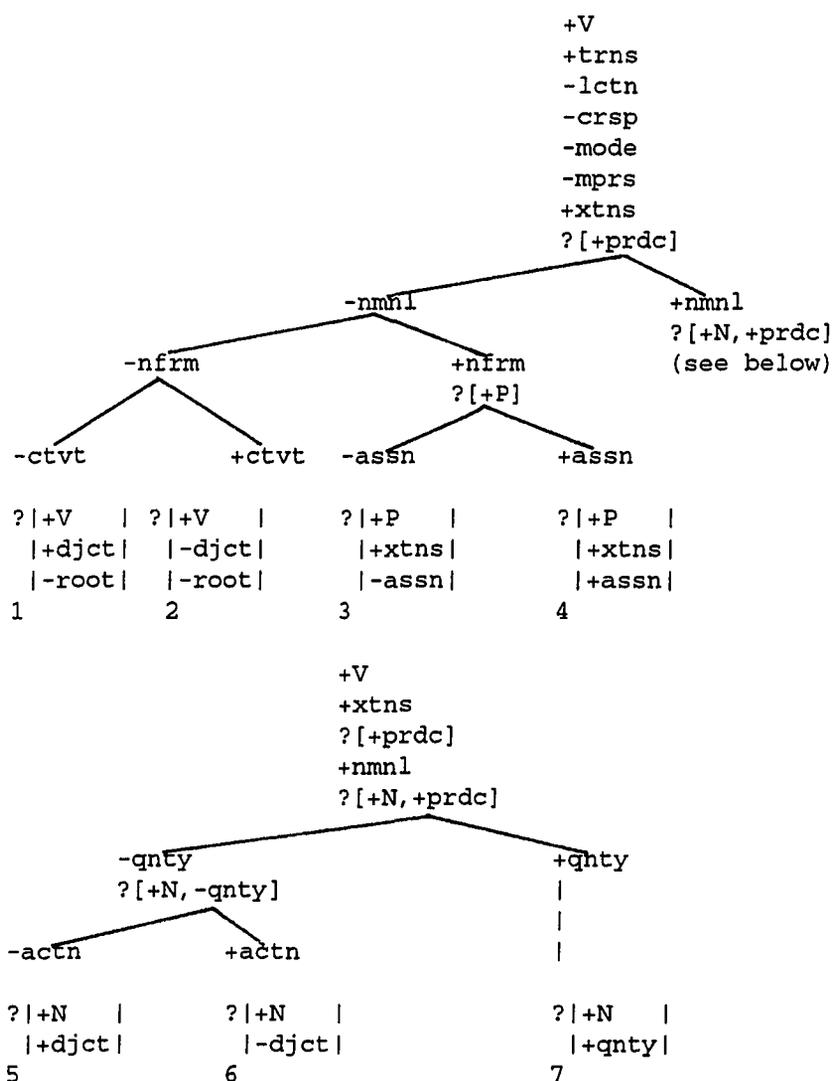


Figure 4.2 Subtypes: Non-impersonal, Extension Verbs in PVC-9

In the subsequent section, a dependency analysis of representative sentences is given for each of the subtypes, together with list of extension verbs.

4.1.3.2 Subtype C-1

(28)							
Yuki	no	iro	ga	yane	o	hikuku	miseta.
snow	Gen	color	Nom	roof	Acc	low	showed
index	2ndex	3ndex	4ndex	5ndex	6ndex	7ndex	8ndex
			+P		+P	+V	+V
						+djct	+trns
						-root	+xtns
							-crsp
							-ctvt
							-lctn
							-mode
							-mprs
							-nfrm
							-nmnl
							-root
							-sttv
							4 ([+Nom])
							4 [+actr]
							4 [+AGT]
							6 ([+Acc])
							6 [+PAT]
							7 [+prdc]
							7 +djct
							-root

'The white of the snow made the eaves look deeper.' (YU62'1)

The transitive verbs in this category require a non-root form of an adjectival verb such as *hikuku* as a dependent. Without this verbal complement (28) is ungrammatical:

(28a) *Yuki no iro ga yane o miseta.

These verbs characteristically refer to the change of state on the part of their PAT. The AGT is the causer in a very basic sense of the change of the state of the PAT, a causee. These verbs may potentially be derived into PVC-2 extension verbs:

(29) Yuki no iro de yane ga hikuku mieta.
 Snow Gen color with roof Nom low lock
 MNS PAT [+prdc] -trns
 +xtns

'With the white of the snow the eaves looked deeper.'

I will pursue this lexical derivation in detail in chapter five.

The following verbs belong to PVC-9-C-1:

(30)
suru (the light) makes (the surrounding of the eyes faintly bright)
sikakeru to begin making (the face red)
omowaseru to let someone believe (as strong)

4.1.3.3 Subtype C-2

(31)
 Suzuki ga Tanaka o aruite misaseta
 Nom Acc walk made try
 1ndex 2ndex 3ndex 4ndex 5ndex 5ndex
 +N +P +N +P +V +V
 -djct +ctvt
 -root +trns
 +xtns
 -crsp
 -lctn
 -mode
 -mprs
 -nfrm
 -nmnl
 -sttv
 2([+Nom])
 2[+actr]
 2[+AGT]
 4([+Acc])
 4[+PAT]
 5[+prdc]
 5|-djct|
 |-root|

'Suzuki made Tanaka venture out on foot.'

The transitive, non-correspondent, non-locational, non-mode, extension verb *misaseta* (the past tense form of verb *misasu* (to

let see)) functions as a kind of manner auxiliary verb in this example. It has a non-root form of an intransitive verb, *aruku* (to walk) as a dependent. Verbs in this category include:

(32)

<i>ikasu</i>	to make go (on foot)
<i>kaesu</i>	to make return (on foot)
<i>morawaseru</i>	to let someone give a favor of (walking)
<i>kosaseru</i>	to let someone come (on foot)
<i>okaseru</i>	to (walk the route) beforehand
<i>simawaseru</i>	to finish (walking)

4.1.3.4 Subtype C-3

(33)

Suzuki	ga	Tanaka	o	baka	ni	sita.
	Nom			Acc	fool	did
1index	2index	3index	4index	5index	6index	7index
	+P	+N	+P	+N	+P	+V
					+xtns	+nfrm
					-assn	+trns
						+xtns
						-assn
						-crsp
						-lctn
						-mode
						-mprs
						-nmnl
						-sttv
						2 ([+Nom])
						2 [+actr]
						2 [+AGT]
						4 ([+Acc])
						4 [+PAT]
						6 [+prdc]
						6 +xtns
						-assn

'Suzuki made fun of Tanaka.'

The verb *suru* belongs to the extension subclass

[-nmnl,+nfrm,-assn], or extension verb, Subtype 3 in the Figure

4.2. The following verbs also belong to this subclass:

(34)					
ateru				to place in the relation of	
atukau				to treat (students on equal terms)	
egakidasu				to depict (the shape of the mountain in a deep purple)	
kanzisaseru				to make one to feel (the happiness)	
kanziru				to feel (regrets)	
miseru				to show (the outfits as extravagant)	
ukeru				to (mis)perceive (the joke as real)	

4.1.3.5 Subtype C-4

(35)							
koobai	o	Singo	wa	himomo	to	mitigaeta	
red	Acc		Tpc	red	as if	mistook	
plum				peach			
1ndex	2ndex3ndex		4ndex	5ndex	6ndex	7ndex	
	+P		+P	+N	+P	+V	
			+modl		+xtns	+assn	
					+assn	+nfrm	
						+trns	
						+xtns	
						-crsp	
						-lctn	
						-mode	
						-mprs	
						-nmnl	
						-sttv	
						2([+Acc])	
						2[+PAT]	
						4([+modl])	
						4([+Nom])	
						4([+them])	
						4[+actr]	
						4[+AGT]	
						6[+prdc]	
						6 +xtns	
						+assn	

'Shingo mistook red plum blossoms as red peach blossoms.'
(YA65-modified)

The extension transitive verb *mitigaeru* in (35) shares the features common to the extension subclass [-nmnl,+nfrm,+assn] (= extension verb, subtype 4 in Figure 4.2) In addition, the following verbs belong to Subtype C4 in PVC-9. The complement marked by [+P,+xtns] to refers to the 'being' as an evolving,

transient state of the PAT. These verbs characterize communication and cognition rather than action:

(36)	
<i>iu</i>	to call (him a liar)
<i>iwaseru</i>	to cause someone to say (him a specialist)
<i>kangaetigaisuru</i>	to mistake (this hot spring for any other)
<i>minasu</i>	to regard (her action as futile)
<i>nazukeru</i>	to name (a puppy Taroo)
<i>saseru</i>	to make (astonished at himself), as in: Singo o gyot to saseta.' Singo was made to be astonished at himself.'
<i>satoru</i>	to recognize (life as nothingness)
<i>uketoru</i>	to receive (the remarks as only a sentimentality)
<i>uyamau</i>	to respect (deities as absolute)
<i>yobu</i>	to call (him a writer)
<i>yobaseru</i>	to cause someone to call (him a liar)

4.1.3.6 Subtype C-5

As mentioned at the beginning of the non-impersonal, extension counterparts, there has been no example found in the primary data for the C-5 counterpart of PVC-9 verbs. A plausible example is offered in (37):

(37)

Sono	sirase	ga	Tanaka	no	yoosu	o
that	news	Nom		Gen	condition	Acc
1ndex	2ndex	3ndex	4ndex	5ndex	6ndex	7ndex
+Det	+N	+P	+N	+P	+N	+P
	hakkiri	saseta.				
	clear	caused				
	8ndex	9ndex				
	+N	+V				
	+djct	+nmnl				
		+trns				
		+xtns				
		-actn				
		-crsp				
		-lctn				
		-mode				
		-mprs				
		-qnty				
		-sttv				
		3 ([+Nom])				
		3 [+actr]				
		3 [+AGT]				
		7 [+PAT]				
		7 ([+Acc])				
		8 [+Acc]				
		8 [+prdc]				
		8 +prdc				
		+djct				

'The news caused Tanaka's condition to be clear.' (Because of the news Tanaka's condition became clear.)

4.1.3.7 Subtype C-6

The verb in this subtype requires that the nominal complement must refer to an action in which the PAT of the upperclause controls the actor of the lower clause. For example, in (38) below, Yasuko let go of her anger by verbal expression. The actor of the lower clause predicate nominative *bakuhatu* is controlled by the PAT of the regent *saseta*, namely, *ikari* 'anger'. This follows the usual control rule: the upper PAT is coreferential with the lower actor.

(38)

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Yasuko	wa	ikari	o	bakuhatu	saseta
	Tpc	anger	Acc	explode	caused
1ndex	2ndex	3ndex	4neex	5ndex	6ndex
+N	+P	+N	+P	+N	+V
	+modl			-djct	+actn
				-qnty	+nmnl
					+trns
					+xtns
					-crsp
					-lctn
					-mode
					-mprs
					-sttv
					2([+modl])
					2([+Nom])
					2([+them])
					2[+actr]
					2[+AGT]
					4([+Acc])
					4[+PAT]
					5[+Acc]
					5[+prdc]
					5 +prde
					-djct

'Yasuko spilled out her anger.' (YA35a modified)

The most prevalent [+xtns,+trns,+actn] verb is *saseru* 'to make/cause', which is derivationally related to the [+xtns,-trns,+actn] verb *suru* 'to do', our PVC-1-C. Other examples of this extension, transitive verb class include:

(39)

<i>ansin saseru</i>	to make (Shimamura) feel easy about
<i>kandoo saseru</i>	to make a moving impression on someone
<i>kanbyoo saseru</i>	to make someone nurse a person
<i>kekkon saseru</i>	to make someone marry another person
<i>musoo saseru</i>	to make someone dream
<i>roobai saseru</i>	to make someone increase his discomfort
<i>ryooyoo saseru</i>	to make someone to regain health by nursing and/or paying for medical expense.
<i>sinpai saseru</i>	to make someone worry
<i>taikutu saseru</i>	to make someone feel bored
<i>zyama saseru</i>	to make someone disturb (Yoko's visit to the graveyard)

4.1.3.8 Subtype C-7

(40)					
Yuki	wa	1-zyoo	o	2,3-syaku	koeru
snow	Tpc		Acc		surpass
1ndex	2ndex	3ndex	4ndex	5ndex	6ndex
	+P		+P	+N	+V
	+mod1			+qnty	+nmnl
					+trns
					+xtns
					-actn
					-crsp
					-lctn
					-mode
					-mprs
					-sttv
					2 ([+mod1])
					2 ([+Nom])
					2 ([+them])
					3 [+actr]
					3 [+AGT]
					4 ([+Acc])
					4 [+PAT]
					5 [+Acc]
					5 [+prdc]
					5 +prdc
					+qnty

'The snowfall surpasses 1-zyoo by 2 or 3 syaku.' (YU63)

The topic phrase is linked to the PAT actor by the theme. The corresponding untropicalized sentence is: *Yuki ga i-zyoo o 2,3 syaku koeru.*⁴ These extension verbs takes a predicate nominal with a selectional restriction: it must refer to a quantification.

The following is a list of verbs in this category:

(41)	
herasu	to reduce weight (by 3 kilo)
susuru	to swallow bowls of noodles
masu	to increase population (by three times)

4.1.3.9 F2

There is an example of a non-impersonal, extension counterpart of a stative, transitive verb, with the predicate complement, a non-root form of a non-adjectival verb, as shown in (42) below.

(42) PVC-9-B [-mprs,+xtns]

Yuki	ga	tumotte	hosikatta
snow	Acc	pile	wished
1ndex	2ndex	3ndex	4ndex
+N	+P	+V	+V
		-djct	+ctvt
		-root	+sttv
			+trns
			+xtns
			-lctn
			-mprs
			-nfrm
			-nmnl
			2[+PAT]
			2(+Acc)
			+sorc
			3[+prdc]
			3 -djct
			-root
			x([+Nom])
			x[+actr]
			x[+AGT]

'[I] wished snow to pile up.'

The non-impersonal extension verb *hosikatta* requires the non-root form of an intransitive complement verb *tumoru* 'pile up'. The PAT of the higher clause headed by *hosikatta* is interpreted by the regular infinitival control rule as coreferential with the implied actor of the lower clause headed by the non-root form of intransitive *tumoru*. As a transitive state verb, *hosikatta* marks its PAT with the accusative source postposition *o*.

If we are to subcategorize this particular verb, it belongs to the F2 subcategory of PVC-9 verbs. The category F2 was established for the non-impersonal, stative, intransitive, extension verb which is characterized by additional features, non-nominal ([-nmnl]), non-informational ([-nfrm]), and activity ([+ctvt]).

Compared with the number of extension verbs in the intransitive verb class, the transitive extension verbs are less prevalent in the data. Furthermore, the stative, transitive subtype of PVC-9 extension verbs occurs only with the F2 predicate type. In the stative, intransitive class, all six predicate types, F1-F6, have been located.

4.2 PRIMARY VERB CLASS 10 (PVC-10)

4.2.1 PVC subtypes

The verbs in this class share a cluster of four features: [+trns, -lctn, -crsp, +mode].

These intransitive mode verbs are further subcategorized by the features association [+assn], extension [+xtns], and personality [+mprs], as shown in (1).

It should be noted that the postposition *ni* listed in Subtypes B and D below refers to the postposition that marks the extension predicate, not the homophonous form that marks the COR and the LOC NPs. Therefore, this *ni* is characterized by a cluster of the features [+P, +xtns, -assn].

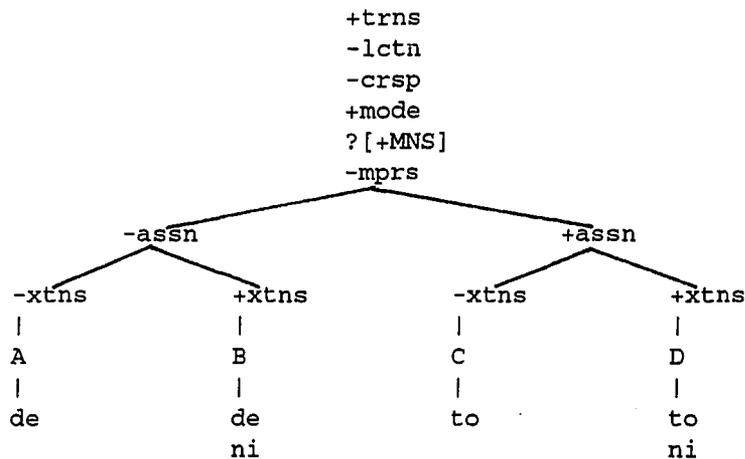


Figure 4.3 Subtypes: Non-impersonal Verbs in PVC-10

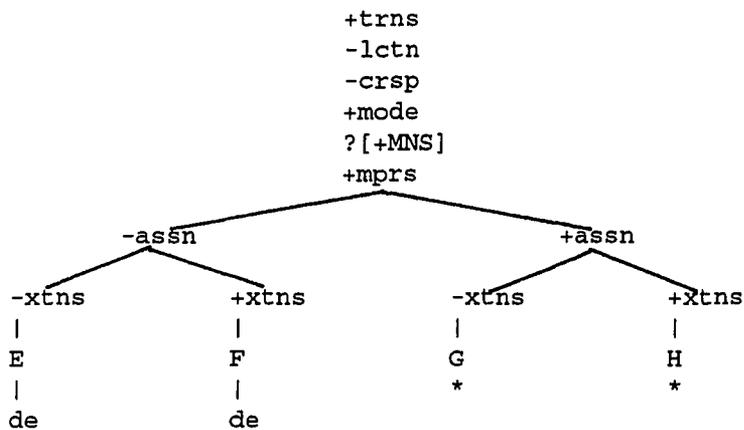


Figure 4.4 Subtypes: Non-impersonal Verbs in PVC-10

In Figure 4.3 those subtypes where we find no examples are marked with an asterisk. They are Subtypes G and H. The postpositions which mark the MNS complement are listed below each of the subtypes of PVC-10 verb. The non-impersonal transitive mode verbs are either association or non-association. The non-association ([-assn]) PVC-10 verbs, regardless of their personality, require the postposition *de* [+P,-drcn,+trmn] as a dependent. They are Subtypes A, B, E and F. In addition to *de*, the Subtype B, being [+xtns], requires the postposition *ni*

[+P,+xtns,-assn]. The association ([+assn]) PVC-10 verbs, Subtypes C and D, require the postposition *to* [+P,-xtns,+assn] to mark the MNS complement. The Subtype D, being [+xtns], requires the postposition *ni* [+P,+xtns,-assn] in addition to *to* [+P,-xtns,+assn].

4.2.2 [-mprs,-xtns]

The majority of PVC-10 verbs belong to this category, which is composed of Subtypes A and C.

An example of subtype A of PVC-10 is given in (43), followed by a list of verbs in the same subtype in (3)

(43)

Hadaka	no	Ama	no	Kawa	wa	
naked	Gen	Heaven	Gen	river	Tpc	
1ndex	2ndex	3ndex	4ndex	5ndex	6ndex	
+N	+P	+N	+P	+N	+P	+modl
yoru	no	daiti	o	suhada	de	maku
night	Gen	earth	Acc	skin	at	wrap
7ndex	8ndex	9ndex	10ndex	11ndex	12ndex	13ndex
+N	+P	+N	+P	+N	+P	+V
					-drcn	+mode
					+trmn	+trns
						-assn
						-crsp
						-lctn
						-mprs
						-xtns
						6 ([+modl])
						6 ([+Nom])
						6 [+AGT]
						6 [+actr]
						6 ([+them])
						10 [+PAT]
						10 ([+Acc])
						12 [+MNS]
						12 [-drcn]

'The Milky Way wraps the night earth in its naked embrace.' (YU 5210)

The following verbs, among others, belong to this subtype:

(44)		
<i>amu</i>	to knit	(the sweater with the yarn)
<i>huku</i>	to thatch	(the teahouse with kaya grass)
<i>katazukesaseru</i>	to have (toys) put away	(by the children)
<i>kazaru</i>	to decorate	(the room with flowers)
<i>miru</i>	to dart	(a burning glance at the two of them)
<i>odorokaseru</i>	to surprise	(the audience with her good looks)
<i>saguru</i>	to feel	(the face of the watch with her fingers)
<i>tutumu</i>	to wrap	(the cheeks with a scarf)
<i>tukuru</i>	to prepare	(sashimi dish with the snapper)
<i>ukaberu</i>	to silhouette	(the withering chrysanthemums against the light from the inn)

These verbs are either morphologically unmarked or marked with the causative suffix *-(s)ase*, as in *katazukesaseru* and *odorokaseru*.

Verbs in (44) are of three semantic types:

- (a) the PAT is the containee, and the MNS is the container as in *huku*, *kazaru*, *maku*, *tutumu*, and *ukaberu*;
- (b) the MNS is or is perceived as inalienable from the AGT, as in *katazukesaseru*⁵, *miru*, *odorokaseru*, and *saguru*;
- (c) the MNS is perceived as the material to be constructed into the PAT as in *amu* and *tukuru*.

As the examples (45) and (46) below indicate, Subtype A of the PVC-2 verbs are derivationally related to PVC-10, Subtype A, in that an addition of causative suffix to PVC-2-A along with a predictable adjustment among case relations will give a morphologically marked PVC-10:

- (45)
Suzuki ga nenzyuu wahuku de toosita.
 Nom the year round kimodo in wore
 'Suzuki wore a kimono the year round.'

(46)

Suzuki ga tuma o nenzyuu wahuku de toosaseta.
 Nom wife Acc the year round kimono in caused to wear
 'Suzuki had his wife wear a kimono the year round.'

Further examples of these morphologically marked verbs are:

kimesareru to cause to decide upon (the consumer taxation
 by the National Diet)

sirebesaseru to cause to examine (the thesis by the
 committee.)

The association PVC-10 verbs, Subtype C, are the other
 non-impersonal, non-extension members of PVC-10. An example
 follows:

(47)

Kikuzi	wa	Tikako	to	me	o	miawaseta.
	Tpc		with	eyes	Acc	meet
1ndex	2ndex	3ndex	4ndex	5ndex	6ndex	7ndex
+N	+P	+N	+P	+N	+P	+V
	+modl		+assn			+assn
						+mode
						+trns
						-crsp
						-lctn
						-mprs
						-xtns
						2([+modl])
						2([+Nom])
						2([+them])
						2[+actr]
						2[+AGT]
						4[+MNS]
						4[+assn]
						6([+Acc])
						6[+PAT]

'Kikuzi's eyes met Tikako's. (Kikuzi made his eyes meet with
 Tikako's and vice versa)' (SE11)

The following verbs belong to this subtype. They are derivationally related to class PVC-2-C verbs and morphologically marked with a causative suffix:

(48)		
arasowaseru	cause to compete (with another person)	
awaseru	cause to meet (with that woman)	
hanasiawaseru	cause to talk to each other	
hureawaseruq	cause to touch each other	
tukiawaseru	cause to associate with each other	
tunagaraseru	cause to connect with a highway	
wakaresaseru	cause to divorce from that man	

4.2.3 [-mprs,+xtns]

Non-impersonal, extension PVC-10 verbs require a complement extension predicate in addition to the postposition which marks the MNS complement. Subtypes B and D in Figure 4.3 belong to this class. The head verb in (49) below is an example of a Subtype B verb, which is an extension counterpart of a non-association, impersonal, transitive, mode verb. It has a complement extension predicate marked by the postposition *ni* [+P,+xtns,-assn].

(49) PVC-10-B					
Syuzin	ga	syain	no	tukaikomi	de
owner	Nom	employee	Gen	consumption	at
1ndex	2ndex	3ndex	4ndex	5ndex	6ndex
+N	+P	+N	+P	+N	+P
					-drcn
					+trmn

hui	ni	sita.
null	as	made
7ndex	8ndex	9ndex
+N	+P	+V
+prdc	+xtns	+trns
	-assn	+xtns
		-assn
		-crsp
		-lctn
		-mprs
		4[+MNS]
		4 -drcn
		+trmn
		6([+Acc])
		6[+PAT]
		8[+prdc]
		8 +xtns
		-assn
		x([+Nom])
		x[+actr]
		x[+AGT]

'(Kikuyu's change of) heart nullified (the original plan of managing) the restaurant.' (YU2312-modified)

In (51) Kikuyuu, a geisya, was supposed to manage the restaurant built by her patron. However, she had a change of heart at the last minute, and threw away the plan. Since the question-pull test requires identification of the one who is nullifying the plan, the AGT is not non-referential. Therefore, the regent is non-impersonal. Further support for indexing the AGT with 'x' comes from grammatical sentences such as (51a):

(51a)
 Kikuyu ga Kikuyu no kokorogara de mise o
 Nom Gen heart by restaurant Acc

hui ni sita
 null as made

'Kikuyu nullified (the original plan of managing) the restaurant by (her) change of heart.'

The extension counterpart of the non-impersonal, transitive, association, mode verb is Subtype D. An example of this verb is given in (52) below:

(52)

Yamada	ga	Suzuki	o	Tanaka	to	tomodati	ni
	Nom		Acc		with	friend	as
1ndex	2ndex	3ndex	4ndex	5ndex	6ndex	7ndex	8ndex
+N	+P	+N	+P	+N	+P	+N	+P
						+prdc	+xtns
							-assn

saseta
 made
 9ndex
 +V
 +assn
 +trns
 +xtns
 -crsp
 -lctn
 -mprs
 2 ([+Nom])
 2 [+actr]
 2 [+AGT]
 4 ([+Acc])
 4 [+PAT]
 6 [+MNS]
 6 |+assn|
 8 [+prdc]
 8 |+xtns|
 |-assn|

'Yamada caused Suzuki to become friends with Tanaka.'

It should be noted that in comparison with PVC-9 verbs, there is a severe restriction on the types of extension predicates that can serve as [+prdc] complements for verbs in the class of

(54a)

Keisatu ga ziken o sirabeta.

AGT PAT

'The police investigated the incident.'

(55a)

Rizikai ga tensyoku negai o uketotta.

AGT PAT

'The board received the transfer request.'

Furthermore, the following sentences are ungrammatical:

(53b)

*Sookai ga sookai de hoosin o kimeta.

(54b)

*Keisatu ga keisatu de ziken o sirabeta.

(55b)

*Rizikai ga rizikai de tensyoku negai o uketotta.

Therefore the regent in (53), (54) and (55) are analyzed as

[+mprs] counterparts of non-extension PVC-10 verbs, namely Subtype

E in Figure 4.4.

4.2.5 [+mprs,+xtns]

The regent *sita*, which belongs to Subtype F in Figure 4.4, provides an example of impersonal extension PVC-10 verbs. This is illustrated in (56) below.

(56)						
Iinkai	de	hooan	o	singi	sita.	
Committee	at	law	Acc	discussion	did	
1ndex	2ndex	3ndex	4ndex	5ndex	6ndex	
+N	+P	+N	+P	+N	+V	
				-djct	+actn	
					+mode	
					+mprs	
					+nmnl	
					+trns	
					+xtns	
					-crsp	
					-lctn	
					0 ([+Nom])	
					0 [+actr]	
					0 [+AGT]	
					2 [+MNS]	
					2 -drcn	
					+trmn	
					4 ([+Acc])	
					4 [+PAT]	
					5 [+Acc]	
					5 [+prdc]	
					5 +prdc	
					-djct	

'The committee discussed the law.'

The feature [+mprs] is established on the account of the [-mprs] sentence (14a) below and on the basis of an ungrammatical sentence

(56b):

(56a)
 Iinkai ga hooan o singi sita.
 committee Nom law Acc discussion did
 'The committee discussed the law.'

(56b)
 *Iinkai ga Iinkai de hooritu o singi sita.
 AGT Nom MNS by PAT Acc discussion did

The occurrence of Subtype F of the verb class PVC-10 is limited to the predicate type C6 in the data.

In viewing the Subtypes A through F in PVC-10 verbs, it is clear that the majority of examples display derivational relationships to PVC-2 verbs. Furthermore, as the number of positively specified features increases, fewer and fewer examples are located in the naturalistic data on hand. There have been no examples found so far for Subtype G and H.

4.3 PRIMARY VERB CLASS 11 (PVC 11)

The verbs in PVC-11 have a cluster of the features [+trns, -lctn, +crsp, -mode].

There have been relatively few examples located in the data. The examples are all non-impersonal, mostly non-extension. There is one example of a verb that belong to the non-impersonal, extension class. The examples of verbs in this class are derivationally related to verbs in PVC-9.

4.3.1 Subtypes

These verbs are further categorized based on the affixation pattern as in Figures 4.5 and 4.6. The numbers under the Subtypes A through H indicate the the numbers assigned to the relevant examples presented below.

4.3.2 [-mprs, -xtns]

(57) PVC-11-A					
Ekityoo	wa	moo	usirosugata	o	miseta
station master		Tpc	already back	Acc	showed
1ndex	2ndex	3ndex	4ndex	5ndex	6ndex
+N	+P	+Adv	+N	+P	+V
	+modl				+crsp
					+trns
					-caus
					-mprs
					-lctn
					-mode
					-pasv
					-xtns
					2([+Nom])
					2([+them])
					2[+actr]
					2[+AGT]
					3([+Adv])
					5([+Acc])
					5[+PAT]
					x[+COR]

'The station master had already turned away (from Yoko).'
 (Literally = 'The station master already showed his back (to Yoko)') (YU2038-modified)

The COR in (57) is not overtly expressed, but is to be interpreted anaaphorically. Thus, the same sentence with an overt COR *Yoko ni* is also acceptable: *Ekityoo wa Yoko ni moo usirosugata o miseta*. The fact that Yoko is not a LOC is shown by the following sentence: *Ekityoo wa soko kara Yooko ni moo usirosugata o miseata*, where *soko kara* is a LOC complement.

This verb is not morphologically marked by either a causative or passive affix. That is, it is an underived 'charter member' of PVC-11.

(58) PVC-11-B

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Kanozyowa		byooninni		kokoro	o	ubawareta
she	Tpc	sick man		by	heart	Acc was taken
1ndex	2ndex	3ndex	4ndex	5ndex	6ndex	7ndex
+N	+P	+N	+P	+N	+P	+V
	+mode		-assn			+crsp
						+pasv
						+trns
						-caus
						-lctn
						-mode
						-mprs
						-xtns
						2([+Nom])
						2([+them])
						2[+actr]
						2[+AGT]
						3[+COR]
						3[-assn]
						5([+Acc])
						5[+PAT]

'Her attention was drawn to the sick man.' (Literally = She was stolen her heart by the sick man.) (YU2053-modified)

Another example for Subtype B in the data is *tukareru* 'to be pierced' as in:

(59)

Simamura wa Komako no kotoba ni mune o tukareta.
Tpc. Gen words by chest Acc was pierced
'Simamura was pierced his in the chest by Komako's words.' (YU
2471-modified)

(60) PVC-11-C

Ayasii	kaikan	ni	mune	o	huruwaseta
strange	thrill	by	chest	Acc	trembled
1ndex	2ndex	3ndex	4ndex	5ndex	6ndex
+Adj	+N	+P	+N	+P	+V
		-assn			+caus
					+crsp
					+trns
					-lctn
					-mode
					-mprs
					-pasv
					-xtns
					3[+COR]
					3[-assn]
					5([+Acc])
					5[+PAT]
					x([+Nom])
					x[+actr]
					x[+AGT]

'A strange thrill made (his) chest rise.' (Literally= (He) trembled his chest by the strange thrill.)

(61) PVC-11-D

Suzuki	ga	Tanaka	ni	yakusoku	o	saserareta
	+Nom		by	promise	Acc	was forced
						to make
1ndex	2ndex	3ndex	4ndex	5ndex	6ndex	7ndex
+N	+P	+N	+P	+N	+P	+V
			-assn			+caus
						+crsp
						+pasv
						+trns
						-lctn
						-mode
						-mprs
						-xtns
						2([+Nom])
						2[+actr]
						2[+AGT]
						4[+COR]
						4[-assn]
						6([+Acc])
						6[+PAT]

regent by way of linking devices mediated by the feature ([+them]). The [+Acc] postposition which marks the PAT Yoko is dropped. We can replace *nado* by *o* and still have a good sentence.

The word with index 13 is for an expression of politeness or deference referring to Yoko. The extension associative postposition to [+P,+xtns,+assn] marks a sentential complement: the complement sentence consists of a string of words with indices 14 and 15. The non-extension, non-associative postposition *ni* [+P,-xtns,-assn] marks the COR.

Although there have been no examples in the primary data, we do have plausible examples for Subtypes E, F, and H. A plausible example for Subtype G is illustrated in (66). These examples are presented below with their lexical matrices as (64), (65), and (67).

(64) Subtype E

Suzuki	ga	Tanaka	o	Yamada	ni					
			Nom		Acc					by
1index		2index	3index	4index	6index	7index				
	+	P		+P		+P				-assn

okakae hisyo	to	misekaketa
private secretary	as	pretended
8ndex	9ndex	10ndex
+N	+P	+V
	+xtns	+crsp
	assn	+trns
		+xtns
		-caus
		-lctn
		-mode
		-mprs
		-pasv
		2 ([+Nom])
		2 [+actr]
		2 [+AGT]
		4 ([+Acc])
		4 [+PAT]
		6 [+COR]
		6 [-assn]
		9 [+prdc]
		9 +xtns
		+assn

'Suzuki (deliberately misrepresented Tanaka as (Suzuki')s private secretary and Yamada took Tanaka as (Suzuki's) private secretary.'

(65) Subtype F

Suzuki	ga	Tanaka	o	Yamada	ni
	Nom		Acc		by
1ndex	2ndex	3ndex	4ndex	6ndex	7ndex
	+P		+P		+P
					-assn

okakae hisyo	to	misekakerareta
private secretary	as	was pretended
8ndex	9ndex	10ndex
+N	+P	+V
	+xtns	+crsp
	+assn	+pasv
		+trns
		+xtns
		-caus
		-lctn
		-mode
		-mprs
		2([+Nom])
		2[+actr]
		2[+AGT]
		4([+Acc])
		4[+PAT]
		6[+COR]
		6[-assn]
		9[+prdc]
		9 +xtnsx
		+assn

'Suzuki was affected by Yamada's deliberately misrepresenting Tanaka as (Suzuki's) private secretary.'

(66) Subtype G

Suzuki	ga	Tanaka	o	Yamada	ni
	Nom		Acc		by
1ndex	2ndex	3ndex	4ndex	6ndex	7ndex
	+P		+P		+P
					-assn

okakae hisyo	to	misekakesaseta
private secretary	as	forced to pretend
8ndex	9ndex	10ndex
+N	+P	+V
	+xtns	+caus
	+assn	+crsp
		+pasv
		+trns
		+xtns
		-lctn
		-mode
		-mprs
		2([+Nom])
		2[+actr]
		2[+AGT]
		4([+Acc])
		4[+PAT]
		6[+COR]
		6[-assn]
		9[+prdc]
		9 +xtns
		+assn

'Suzuki forced Yamada to misrepresent Tanaka as (Suzuki's) private secretary.'

(67) Subtype H

Suzuki	ga	Tanaka	o	Yamada	ni
	Nom		Acc		by
1ndex	2ndex	3ndex	4ndex	6ndex	7ndex
	+P		+P		+P
					-assn

okakae hisyo	to	misekakesaserareta
private secretary	as	was forced to pretend
8ndex	9ndex	10ndex
+N	+P	+V
	+xtns	+caus
	+assn	+crsp
		+pasv
		+trns
		+xtns
		-lctn
		-mode
		-mprs
		2([+Nom])
		2[+actr]
		2[+AGT]
		4([+Acc])
		4[+PAT]
		6[+COR]
		6[-assn]
		9[+prdc]
		9 +xtns
		+assn

'Suzuki was forced by Yamada to present Tanaka as (Suzuki's) private secretary.'

4.3.4 Derivational complexity and Processing of Subtypes

It is observed that processing of these plausible examples of Subtypes E through H becomes increasingly difficult for native speakers as the number of contextual features marked with the positive signs increases. In order to track complexity of derivation, some resorted to visual enhancement by writing the

sentence down before identifying their grammatical judgement on these sentences. In these examples the only difference in the number of contextual features is between the extensional and non-extensional verbs. Otherwise they all have the same arity, or the same number of complements. Here the processing problem must be partly due to the number of contextual features, but also to the degree of derivational and morphological complexity, which correlates with the number of positively specified non-contextual features.

4.4 PRIMARY VERB CLASS 12 (PVC-12)

The verbs in PVC-12 have the following features:

[+trns, -lctn, +crsp, +mode].

The verbs in this class have a 'case frame' that is more saturated than a matrix for verbs in the PVC-11 class. It is, therefore, expected that even fewer examples of a verb in the PVC-12 class will be found in the primary data, and in fact there is but one example of verb in the class of PVC-12 found so far in the data I examined. This example is a non-impersonal, non-extension verb and is given as (71) in 4.4.2. below.

The plausible sentences I constructed for this class of verbs are limited to non-impersonal verbs. They are morphologically marked by the causative and/or by the passive affixes, as shown in examples (68) through (70), (72), and (73) below.

(68) Subtype B:

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Syoonikai	ga	hotyooki	de	kodomo	ni		
pediatrician	Nom	stethoscope	at	child	by		
1ndex	2ndex	3ndex	4ndex	5ndex	6ndex		
+N	+P	+N	+P	+N	+P		
			-drcn		-assn		
zibun	no	mune	no	oto	o	kikareta.	
self	Gen	chest	Gen	sound	Acc	was listened	
7ndex	8ndex	9ndex	10ndex	11ndex	12ndex	13ndex	
+N	+P	+N	+P	+N	+P	+V	
						+crsp	
						+mode	
						+pasv	
						+trns	
						-caus	
						-mprs	
						-lctn	
						-xtns	
						2([+Nom])	
						2[+actr]	
						2[+AGT]	
						4[+MNS]	
						4[-drcn]	
						6[+COR]	
						6[-assn]	
						12([+Acc])	
						12[+PAT]	

'The pediatrician was adversely affected by the child listening to the sound of his own heart beating with the stethoscope.⁶'

(69) Subtype C:

Syoonikai	ga	hotyooki	de	kodomo	ni		
pediatrician	Nom	stethoscope	at	child	by		
1ndex	2ndex	3ndex	4ndex	5ndex	6ndex		
zibun	no	mune	no	oto	o	kikaseta.	
self	Gen	chest	Gen	sound	Acc	made to	
						listen	
7ndex	8ndex	9ndex	10ndex	11ndex	12ndex	13ndex	

'The pediatrician let the child listen to the sound of his own heart beating with a stethoscope.'

(70) Subtype E:

Syoonikai	ga	hotyooki	de	kodomo	ni		
pediatrician	Nom	stethoscope	at	child	by		
1ndex	2ndex	3ndex	4ndex	5ndex	6ndex		

zibun	no	mune	no	oto	o	kikaserareta.
self	Gen	chest	Gen	sound	Acc	was made to
						listen
7ndex	8ndex	9ndex	10ndex	11ndex	12ndex	13ndex

(70a)

'The pediatrician was forced by the child to let the child listen to the sound of his own heart beating with the stethoscope.'

(70b)

'The pediatrician was forced by the child and to listen to the sound of his own heart beating with the stethoscope.'

It should be noted that in (68) and (69) above, the COR of the regent, ICkodomomo 'child', is the one who listens to the heart beat; while in (70) we have two readings: the COR of the regent, kodomo 'child' (70a) or the AGT of the regent, ICsyoonikai 'pediatrician' (70b) is the one who listened to the heart beat.⁷ In both (70a) and (70b), the child is the causer of the action.

When the child is the one who listens to the heart beat (70a), we can no longer add the child as another AGT. Sentence (70c) is ungrammatical:

(70c)

*Syoonikai ga hotyooki de kodomo ni kodomo ga zibun no mune no oto o kikaserareta.

When the pediatrician is the one who listens to the heart beat (70b), we can no longer add explicitly the identity of the one who was forcing the pediatrician to listen to the heart beat as another AGT. Sentence (70d) is thus ungrammatical:

(70d)

*Kodomo ga syoonikai ga hotyooki de kodomo ni zibun no mune no oto o kikaserareta.

This is because of the case frame saturation. We have five complements to the regent. Therefore, we can no longer add other complement case relations to the matrix of the regent due to the lexicase one per Sent constraint. Note that this explanation is not available for a grammar that creates causative verbs by transformation rather than by lexical derivation.

The three verbs in (68), (69), and (71) are derivationally related among themselves. They are also derivationally related to the verbs in PVC classes 11, 10, and 9 as follows:

PVC-9 plus MNS : PVC-10

PVC-9 plus COR : PVC-11

PVC-9 plus MNS plus COR : PVC-12

PVC-10 plus COR : PVC-12

PVC-9 plus COR plus MNS : PVC-12

PVC-11 plus MNS : PVC-12

The MNS complement in (71) is marked by the postposition *de* as in examples (68) through (70) above, and the regent *iresaseta* in (71) belongs to the subclass C.

(71)

Singo	wa	gyokuro	mo	atui	yu	de
	Tpc	tea	Tpc	hot	water	at
	Kikuko	ni	iresaseta			
		by	made to serve			

'Singo made Kikuko serve gyokuro tea also in hot water.'

The examples given so far include a MNS complement marked by the postposition *de*. In examples (72) and (73), however, the MNS

complement is marked by the postposition *to*. The regent verb in

(72) represents Subtype D:

(72) Subtype D

Singo	wa	kutusita	o	Yasuko	ni	zubon	to
	Tpc	sox	Acc		by	pants	with
1index	2ndex	3ndex	4ndex	5ndex	6ndex	7ndex	8ndex
+N	+P	+N	+P	+N	+P	+N	+P
	+mod1				-assn		+assn

soroesaseta.
 forced to match
 9ndex
 +V
 +caus
 +crsp
 +mode
 +trns
 -mprs
 -xtns
 -lctn
 -pasv
 2([+mod1])
 2([+Nom])
 2([+them])
 2[+actr]
 2[+AGT]
 4([+Acc])
 4[+PAT]
 6[+COR]
 6[-assn]
 8[+assn]
 8[+MNS]

'Singo forced Yasuko to match his socks and his pants.'

In (73) below, the word marked with the index number 9 is a predicate nominative. This predicate nominative has a missing PAT actor which, as predicted by the standard lexicase infinitival complement rule, is coreferential with the PAT of the higher clause, *zubon* 'pants'.⁸ The word marked with index number 10 is the non-root form of the copula verb, not a postposition. The MNS complement of the higher clause is marked by the postposition *to*.

The head verb in (73) is an example of the extension class of

PVC-12, Subtype

(73) Subtype F

Singo	wa	kutusita	o	Yasukoni	zubon	to	
	Tpc	sox	Acc		by	pants	with
1index	2index	3index	4index	5index	6index	7index	8index
+N	+P	+N	+P	+N	+P	+N	+P
	+modl			-assn		+assn	

dookeisyoku	de	soroetaseta.
same hue	be	forced to match
9index	10index	11index
+N	+V	+V
	-djct	+caus
	-root	+crsp
		+mode
		+trns
		+xtns
		-mprs
		-lctn
		-pasv
		2([+modl])
		2([+Nom])
		2([+them])
		2[+actr]
		2[+AGT]
		4([+Acc])
		4[+PAT]
		6[+COR]
		6[-assn]
		8[+assn]
		8[+MNS]
		10[+prdc]
		10 -djct
		-root

'Singo made Yasuko match his socks and his pants in the same hue.'

4.5 PRIMARY VERB CLASS 13 (PVC-13)

4.5.1 Subtypes within Primary Verb Class 13

Subtypes within PVC-13 share a cluster of features [-trns,+lctn,-crsp,-mode]. They are further divided into four groups established in terms of two features, extension and personality. The four groups are: [-mprs,-xtns], [-mprs,+xtns], [+mprs,-xtns], and [+mprs,+xtns]. I present subtypes in the order of the four groups.

4.5.2 [-mprs,-xtns]

Verbs in this group share a cluster of the features [-trns,+lctn,-crsp,-mode,-mprs,-xtns]. They are further divided into fifteen major subgroups by three features: stativity [\pm sttv], directionality [\pm drcn], traversality [\pm trvs], telicity [\pm telc], source [\pm src], and goal [\pm goal]. Figures 4.8, 4.9, and 4.10 give 15 subtypes with the postpositions that mark their LOC complements. The rules of subcategorization are presented in (74).

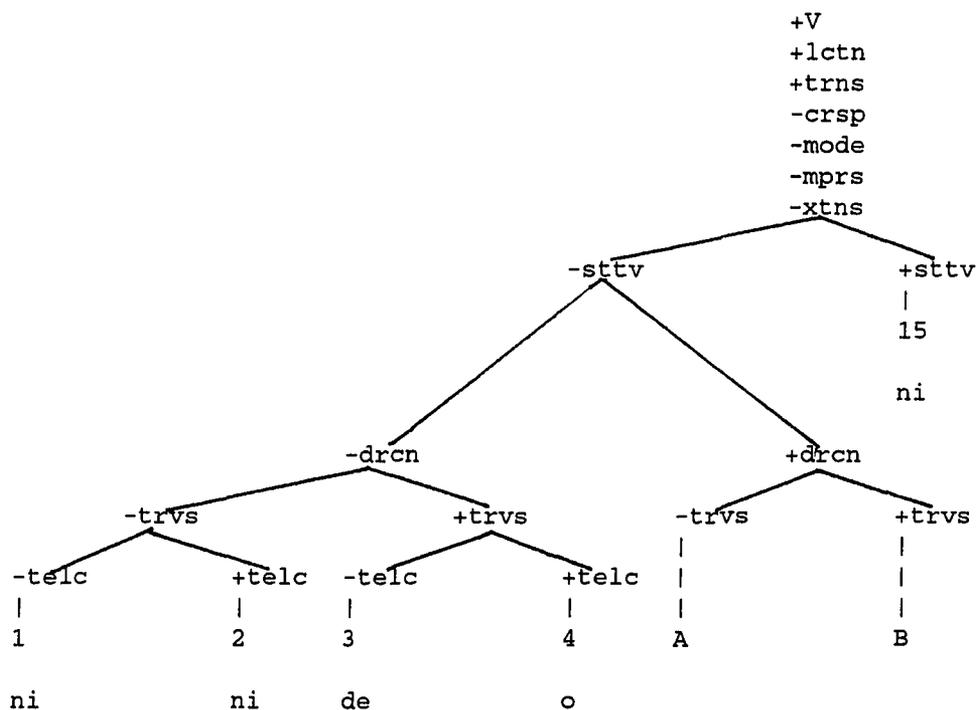


Figure 4.8 Subtypes: Non-directional PVC-13

The non-impersonal, non-extension PVC-13 verbs with the cluster of features [-sttv,+drcn,-trvs], indicated by A in Figure 4.8 above, are further divided as shown in Figure 4.9 below.

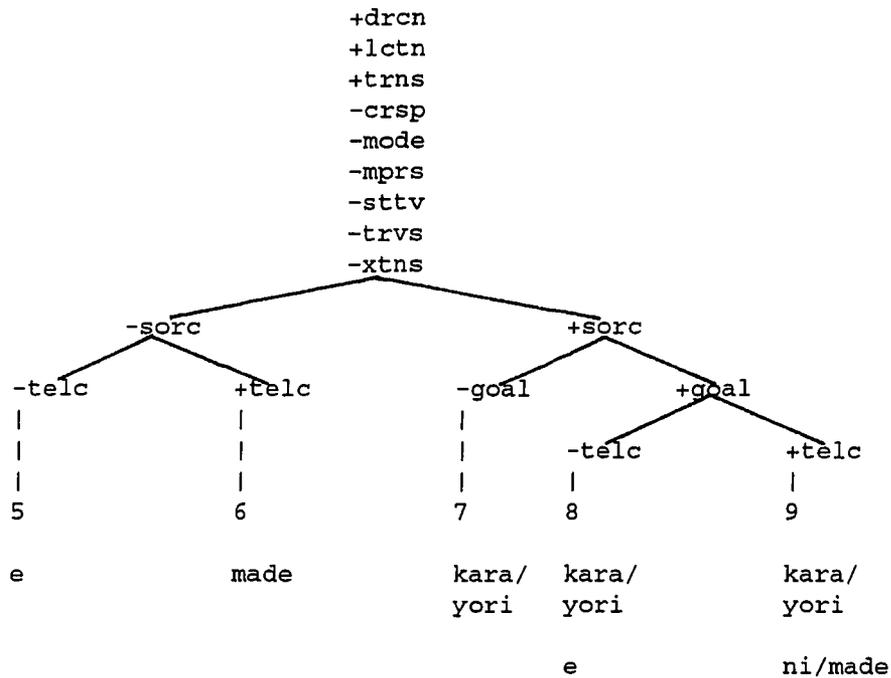


Figure 4.9 Subtypes: Non-traversal directional PVC-13

The non-impersonal, non-extension PVC-13 verbs with the cluster of features [-sttv,+drcn,+trvs], indicated by B in Figure 4.8 above are further divided as shown in Figure 4.10 below:

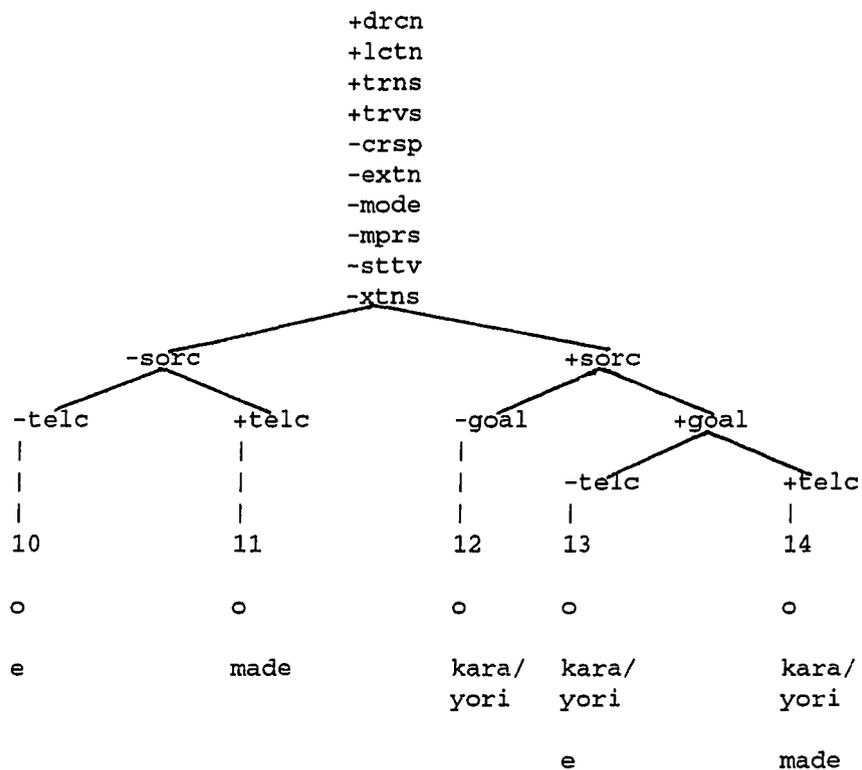


Figure 4.10 Subtypes: Traversal directional PVC-13

The subtypes in Figures 4.8, 4.9, and 4.10 are governed by the following subcategorization rules:

(74)

a	[+V]	->	[±sttv]
b	[-sttv,+lctn]	->	[±drcn,±trvs]
c	[+drcn]	->	[±sorc]
d	[-sorc]	->	[±telc]
e	[+sorc]	->	[±goal]
f	[+goal]	->	[±telc]

The dependent postpositions for the 15 subgroups of the locational, intransitive verbs are listed in (75) below:

(75)

subcategory	postpositions		
PVC-13-1	ni		
-2	ni		
-3	de		
-4	o		
-5	e		
-6	made		
-7	kara/iori		
-8	kara/iori	e	
-9	kara/iori	ni/made	
-10	o	e	
-11	o	made	
-12	o	kara/iori	
-13	o	kara/iori	e
-14	o	kara/iori	made
-15	ni		

In the remainder of this section I present examples of verbs in the proposed 15 categories .

The feature stativity for PVC-13 verbs is determined by the attachment of an aspect-marker *-te iru* 'is -ing'. Non-stative verbs, our PVC-5-13 subtypes 1 through 14, may co-occur with this aspect marker, while stative verbs, our PVC-5-13 subtype 15 do not.

The non-stative, non-extension, non-directional, non-traversal PVC-13 verbs are either atelic (1) or telic (2). The distinction between these two types can be established by a test in which an aspectual marker *-te oku* 'finish -ing' is

attached to the stem of the head verb. For PVC-13-2 verbs the attachment of this aspect marker entails perfective interpretation, whereas for PVC-13-1 verbs with the same aspect marker such entailment is not present. Instead, when we attach the same aspect marker to PVC-13-1 verbs, it yields pragmatically incompatible result. The aspectual marker *-te iru* 'is -ing' attached to PVC-13-2 verbs entails progressive interpretation, while the same aspectual marker attached to PVC-13-1 verbs entails resultative interpretation. For example, the regent verb *kanziru* 'feel' in (76) is an atelic, non-traversive, non-directional, non-stative PCV-13, our subtype 1. The attachment of *-te iru* to this verb will give us a resultative interpretation: *kanzite iru* '(Singo) has felt (obliged or responsible to the letter of introduction)'. The regent verb *ireru* 'put in' in (78) is a telic, non-traversal, non-directional, non-stative PCV-13, our subtype 2. The attachment of *-te iru* to this verb *irete iru* will give us a progressive interpretation: '(Singo) is in the process of putting the mask back into its pouch.'

The result of this test on the sample verbs gives few examples of the atelic subtype (PVC-13-1). All other examples belong to the telic subtype (PVC-13-2). The telic verbs and the LOC marking postposition *ni* fit together semantically. The postposition is terminus and expects some type of contact between the PAT and the LOC. The contact in turn correlates with telicity: a telic verb is one whose meaning includes an endpoint

of an action, and an action resulting in physical contact necessarily includes an endpoint. Further examples of atelic verbs (PVC-13-1) and telic verbs (PVC-13-2) are given in (77) and (79) respectively.

4.5.2.1 PVC-13-1

Verbs in Subtype 1 in PVC-13 have a cluster of features [+lctn, +trns, -crsp, -drcn, -mode, -mprs, -sttv, -telc, -trvs, -xtns]. This is the least marked Subtype of PVC-13. The verbs in Subtype 1 require their AGT, PAT and LOC complements to be marked with postpositions *ga* [+P, +Nom], *o* [+P, +Acc], and *ni* [+P, -assn], respectively.

(76) PVC-13-1

Singo	wa	syookaizyooni	sekinin	o	kanzita	
	Tpc	introduc-	by	responsib-	Acc	felt
		ion		ility		
1ndex	2ndex	3ndex	4ndex	5ndex	6ndex	7ndex
+N	+P	+N	+P	+N	+P	+V
	+modl		-assn			+lctn
						+trns
						-crsp
						-drcn
						-mode
						-mprs
						-sttv
						-telc
						-trvs
						-xtns
						2([+mode])
						2([+Nom])
						2([+them])
						2[+actr]
						2[+AGT]
						4[+lctn]
						4[+LOC]
						6[+PAT]
						6([+Acc])

'Singo felt obligated because of the letter of introduction.'
(YA67).

(77) PVC-13-1 verbs

<i>mitoresaseru</i>	to cause to be fastened on (the bright red)
<i>kakeru</i>	to be put off (by his show of disapproval)
<i>tameru</i>	to fill (tears in the eye)

The AGT of PVC-13-1 verbs characteristically is not in control of the activities designated by the verbs.

4.5.2.2 PVC-13-2

Verbs in Subtype 2 in the PVC-13 have a cluster of the features [+lctn,+telc,+trns,-crsp,-drcn,, -mode,-mprs,-sttv,-trvs,-xtns]. The verbs in Subtype 2 require their AGT, PAT and LOC complements to be marked with postpositions *ga* [+P,+Nom], *o* [+P,+Acc], and *ni* [+P,-assn], respectively. The telicity feature distinguishes Subtype 2 from Subtype 1.

(78) PVC-13-2

Singo	wa	men	o	hukuro	ni	ireta.
	Tpc	mask	Acc	pouch	at	put back
1ndex	2ndex	3ndex	4ndex	5ndex	6ndex	7ndex
+N	+P	+N	+P	+N	+P	+V
	+modl				-assn	+lctn
						+telc
						+trns
						-crsp
						-drcn
						-mprs
						-mode
						-sttv
						-trns
						-trvs
						-xtns
						2 ([+Nom])
						2 ([+them])
						2 [+actr]
						2 [+AGT]
						2 [+modl]
						4 ([+Acc])
						4 [+PAT]
						6 [-assn]
						6 [+LOC]

'Singo put the mask back into its pouch.' (YA56-modified)

The verbs in this class share a semantic similarity: the PAT and the LOC come into contact. These verbs are derivationally related to some of the intransitive, locational verbs in PVC-5-2. For example, PVC-5-2 verbs with *-(s)as* or *-(s)ase-* affixation belong to the PVC-13-2 category:

<i>ahureru</i>	to fill (PAT=tear, LOC=eyes)
<i>ahuresasu</i>	AGT fill (PAT=tear, LOC=eyes)
<i>ahuresaseru</i>	AGT fill (PAT=tear, LOC=eyes)

Among the verbs listed earlier as PVC-5-2, the following verbs are not related derivationally to PVC-13-2.

<i>kanzirareru</i>	to feel (PAT=malice, LOC=human being)
<i>mitukaru</i>	to find (PAT =chestnuts, LOC= the edge of water)
<i>simiru</i>	to be struck by (PAT=emotion)

The list of verbs in PVC-13-2 follows. The list is in two parts. The first part includes those verbs derivationally related to verbs that were introduced earlier in the section on PVC-5-2. These verbs are given in pairs: PVC-13-2 verbs are preceded by corresponding PVC-5-2 verbs. The pairing shows the semantic as well as grammatical similarities between the derived and the charter members of the list. This points up an advantage of a derivational analysis, in that we can account for the interaction of semantics and derivational processes as well as the upper boundary and actual gaps in the derivation. By treating these constructions in the lexicon rather than by transformation, we are able to account for the fact that the resulting derived forms still must fit themselves into the same classes that were established for non-derived forms.

The second part of the list includes those verbs that lack such pairing. They are given in three subgroups: a, b, and c established according to the guidelines explained at the beginning of the second part of the list.

(79) PVC-13-2 verbs

(79) Part 1.

The gloss is given for PVC-13-2 only, as the gloss for PVC-5-2 is identical to those listed earlier in the chapter dealing with this class of verbs.

PVC-5-2	PVC-13-2	
<i>ahureru</i>	<i>ahuresasu</i> <i>ahuresaseru</i>	to cause to fill (eyes with tears)
<i>arawareru</i>	<i>arawaresasu</i> <i>arawaresaseru</i>	to cause to emerge (from)
<i>hureru</i>	<i>huresasu</i> <i>huresaseru</i>	to cause to touch
<i>kaburituku</i>	<i>kaburitukasu</i> <i>kaburitukaseru</i>	to cause to bite (at her arm)
<i>kakeru</i>	<i>kakesaseru</i>	to cause to want (in affection)
<i>kikoeru</i>	<i>kikoeraseru</i>	to cause to be heard (in the distance)
<i>mitiru</i>	<i>mitasu</i>	to cause to fill (eyes with the Milky Way)
<i>muragaru</i>	<i>muragarasu</i> <i>muragaraseru</i>	to cause to swarm (at the light)
<i>nazimu</i>	<i>nazimasu</i> <i>nazimaseru</i>	to familiarize
<i>nokoru</i>	<i>nokosu</i> <i>nokorasu</i> <i>nokoraseru</i>	to cause to linger
<i>norikomu</i>	<i>norikomase</i>	to cause to come aboard
<i>omoiataru</i>	<i>omoiataraseru</i>	to cause to come to realization
<i>sitasimu</i>	<i>sitasimaseru</i>	to familiarize

<i>tobituku</i>	<i>tobitukasu</i> <i>tobitukaseru</i>	to cause to jump
<i>tukamaru</i>	<i>tukamarasu</i> <i>tukamaraseru</i>	to cause to put (arms around a persimmon tree)
<i>tuku</i>	<i>tukasu</i> <i>tukaseru</i>	to cause to arrive (at the inn)
<i>tuku</i>	<i>tukesasu</i> <i>tukesaseru</i>	to cause to be aware of (PAT=attention)
<i>uturu</i>	<i>utusu</i> <i>uturaseru</i>	to cause to reflect (in the mirror)
<i>uzumoreru</i>	<i>uzumeru</i> <i>uzumorasu</i> <i>uzumoraseru</i>	to bury (in the snow) to cause to bury

(79) Part 2.

Verbs listed in (79)a below refer to a concrete contact between the PAT and the LOC. These verbs detail the manner of such contact. Among the verbs listed, *tumamu* is derivationally related to a PVC-10 verb. For the verbs in (79)b, the PAT is brought about by the AGT's contact with the LOC. In other words, the PAT did not exist before the AGT contacts the LOC. The verbs in (79)c are semantically transactional. The PAT of these verbs are transferred to the LOC. Taylor developed a detailed subgrouping of these transactional verbs in an earlier lexibase framework (Taylor 1971:179-189, 475-479). In his analysis *hanasu* and *susumeru* below are considered to be transitive, transfer, information verbs, while *watasu* is a transitive, transfer, locomotion verb.⁹

a. Concrete contact

<i>ateru</i>	to press (her hands to her red cheeks)
<i>daku</i>	to hold (a child on her lap)
<i>hasamu</i>	to put (the tickets into the sash)
<i>huseru</i>	to put (the face down on the table)
<i>ireru</i>	to put (her comb into her hair); comb
<i>kakaeru</i>	to hold (Yoko at her=Komako's breast)
<i>kasaneru</i>	to put (her hands on his)
<i>oiyaru</i>	to push (Aihara to his destruction)
<i>oku</i>	to set (the hat on his knees)
<i>orosu</i>	to sit down (on the flat rock)
<i>ositukeru</i>	to press (her face to his shoulder)
<i>sarasu</i>	to bleach (the cloth in the snow)
<i>soroeru</i>	to arrange (cloth in a basket)
<i>sueru</i>	to glare (at the boys in their flowery kimonos)
<i>suwaraseru</i>	to let (woman sit on the mat)
<i>tareru</i>	to hang (reed blinds at the eaves)
<i>tugu</i>	to pour (cold sake into the cups)
<i>tukkomu</i>	to put (her finger into the paper screen)
<i>tumamu</i>	to hold (a needle in her finger)
<i>tukisasu</i>	to stab (at the mat with her hair ornament)
<i>yaru</i>	to put (her hand to her disordered hair)
<i>yoseru</i>	to put (his face to the window)

b. Factitive

<i>egaku</i>	to draw (waves on the eaves)
<i>hiku</i>	to draw (a line on the window glass)

c. Transactional

<i>hanasu</i>	to describe (this part of the dream to Yasuko)
<i>kureru</i>	to give away (my skis to friends)
<i>susumeru</i>	to offer (a cushion to Simamura)
<i>watasu</i>	to give (flowers to the Master's wife)

4.5.2.3 PVC-13-3

Verbs in Subtype 3 in PVC-13 have a cluster of the features [+lctn,+trns,+trvs,-crsp,-drcn,-mode,-mprs,-sttv,-telc,-xtns].

Subtype 3 contrasts with Subtype 4 with respect to telicity:

Subtype 3 is atelic, while Subtype 4 is telic. The verbs in Subtype 3 require their AGT, PAT and LOC complements to be marked with postpositions *ga* [+P,+Nom], *o* [+P,+Acc], and *de* [+P,-drcn,+trmn], respectively. The traversality in PVC-13-3, as in PVC-5-3 verbs, is defined in terms of a temporal rather than locational domain.

(80)PVC-13-3

Musuko	<i>o</i>	Karuizawa	<i>de</i>	sugosasetta.
My son	Acc		at	pass time
1index	2ndex	3ndex	4ndex	5ndex
+N	+P	+N	+P	+V
			-drcn	+lctn
			+trmn	+trns
				+trvs
				-crsp
				-drcn
				-mprs
				-mode
				-sttv
				-telc
				-xtns
				2([+Acc])
				2[+PAT]
				4 -drcn
				+trmn
				4[+LOC]
				x([+Nom])
				x[+actr]
				x[+AGT]

'(I) had my son stay at Karuizawa.'

The verbs in this class are derivationally related to those verbs in PVC-5-3 by causative derivation, signaled by means of *-(s)as-* or *-(s)ase-* affixation.

<i>asobaseru/asobasu</i>	to arrange to let a child play (inside of the basket)
<i>kiesasu/kiesaseru</i>	to make disappear (in the sky)
<i>kurasasu/kurasaseru</i>	to arrange to make a living (in the village)
<i>sugosasu/sugosaseru</i>	to arrange to pass time (in the foreign country)
<i>hatarakasu/hatarakaseru</i>	to arrange to be employed (at the research institute)
<i>tobiagarasu/tobiagaraseru</i>	to force to jump on the chair

4.5.2.4 PVC-13-4

Verbs in Subtype 4 in PVC-13 have a cluster of the features [+lctn,+telc,+trns,+trvs,-crsp,-drcn,-mode,-mprs,-sttv,-xtns], differing from Subtype 3 with respect to telicity. The verbs in Subtype 4, or the telic, non-stative, non-directional, traversal verbs (PVC-13-4) require their AGT to be marked with with the postposition *ga* [+P,+Nom], and both their PAT and LOC complements to be marked with the postposition *o* [+P,+Acc]. The [+Acc] postposition which marks the LOC complement was introduced in chapter 1, section 4.2.4. The locational domain rather than the temporal domain is in focus for the feature telicity in this class. This is similar to the telicity feature in PVC 5-4 verbs. The examples are repeated as (82) below in order to show the derivational relationship between PVC-5-4 and PVC-13-4 verbs.

(82) PVC-5-4

toorinuketa
 Kisyā ga tonneruo toorinuketa.
 train Nom tunnel passed through
 'The train came out of the tunnel.'

hassita
 Uma ga soogen o hassita.
 horse prairie ran
 'The horse ran on the prairie.'

itta
 Wakamidori no mati o kuruma wa itta
 Young green Gen city cab went
 'The cab traveled in the city surrounded by green shoots'

No examples of transitive, traversal verbs have so far turned up in my samples of verbs. However, examples of PVC-13-4 verbs are obtained by applying the -(s)ase- derivation to PVC-5-4 verbs. It should be remembered, however, that affixation is only one part of the derivation process. For example, the intransitive actor PAT in (83) is reinterpreted as the transitive PAT in (84) after causative derivation by means of the -(s)ase affixation.

(83)
 Kono uma ga soogen o hassita.
 PAT
 this horse prairie ran
 'This horse ran on the prairie.'

(84) PVC-13-4					
Kono	uma	o	soogen	o	hasiraseta.
this	horse	Acc	prairie	Acc	forced to run
index	2ndex	3ndex	4ndex	5ndex	6ndex
+Det	+N	+P	+N	+P	+V
					+lctn
					+telc
					+trns
					+trvs
					-crsp
					-drcn
					-mode
					-sttv
					3([+Acc])
					3[+PAT]
					5[+Acc]
					5[+LOC]
					x([+Nom])
					x[+actr]
					x[+AGT]

'(I) forced this horse to run on the prairie.'

It should be noted, however, that these derivationally related verbs with causative affixation require a 'coercive' interpretation, as illustrated in (84). The regent *hasiraseta* is to be interpreted as 'forced X to V'. In other words, (84) is semantically different from (84a) in which the horse is not necessarily unwilling to run on the prairie:

(84a)
 Kono uma ni soogen o hasiraseta.
 'I let this horse run on the prairie.'¹⁰

A selected list of verbs which belong to Subtype 4 of PVC-13 is presented in (85).

<i>agarasu/agaraseru</i>	to force PAT to ascend (the stairways)
<i>arukasu/arukaseru</i>	to force PAT to walk (a road)
<i>toosu/tooraseru</i>	to force PAT to pass (the checkpoint)
<i>watasu/wataraseru</i>	to force PAT to cross (the bridge)

4.5.2.5. PVC-13-5.

The verbs in the fifth subtype in PVC-13 share a cluster of the features [+drcn,+lctn,+trns,-crsp,-mode,-mprs,-sorc,-sttv,-telc,-trvs,-xtns], differing from Subtype 6 with respect to telicity. That is, while verbs in Subtype 5 are atelic, Subtype 6 is telic. Verbs in Subtype 5 require their AGT, PAT and LOC complements to be marked with postpositions *ga* [+P,+Nom], *o* [+P,+Acc], and *e* [+P,-sorc,-trmn]. An analysis of a verb in Subtype 5 in (86) is followed by a list of selected verbs in this category in (87).

(86) PVC-13-5

Komako	wa	Simamura	o	uraniwa	e	sasoidasita
	Tpc		Acc	back	toward	took
				yard		
1ndex	2ndex	3ndex	4ndex	5ndex	6ndex	7ndex
+N	+P	+N	+P	+N	+P	+V
	+modl				-sorc	+drcn
					-trmn	+lctn
						+trns
						-crsp
						-mprs
						-mode
						-sorc
						-sttv
						-telc
						-trvs
						-xtns
						2([+Nom])
						2([+them])
						2[+actr]
						2[+AGT]
						4([+Acc])
						4[+PAT]
						6 -sorc
						-trmn
						6[+LOC]

'Komako took Simamura down to the back yard.' (YU44-modified)

(87) PVC-13-5 verbs

a.

<i>hikiyoseru</i>	to pull (a person toward the woman)
<i>hurimukeru</i>	to wave (his lantern toward the dormitories)
<i>mawasu</i>	to arrange to have (the car) return (by way of the lake)
<i>yobidasu</i>	to beckon (Komako into the hall)

b.

<i>dasu</i>	to send (a letter to Simamura)
<i>iu</i>	to say (an apology to the woman)
<i>kakeru</i>	to make (a phone call to one's home)

c.

<i>harau</i>	to pay (the bill to the inn)
<i>uru</i>	to sell (the teacup to the master)

The LOC complements of verbs in b and c are perceived as potential receivers of verbal activities and as potential receivers of transactions, respectively.

The verbs presented earlier in PVC-5-5 are derivationally related to verbs in PVC-13-5 by way of *-(s)ase* or *-(s)as-* affixation.

4.5.2.6 PVC-13-6

The verbs in the sixth subtype in PVC-13 differ from Subtype 5 with respect to telicity. Verbs in Subtype 6 have a cluster of the features [+drcn,+lctn,+telc,+trns,-crsp,-mode,-mprs,-sorc,-sttv,-trvs,-xtns]. They require their AGT, PAT and LOC complements to be marked with the postpositions *ga* [+P,+Nom], *o* [+P,+Acc], and *made* [+P,-sorc,+trmn] respectively. An analysis of a verb in Subtype 6 in (88) is followed by a list of such verbs in (89).

Komako	wa	Simamura	o	eki	made	miokutta.
	Tpc		Acc	station	up to	saw off
1ndex	2ndex	3ndex	4ndex	5ndex	6ndex	7ndex
+N	+P	+N	+P	+N	+P	+V
	+modl				-sorc	+drcn
					+trmn	+lctn
						+telc
						+trns
						-crsp
						-mprs
						-mode
						-sorc
						-sttv
						-trvs
						-xtns
						2([+modl])
						2([+Nom])
						2([+them])
						2[+actr]
						2[+AGT]
						4([+Acc])
						4[+PAT]
						6 -sorc
						+trmn
						6[+LOC]

'Komako saw him to the station.' (YU3001)

(89) PVC-13-6 verbs

makuru to pull (skirt up over one knee)
saseru to make PAT come (to the crossing)
someru to flush (even to the throat)

Some of the PVC-13-6 verbs are derivationally related to PVC-5-6 verbs. For example, *makureru* and *kosaseru* in PVC-5-6 are related to *makuru* and *kuru* respectively.

4.5.2.7 PVC-13-7

The verbs in the seventh subtype in PVC-13 are non-stative directional non-traversal source verbs that have the additional feature [-goal].

Verbs in Subtype 7 have a cluster of the features [+drcn,+lctn,+sorc,+telc,+trns,-crsp,-goal,-mode,-mprs,-sttv,-trvs,-xtns]. They require their AGT and PAT complements to be marked with the postpositions *ga* [+P,+Nom] and *o* [+P,+Acc]. The single LOC complement is marked by the terminus or non-terminus source postposition *kara* or *yor**i*. An analysis of a verb in Subtype 7 in (90) is followed by list of verbs in (91).

Simamura	ga	makura	kara	atama	o	ageru
	Nom	pillow	from	head	Acc	raises
Index	2ndex	3ndex	4ndex	5ndex	6ndex	7ndex
+N	+P	+N	+P	+N	+P	+V
	+Nom		+sorc			+drcn
			+trmn			+lctn
						+sorc
						+trmn
						+trns
						-crsp
						-goal
						-mprs
						-mode
						-sttv
						-trvs
						-xtns
						2([+Nom])
						2[+actr
						2[+AGT]
						4[+sorc
						+trmn
						4[+LOC]
						6([+Acc])
						6[+PAT]

'Simamura raises his head from the pillow.' (YU177-modified)

(91) PVC-13-7 verbs.

<i>dakiageru</i>	hold (Simamura up from the warm bed)
<i>dakitoru</i>	take and hold (Yoko away from Komako)
<i>dasu</i>	take out (a watch from her sash)
<i>kiku</i>	learn (the professional name from the maid)
<i>nuku</i>	take out (the right hand from the woman's palms)
<i>osinokeru</i>	push (Yoko roughly away from him)
<i>soraseru</i>	look (away from Yoko's face)

The verbs introduced earlier as PVC-5-7 are derivationally related to PVC-13-7 by way of causative derivation. However, derivation is of course typically non-productive to varying

degrees, and some PVC-5-7 verbs are exceptions to this derivational relationship. These verbs are listed below:

(92)

<i>deru</i>	to come (out of the bath/entrance)
<i>dekiru</i>	to make (out of rice)
<i>kikoeru</i>	to be heard (PAT = the carpenter's plane) in (a sky shop)
<i>kirawareru</i>	(The rich) are disliked by (the poor)
<i>mieru</i>	to be seen (PAT = the stars) through (the trees at its crest)
<i>otiru</i>	to fall (from the balcony)
<i>siru</i>	to realize (from the appearance)
<i>tukureru</i>	to be able to make (from rice)
<i>wakaru</i>	to be apparent (from the manner of talking)

It should be noted that there are various factors involved in this gap of causative derivation. First there are some instances of a transitive verb having a causative interpretation. For example, transitive *dasu* 'take out' and *otosu* 'drop' already have intransitive counterparts *deru* 'come out' and *otiru* 'fall' respectively. Under this condition,¹¹ the causative affixation is blocked. In addition, when head verbs refer to innate potential on the part of an intransitive PAT, the causative affixation to these verbs is not possible, or at best refers to a highly artificial situation:

(93)

<i>*dekisaseru</i>	
<i>kikoeraseru</i>	to make (the carpenter's plane) heard (in a sky shop)
<i>*kirawaresaseru</i>	
<i>?miesaseru</i>	to arrange for (the stars) to be seen through the trees at their crest)
<i>siraseru</i>	to arrange for (the danger) to be realized (from the appearance)
<i>*tukuresaseru</i>	
<i>?wakaraseru</i>	to arrange to be apparent (from the manner of talking)

4.5.2.8 PVC-13-8.

The verbs in the eighth subtype in the PVC-13 have multiple localistic features, reflected by the co-occurring postpositions *kara* and *e*. These two location-marking postpositions encode a macro-locus¹², or a range of the location. The regent may have more than two LOC complements when they refer to a macro-locus. The verbs in the class of PVC-13-8 share the features [+drcn,+goal,+lctn,+sorc,+trns,-crsp,-mprs,-mode,-sttv,-telc,-trvs,-xtns] and take a source and a goal which are non-terminus. The source is the *kara*-marked LOC and the non-terminus goal is the *e*-marked LOC. We represent the case form of the former in the verb's matrix as [+sorc] and the latter as goal [+goal]. An example is given in (94) followed by a list of verbs in this category in (95). There are only two examples of this class in the primary source I examined.

Ziisan	wa	sore	o	mado	kara
Old man	Tpc	it	Acc	window	from
1ndex	2ndex	3ndex	4ndex	5ndex	6ndex
+N	+P	+N	+P	+N	+P
	+modl				+sorc
					+trmn

jp27

purattofoumu	e	otosita
platform	to	dropped
7ndex	8ndex	9ndex
+N	+P	+V
	-sorc	+drcn
	-trmn	+goal
		+lctn
		+sorc
		+trns
		-crsp
		-mprs
		-mode
		-sttv
		-telc
		-trvs
		-xtns
		2([+modl])
		2([+Nom])
		2([+them])
		2[+actr]
		2[+AGT]
		4([+Acc])
		4[+PAT]
		6 +sorc
		+trmn
		6[+LOC]
		8 -sorc
		-trmn
		8[+LOC]

'The old man threw it (=a wicker trunk) out the window to the platform.' (YU2282-modified)¹³

(95)

nageageru to throw (the snow) up (to a high bank of snow in the middle of the street)

4.5.2.9 PVC-13-9.

The verbs in Subtype 9 in Primary Verb Class 13, i.e. source verbs with a telic goal complement, share the features [+drcn,+goal,+lctn,+sorc,+telc,+trns,-crsp,-mprs,-mode,-sttv,-trvs,-xtns]. The source is the *kara*-marked LOC and the telic goal is marked either by *made* or *ni*. These two location-marking postpositions mark a macro-locus. Therefore, it is not contradictory for a regent verb in this class to have more than two LOC complements in the matrix. The case form of the former is represented in the verb's matrix as [+sorc] and the latter as a telic goal [+goal,+telc]. There are three examples located in the sample verbs in the primary source I examined. An example is given in (96) with a fully specified matrix, followed by two more examples without the matrices in (97) and (98). In (96) below the source LOC complement together with goal LOC complement refer to a macro-locus. Therefore, having source and goal in the same matrix is not contradictory to the one per Sent requirement of the lexicase version of dependency grammar.

Rooka	kara	bantoo	ga	higo	ni
corridor	from	porter	Nom	red carp	by
1ndex	2ndex	3ndex	4ndex	5ndex	6ndex
+N	+P	+N	+P	+N	+P
	+sorc				-assn
	+trmn				

esa	o	nageta
feed	Acc	threw
7ndex	8ndex	9ndex
+N	+P	+V
		+drcn
		+goal
		+lctn
		+sorc
		+telc
		+trns
		-crsp
		-mode
		-mprs
		-sttv
		-trvs
		-xtns
		2 +sorc
		+trmn
		2[+LOC]
		4([+Nom])
		4[+actr]
		4[+AGT]
		6[-assn]
		6[+LOC]
		8([+Acc])
		8[+PAT]

'The porter threw feed from the corridor to the red carp.' (YU43)

(97)

Kono heya wa sanroku no sukiizyoo o
 this room Tpc mountain base Gen suki runs Acc

mayoko kara minami ni miwataseru.
 side from south by look over'

'The room looked (from the high ground) directly south over the
 ski runs at the base of the mountain.' (YU2243)

(28)

Syomotu to syasin o gaikoku kara te ni ireta.
 books and pictures Acc abroad from hand by put inside

'(Simamura) has acquired books and pictures from abroad.' (YU2092)

In (28) the goal LOC complement and the regent *ireta*
 constitute an idiomatic expression: from 'to put inside of one's
 hand' to 'acquire'.

The goal locus is marked with *ni* in all three examples.
 While in (97) it is possible to replace *ni* with a non-terminus
 postposition *e*, such replacement is precluded in (96) and (98).
 Moreover, the goal locus postposition is replaceable by another
 terminus postposition *made* in (97), though not in (96) or (98).
 In terms of movement, 'throwing' (96) from corridor to the pond
 must involve a vertical downward movement, while *miwatasu*
 'looking' (97) does not involve vertical downward movement.
 Contrary to such a word as *miageru* 'look upward' or *mikudasu* 'look
 down', *miwatasu* is an atelic verb which refers to a horizontal
 movement. It seems, therefore, that the choice of postposition in
 the goal LOC complement is at least partially determined by the
 direction of movement, horizontal or vertical. Verbs of
 horizontal movement correlate with a goal LOC complement encoded

by the non-terminus postposition *e*; while verbs of vertical downward movement correlate with a goal LOC complement encoded by the terminus postposition *ni* or *made* as in (99).¹⁴

(99)

Bantoo ga rooka kara booru o uraniwa made nageta.
 porter Nom corridor from ball Acc back yard up to threw.
 'The porter threw a ball from the corridor to the backyard.'

The contrast between (96) and (97) is explainable in terms of how goal locuses are depicted: *ni* is used when the LOC complement refers to the final location of the PAT. What matters here is not the path or distance to the destination, but the terminal locus of the PAT. On the other hand, the goal LOC is marked by *made* when the path to the final location of the PAT and the process by which the PAT comes in contact with the LOC take precedence over the PAT's terminal destination. I have made a similar observation for intransitive verbs discussed in the section on PVC-5-14 verbs.

There have been no examples of verbs in subtypes 10 through 14 found so far in the primary data I examined. It seems that the transitive counterparts of the traversal locational verbs are highly marked functionally and distributionally.

4.5.2.10 PVC-13-15.

The verbs in Subtype 15 in PVC-13 share the features [+lctn,+sttv,+trns,-crsp,-mprs,-mode,-xtns]. The analyses presented in (100) with a case frame and (101) without a case frame indicate that for every non-stative, locational, transitive verb, its stative counterpart may be derived by the addition of

the negative suffix *-(a)nai* for non-past tense and *-(a)nakatta* for past tense. That is, the head verb *hanasanakatta* in (100) may well be analyzed as a stative counterpart of *hanasita* in *Yasuko ni kore wa hanasita* '(He) described this (part of dream) to Yasuko.' Similarly, *irenakatta* in (101) may well be analyzed as a stative counterpart of *ireta* in *Kanozuyo wa mado kara mune o ireta* 'She pulled her chest back from the window,' i.e. she is no longer leaning out the window.

It should be noted that not all verbs in Subtype 15 are derived stative counterparts of verbs in Subtype 1-14 in PPV-13. The head verb *iru* 'to need' in (102) below is an example where we find no stative counterpart.

(100) PVC-13-15

Yasuko	ni	kore	wa	hanasanakatta
	to	this	Tpc	did not speak
1ndex	2ndex	3ndex	4ndex	5ndex
+N	+P	+N	+P	+V
	-assn		+modl	+lctn
				+sttv
				+trns
				-crsp
				-mode
				2[-assn]
				2[+LOC]
				4([+modl])
				4([+them])
				4([+Acc])
				4[+PAT]
				x([+Nom])
				x[+actr]
				x[+AGT]

'(He) did not describe this (part of dream) to Yasuko.' (YA30)

(101)

Kanozyo wa mado kara mune o irenakatta.
 She Tpc window from chest Acc did not put inside
 'She was still leaning out the window (when the train pulled
 away).' (YU8 : Lit. She did not put her chest inside the train
 from the window.)

(102)

Suzuki ga musuko ni gakusi ga iru.
 Nom son at tuition Nom needs
 'Suzuki needs money for his son's schooling.'

4.5.3 [-mprs,+xtns]

The number of examples for non-impersonal extension verbs that belong to PVC-13 is rather limited compared to those belonging to PVC-9, the simple, locational, non-correspondence, non-mode transitive verbs. The symmetry of the pattern of extension verbs we find in PVC-13 to the pattern of extension verbs in PVC-9 is compelling. In the following I give examples of non-impersonal, extension verbs arranged, first by the 15 subtypes established for non-impersonal, extension verbs in PVC-13. Within each of the 15 subtypes I will present examples based on the types of extension complements the regent requires. These subtypes of complements have been established in 4.5.1.1.

a.

Koppu	ni	nihai	hiyazake	o	tuida
Cups	at	two	cold sake	Acc	poured
		cups			
1index	2index	3index	4index	5index	6index
+N	+P	+N	+N	+P	+V
	-assn		+qnty		+lctn
					+nmnl
					+trns
					+xtns
					-actn
					-crsp
					-drcn
					-mode
					-mprs
					-sttv
					-telc
					2[-assn]
					2[+LOC]
					3[+Acc]
					3[+prdc]
					3 +prdc
					+qnty
					5([+Acc])
					5[+PAT]
					x([+Nom])
					x[+actr]
					x[+AGT]

'(Komako) poured sake into two cups.' (YU2461-modified)

b.

Koppu	ni	naminami	to	hiyazake	o	tuida
Cups	at	full		cold sake	Acc	filled
1index	2ndex	3ndex	4ndex	5ndex	6ndex	7ndex
+N	+P	+N	+P	+N	+P	+V
	-assn		+xtns			+assn
			+assn			+lctn
						+nfrm
						+trns
						+xtns
						-crsp
						-drcn
						-mode
						-mprs
						-nmnl
						-sttv
						-telc
						2[-assn]
						2[+LOC]
						4[+prdc]
						4 +xtns
						+assn
						6([+Acc])
						6[+PAT]
						x([+Nom])
						x[+actr]
						x[+AGT]

'(Komako) poured sake in cups.' (YU2461-modified)

a.

Simamura	wa	kanozyo	no	uti	ni
	Tpc	her	Gen	inside	at
1ndex	2ndex	3ndex	4ndex	5ndex	6ndex
+N	+P	+N	+P	+N	+P
	+modl				-assn
nanika	sunda	tumetasa	o	atarasiku	mituketa
some	transparent	cool	Acc	new	found
7ndex	8ndex		9ndex	10ndex	11ndex
+N	+N		+P	+V	+V
				+djct	+lctn
				-root	+telc
					+trns
					+xtns
					-crsp
					-ctvt
					-drcn
					-mode
					-mprs
					-nfrm
					-nmnl
					-sttv
					-trvs
					2([+modl])
					2([+Nom])
					2([+them])
					2[+actr]
					2[+AGT]
					6[+lctn]
					6[+LOC]
					9[+Acc]
					9[+PAT]
					10[+prdc]
					10 +djct
					-root

'Simamura had newly found in her a transparent coldness.' (YU5-4)

b						
koinu	ni	Taroo	to	na	o	tuketa
Puppu	at		as	name	Acc	call
1ndex	2ndex	3ndex	4ndex	5ndex	6ndex	7ndex
+N	+P	+N	+P	+N	+P	+V
	+lctn		+xtns			+assn
			+assn			+lctn
						+nfrm
						+telc
						+trns
						+xtns
						-crsp
						-drcn
						-mode
						-mprs
						-nmnl
						-sttv
						2[-assn]
						2[+LOC]
						4[+prdc]
						4 +xtns
						+assn
						6([+Acc])
						6[+PAT]
						x([+Nom])
						x[+actr]
						x[+AGT]

'(He) named the puppy Taroo.'

Zibun	no	tizimi	o	Simamura	wa	imademo
Self	Gen	kimono	Acc		Tpc	still
1ndex	2ndex	3ndex	4ndex	5ndex	6ndex	7ndex
+N	+P	+N	+P	+N	+P	+Adv
					+modl	

hurugiya	e	yukisarasi	ni	dasu
shop	to	snow bleaching	at	send
8ndex	9ndex	10ndex	11ndex	12ndex
+N	+P	+N	+P	+V
	-sorc		+xtns	+drcn
	-trmn		-assn	+lctn
				+trns
				+xtns
				-assn
				-crsp
				-mode
				-mprs
				-nfrm
				-nmnl
				-sttv
				-telc
				-trvs
				4([+Acc])
				4[+PAT]
				6([+modl])
				6([+Nom])
				6([+them])
				6[+actr]
				6[+AGT]
				9 -sorc
				-trmn
				9[+LOC]
				11[+prdc]
				11 +xtns
				-assn

'He still sent his kimono back to the shop for 'snow bleaching'.'
(YU55)

Kodomo	o	nikai	kara	ponpon	nageorosita
children	Acc	second	from	one	threw down
		floor		after	
				another	
1index	2ndex	3ndex	4ndex	5ndex	6ndex
+N	+P	+N	+P	+N	+V
			+sorc	-djct	+drcn
			+trmn		+lctn
					+nmnl
					+sorc
					+trns
					+xtns
					-actn
					-crsp
					-drcn
					-goal
					-mode
					-mprs
					-sttv
					-telc
					4 +sorc
					+trmn
					4[+LOC]
					2([+Acc])
					2[+PAT]
					5[+Acc]
					5[+prdc]
					5 +prdc
					+djct
					x([+Nom])
					x[+actr]
					x[+AGT]

'(As the warehouse theater caught fire), children (who had been watching a movie on the balcony in the warehouse) had been dropped one after another from the balcony.' (YU2541)

The word *ponpon*, indexed by 5, is a complement since the PAT is in the scope of this qualifer regardless of the order. The 5 may occur in any of the following three locations: before 1,

between 2 and 3, or between 4 and 5. In all instances, 6 has a natural connection to PAT, Kodomo.¹⁵

In reviewing examples (103) through (106), we notice that non-impersonal, extension verbs in PVC-13 class have exactly the same types of extension varieties observed in the verbs in other PVC classes. For example, we established six basic extension verb classes for PVC-1: C1 through C7. The PVC-13 verbs have exact counterparts in each of the other [+xtns] classes. The extension verb class C1 is in (104a), C2 in (106a), C3 in (105) and (106b), C4 in (103b) and (104b), and C6 in (106). The example below (106b) given without a matrix is a C3 extension verb class in PVC-13-7.

(106b)
A-sya ga Suzuki o B-sya kara butyoo ni hikinuita
'Company A pulled Suzuki out from Company B for the position of section head.'

While there was no occurrence observed for C5 type extension verbs in the *Snow Country* data for PVC-13 verbs, *saseru* in (107) among others is an example of the required type:

(107)
Suzuki ga musuko o beddo no naka de sizuka ni saseru
Nom son Acc bed Gen inside at calm by make
'Suzuki makes his son calm in his bed.'

A plausible example of a C2 type extension verb is (108) below:

(108)
Isya ga Suzuki o aruite byoojin made kosaseta
physician Nom Acc walk hospital to made to come
'The physician forced Suzuki to come to the hospital on foot.'

4.5.4 [+mprs, -xtns]

There are few impersonal, non-extension PVC-13 verbs in the sample. They are listed in (109) through (112) below:

(109)

Simamura no hoo kara wabi o iu
 Gen side from apology Acc say
 'It is up to Simura to begin with an apology.' (YU2063)

Example (109) lacks a referential subject. The verb *iu* in (109) is an impersonal, non-extension member of class PVC-13-7. This verb is derivationally related to *iu*, a non-impersonal, non-extension verb of class PVC-9 that was discussed earlier:

Simamura no hoo ga wabi o iu 'Simamura apologizes.'

(110)

Kimi kara tanomu
 you from ask
 'You call someone for me.' (YU2082)

The impersonal non-extension verb *tanomu* is derivationally related to the PVC-9 verb *tanomu* in: *Kimi ga dareka o tanomu* 'You call someone.'

(111)

Boku kara syorui o kakari ni watasita
 I from papers Acc clerk to handed over
 'The paper is given by me to the clerk.'

The PAT, the paper, is in the semantic scope of two LOC complements, being transferred from one LOC (source) to another LOC (goal). This class of transfer verbs is derivationally related to non-impersonal, locational verbs: *Boku ga syorui o kakari ni watasita* 'I handed the paper to the clerk.' Similarly, *tutaeru* in (112) belongs to this class of impersonal transitives.

(112)
 Boku kara renraku zikoo o minna ni tutaeta
 I from communication item Acc all to delivered
 'The message was delivered to all from me.'

The verb *tutaeta* is derivationally related to a non-impersonal, locational verb: *Boku ga renraku zikoo o minna ni tutaeta*. 'I conveyed the message to everybody.'

4.5.5 [+mprs,+xtns]

Example (113) illustrates an impersonal extension PVC-13-9, *yaru*. As a transfer verb mentioned in 4.5.1.3, it takes two LOC complements. Furthermore, we cannot add an AGT case relation to (113), so it is grammatically impersonal.

(113).
 Ekityoo-san kara ototoo ni yoku osiete yatte
 Station master from brother to well teach gave
 'You (the station master) will teach my brother whatever he needs to know, won't you.' (YU2037)

4.6 PRIMARY VERB CLASS 14 (PVC-14)

The verbs in PVC-14 share a cluster of the features: [+trns,+lctn,-crsp,+mode]. The examples of verbs in this class are quite limited in occurrence in the primary data I have examined so far. The verbs in this class are derivationally related to the verbs in PVC-10, and to the verbs in PVC-12. Neither impersonal nor extension verbs have been found so far in the data for PVC-14.

I establish the following subclasses as presented in Figures 4.11 and 4.12. The postpositions which mark the MNS and LOC

4.6.2 Examples

4.6.2.1 PVC-14-A

Verbs in Subtype A have a cluster of the features: [+lctn,+mode,+trns,-assn,-crsp,-mprs,-xtns,-drcn,-telc]. They require that the MNS complement¹⁶ be marked with the postposition *de* [+P,-drcn,+trmn] and the LOC complement be marked by the postposition *ni* [+P,-xtns,-assn]. In the matrix of verbs these postpositions are represented as [-drcn,+trmn] and [-assn], respectively. The feature telicity is discerned by the attachment of an aspect marking *-te iru*. Those verbs that receive a resultative interpretation with this attachment are considered to be [-telc]. The verbs in this class are also compatible with an aspect-marking form *-te aru*, which also gives a resultative interpretation.

(113)

Yubune	kara	ahureru	yu	o
bathtub	from	spill	hot water	Acc
1ndex	2ndex	3ndex	4ndex	5ndex
+N	+P	+V	+N	+P
	niwakazukuri	no	mizo	de
	makeshift	Gen	ditch	at
	6ndex	7ndex	8ndex	9ndex
	+N	+P	+N	+P
				-drcn
				+trmn

yado	no	kabezoi	ni	meguraseru.
inn	Gen	along wall	by	force to go around
10ndex	11ndex	12ndex	13ndex	14ndex
+N	+P	+N	+P	+V
			-assn	+lctn
				+mode
				+trns
				-assn
				-crsp
				-drcn
				-mprs
				-telc
				-xtns
				13 [+LOC]
				13 [-assn]
				5 ([+Acc])
				5 [+PAT]
				9 [+MNS]
				9 -drcn
				+trmn
				x ([+Nom])
				x [+actr]
				x [+AGT]

'(They) lead the water from the baths around the wall of the inn by a makeshift ditch.' (YU2165-modified)

4.6.2.2 PVC-14-B

Verbs in Subtype B have a cluster of the features:

[+lctn,+mode,+trns,-assn,-crsp,-mprs,-xtns,-drcn,+telc]. They require that the MNS complement be marked with the postposition *de* [+P,-drcn,+trmn] and that the LOC complement be marked by the postposition *ni* [+P,-xtns,-assn]. In the matrix of verbs, these postpositions are represented as [-drcn,+trmn] and [-assn], respectively. The feature telicity is discerned by the attachment of an aspect marking *-te iru*. Those verbs that are given a progressive interpretation with this attachment are considered to

be [+telc]. The verbs in this class are not always compatible with an aspect marking form *-te aru*. If such attachment is allowed, verbs receive a perfective interpretation: 'finish -ing'.

(114)

Suzuki	ga	wakkusu	de	sukii	ni
	Nom	wax	at	ski	by
1ndex	2ndex	3ndex	4ndex	5ndex	6ndex
+N	+P	+N	+P	+N	+P
			-drcn		-assn
			+trmn		

tuya	o	dasita
shine	Acc	took out
7ndex	8ndex	9ndex
+N	+P	+V
		+lctn
		+mode
		+telc
		+trns
		-assn
		-crsp
		-drcn
		-mprs
		-xtns
		2 ([+Nom])
		2 [+actr]
		2 [+AGT]
		4 [+MNS]
		4 -drcn
		+trmn
		6 [+LOC]
		6 [-assn]
		8 ([+Acc])
		8 [+PAT]

'Suzuki polished his ski with wax.'

Verbs in this subclass include following:

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(115)

kiku to inquire (the name and the address of the applicants at the interview)
kukuru to tie (the intruder to the pillar with a chain)
uttaeru to sue (the director at the local court for mismanagement of the fund)

4.6.2.3 PVC-14-C

Verbs in Subtype C share a cluster of the features:

[+lctn,+mode,+trns,-assn,-crsp,-mprs,-xtns,+drcn,-sorc,-telc].

They require that the MNS complement be marked with the postposition *de* [+P,-drcn,+trmn] and the LOC complement be marked by the postposition *e* [+P,-sorc,-trmn]. In the matrix of verbs, these postpositions are represented as [-drcn,+trmn] and [-sorc,-trmn], respectively. The feature telicity is concerned with the goal argument. The atelic goal argument is represented by the postposition *that* that does not imply that the PAT is in contact with the LOC. The [-trmn] postposition *e* marks this atelic goal argument.

(116)

Suzuki	wa	kainu	o	kusari	de
	Tpc	kept dog	Acc	chain	at
1ndex	2ndex	3ndex	4ndex	5ndex	6ndex
+N	+P	+N	+P	+N	+P
	+modl				-drcn
					+trmn

ki	e	tunaida
tree	to	fastened
7ndex	8ndex	9ndex
+N	+P	+V
	-sorc	+drcn
	-trmn	+lctn
		+mode
		+trns
		-assn
		-crsp
		-mprs
		-sorc
		-telc
		-xtns
		2([+modl])
		2([+Nom])
		2([+them])
		2[+actr]
		2[+AGT]
		4([+Acc])
		4[+PAT]
		6[+MNS]
		6 -drcn
		-trmn
		8[+LOC]
		8 -sorc
		-trmn

'Suzuki fastened his dog to the tree with a chain.'

The verb *hakobu* in the following sentence belongs to this subtype: *Tyuugoku seihi wa panda o Tookyoo e tyaataaki de hakonda*
 'The Government of China transported a panda to Tokyo in a chartered plane.' This sentence does not make a statement to the effect that the panda actually reached its destination, Tokyo.

4.6.2.4 PVC-14-D

Verbs in Subtype D have a cluster of the following features:
 [+lctn,+mode,+trns,-assn,-crsp,-mprs,-xtns,+drcn,-sorc,+telc].

They require that the MNS complement be marked with the postposition *de* [+P,-drcn,+trmn] and the LOC complement be marked by the postposition *made* [+P,-sorc,+trmn]. In the matrix of verbs these postpositions are represented as [-drcn,+trmn] and [-sorc,+trmn], respectively. The feature telicity is concerned with the goal argument. The telic goal argument is marked by the postposition *made*. The PAT and the LOC of Subtype D verbs are interpreted as being in contact, as shown in the following example.

(117)

Otoko	wa	erimaki	de
man	Tpc	muffler	at
1ndex	2ndex	3ndex	4ndex
+N	+P	+N	+P
	+modl		-drcn
			+trmn

hana	no	ue	made	tutunda
nose	Gen	surface	to	wrapped
5ndex	6ndex	7ndex	8ndex	index
+N	+P	+N	+P	+V
			-sorc	+drcn
			+trmn	+lctn
				+mode
				+telc
				+trns
				-assn
				-crsp
				-mprs
				-sorc
				-xtns
				2 ([+modl])
				2 ([+Nom]
				2 ([+them])
				2 [+actr]
				2 [+AGT]
				4 [+MNS]
				4 -drcnm
				-trmn
				8 [+LOC]
				8 +trmn
				-sorc
				x ([+Acc])
				x [+PAT]

'He buried (his face) to the nose in a muffler.' (YU2033-modified)

4.6.2.5 PVC-14-E

Verbs in Subtype E have a cluster of the following features:

[+lctn,+mode,+trns,-assn,-crsp,-mprs,-xtns,+drcn,+sorc,-goal].

They require that the MNS complement be marked with the postposition *de* [+P,-drcn,+trmn] and the LOC complement be marked by the postposition *kara* [+P,+sorc,+trmn].

In the matrix of verbs these postpositions are represented as [-drcn,+trmn] and [+sorc,-trmn], respectively. The feature [-goal] indicates the lack of a goal argument.

(118)

Ga	o	yubi	de	kanaami	no	utigawa	kara
moth	Acc	finger	at	screen	Gen	inside	from
1ndex	2ndex	3ndex	4ndex	5ndex	6ndex	7ndex	8ndex
+N	+P	+N	+P	+N	+P	+N	+P
			-drcn				+sorc
			+trmn				+trmn

haziita

tapped

9ndex

+V

+drcn

+lctn

+mode

+sorc

+telc

+trns

-assn

-crsp

-goal

-mprs

-xtns

2([+Acc])

2[+PAT]

4[+MNS]

4|-drcn|

|+trmn|

8[+LOC]

8[+sorc|

|+trmn|

x([+Nom]

x[+actr]

x[+AGT]

'(Wondering if the moth was alive, Simamura went over to the window and) rubbed his finger over the inside of the screen (where the moth was located.)' (YU2283-modified)

The verb *hagasu* in the sentence, *Tanaka ga mesu de hyoohi o sitai kara hagasita* 'Tanaka peeled the skin from the corpse with a surgical knife', belongs to this Subtype E.

4.6.2.6 PVC-14-F

Verbs in Subtype F share a cluster of the following features: [+lctn,+mode,+trns,-assn,-crsp,-mprs,-xtns,+drcn,+sorc,+goal,-telc]. They require that the MNS complement be marked with the postposition *de* [+P,-drcn,+trmn] and that their LOC complement, which is a macro-locus, be marked by the postposition *kara* [+P,+sorc,+trmn] for the source and by the postposition *e* [+P,-sorc,-trmn] for the non-terminus goal argument. The Subtype G below differs from F in that the goal argument in G is a terminus and marked by the postposition *made*. The Subtype F is an atelic macro-locus mode transitive verb while the Subtype G is a telic macro-locus mode transitive verb. There have been no examples located in my data so far of verbs in these two Subtypes. I give a plausible example of my own for each of the Subtypes F and G below. In the matrix of verbs, the postposition that marks the MNS complement is represented as [-drcn,+trmn] and macro-locus marking postpositions are represented as follows: *e* as [-sorc,-trmn], *made* as [+sorc,+trmn], and *ni* as [-assn].

(119)

Tanaka	wa	papaiya	o	Honoruru	kara
	Tpc	papaya	Acc	Honolulu	from
1ndex	2ndex	3ndex	4ndex	5ndex	6ndex
+N	+P	+N	+P	+N	+P
	+modl				+sorc
					+trmn

Tookyoo	e	tokubetuki	de	okuridasu.
Tokyo	to	special plane	at	send
7ndex	8ndex	9ndex	10ndex	11ndex
+N	+P	+N	+P	+V
	-sorc		-drcn	+drcn
	-trmn		+trmn	+goal
				+lctn
				+mode
				+sorc
				+trns
				-assn
				-crsp
				-mprs
				-telc
				-xtns
				2 ([+modl])
				2 ([+them])
				2 [+actr]
				2 [+AGT]
				4 ([+Acc])
				4 [+PAT]
				6 [+LOC]
				6 +sorc
				+trmn
				8 [+LOC]
				8 -sorc
				-trmn
				10 [+MNS]
				10 -drcn
				+trmn

'Tanaka sends papayas from Honolulu to Tokyo in a chartered airplane.'

4.6.2.7 PVC-14-G

This subtype differs from F in that verbs in Subtype G require a terminus, not a non-terminus goal argument in their macro-locus.

(120)

Tanaka	wa	sake	o	Oregon	kara
	Tpc	salmon	Acc	Honolulu	from
1ndex	2ndex	3ndex	4ndex	5ndex	6ndex
+N	+P	+N	+P	+N	+P
	+modl				+sorc
					+trmn

yado	made	tokubetuki	de	okurikonda.
inn	to	special plane	at	send
7ndex	8ndex	9mdex	10ndex	11ndex
+N	+P	+N	+P	+V
	-sorc		-drcn	+drcn
	+trmn		-trmn	+goal
				+lctn
				+mode
				+sorc
				+telc
				+trns
				-assn
				-crsp
				-mprs
				-xtns
				2([+modl])
				2([+them])
				2[+actr]
				2[+AGT]
				4([+Acc])
				4[+PAT]
				6[+LOC]
				6 +sorc
				+trmn
				8[+LOC]
				8 -sorc
				+trmn
				10[+MNS]
				10 -drcn
				-trmn

'Tanaka sent the salmon in a chartered plane from Oregon to the inn (he frequented in Tokyo).'

It should be noted in (120) that the PAT 'the salmon' actually reached the LOC, Tanaka's favorite inn.

4.6.2.8 PVC-14-H

Verbs in Subtype H have a cluster of the features:

[+lctn,+mode,+trns,+assn,-crsp,-mprs,-xtns]. They require that

the MNS complement be marked with the postposition *to* [+P,-xtns,+assn] and their LOC complement be marked by the postposition *de* [+P,-drcn,+trmn]. Although there have been no examples so far located for this subtype in the primary source I examined, I give plausible examples. In the matrix of verbs, the postposition that marks the MNS complement is represented as [+assn] and the postposition that marks the LOC complement is given as [-drcn,+trmn].

(121)

Akebono	to	Konishiki	o	dohyoo	de
	with		Acc	ring	at
1ndex	2ndex	3ndex	4ndex	5ndex	6ndex
+N	+P	+N	+P	+N	+P
	+assn				+trmn
					-drcn

kisoiawaseta
 forced to compete with each other
 7ndex
 +V
 +assn
 +lctn
 +mode
 +trns
 -crsp
 -mprs
 -xtns
 2[+assn]
 2[+MNS]
 4([+Acc])
 4[+PAT]
 6[+LOC]
 6[+trmn]
 |-drcn|
 x([+Nom])
 x[+actr]
 x[+AGT]

'(They) made Konishiki wrestle against Akebono in the (sumo) ring.'¹⁷

The association, transitive mode verbs such as *tunagu* and *nisesaseru* are derivationally related to the verbs in Subtype H, PVC-14.

(122)

Kentikuka ga renraku tuuro de sinkan to
 architect Nom pass way at new building with

honka o tunaida
 main building Acc connected

'The architect connected the main building with the new building at the pass way.'

(123)

Kesyogakari ga musukoyaku o titioyayaku to
 make-up artist Nom actor playing Acc actor playing
 the son the father with

me no tokoro de nisesaseta
 eyes Gen location at made to resemble

'The make-up artist made the actor playing the son resemble the actor playing the father at the eyes.'

4.6.3 Notes on extensionality and personality

It should be noted that in the data I examined there are no instances of PVC-14 verbs occurring as impersonal or extension verbs. Furthermore, these plausible examples given for non-impersonal, non-extension, PVC-14 verbs are highly marked cases. This is explained by the high degree of saturation, or the relatively high number of features marked in the matrix with a positive sign: the more features that are marked with the positive sign, the less frequent are the occurrences of such verbs in the data. Therefore, we predict that we have a greater number of verbs in the following categorical sequences: PVC-2 > PVC-4 and

PVC-6 > PVC 8 in the intransitive class; and PVC 10 > PVC-12 and PVC-14 > PVC-16 in the transitive class.

4.7 PRIMARY VERB CLASS 15 (PVC-15)

The verbs in PVC-15 have a cluster of the following features [+trns,+lctn,+crsp,-mode]. There have been no examples of this class found so far in the primary data I examined, indicating that verbs in this class are quite limited in occurrence. The analysis below is offered for plausible examples based on my intuition and limited to non-impersonal, non-extension verbs in this class.

Examples of verbs in this class are derivationally related to the verbs in the PVC-9, 11, and 13. The majority of verbs in PVC 15 include either the causative affix *-(s)ase*, the passive affix *-(r)are*, or the former followed by the latter, *-(s)aserare*.

4.7.1 Subtypes within PVC-15

I have established subtypes for verbs in this class as presented in Figures 4.13 through 4.21. The verbs in this class are either stative (Subtypes A through M) or non-stative (Subtype A' through M'). The verbs in the non-stative PVC-15 Subtypes may occur with the aspect-marking form *-te iru*, while those in the stative PVC-15 Subtypes may not. The features causative [+caus] and passive [+pasv] are morphosyntactic features on the verb. The verbs marked with [+caus] and [+pasv] bear the causative affix *-(s)ase* and the passive suffix *-(r)are*, respectively. These two affixes are not necessarily mutually exclusive. The causative

passives are represented using both features, as shown in (6) below. That is, verbs in Subtype A do not include either affix, verbs in Subtypes B through G include a passive affix, verbs in Subtypes H and M include a causative affix, and verbs in Subtypes N through S include a causative affix and a passive affix strung together.

The localistic features in Figures 4.13 through 4.21, the features [+drcn], [+sorc], and [+telc], have been established earlier for verbs in PVC-13. It should be noted that the distinction between atelic and telic verbs, which was required for non-directional, locational verbs in the class of PVC-13 and PVC-14, is neutralized and no longer used for the non-directional verbs in PVC-15. That is, the distinction between telic and atelic verbs is no longer maintained as a branching of the non-directional verbs here. This is due to the fact that the aspect-marking form *-te iru* attached to PVC-15 verbs uniformly gives a progressive rather than a resultative interpretation. However, this telicity distinction still applies for directional verbs in PVC-15, specifically for source and goal arguments.

In Figures 4.13 through 4.21 I list postpositions which identify the COR and LOC for each of these subtypes of PVC-15 verbs. In Figures 4.14 through 4.21.

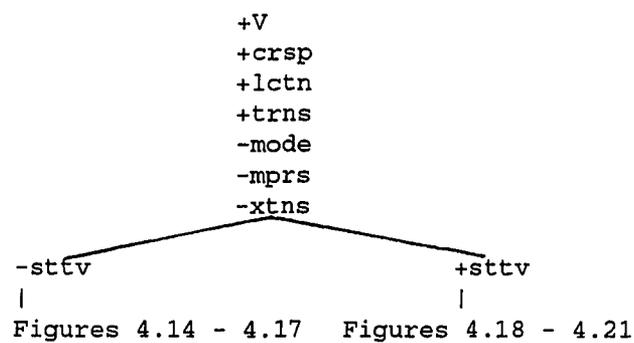


Figure 4.13 PVC-15 Subtypes

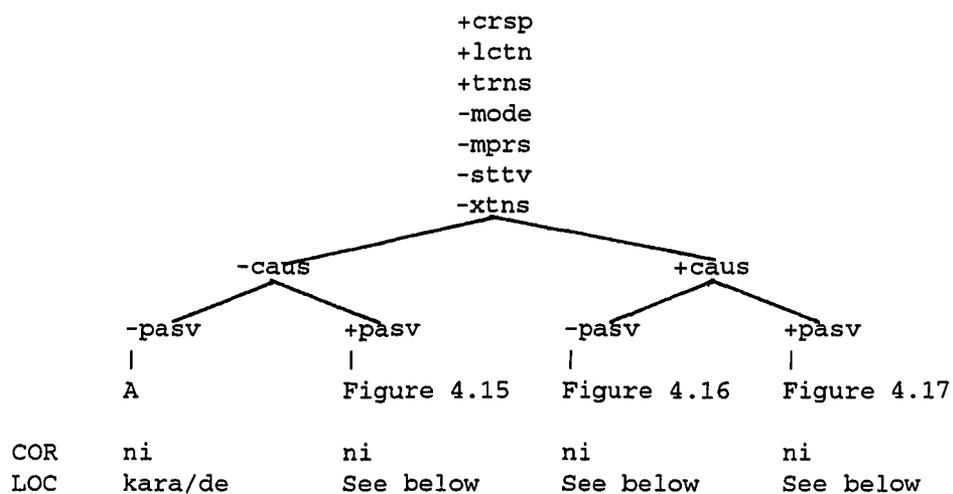


Figure 4.14 Subtypes: Non-stative PVC-15 (1)

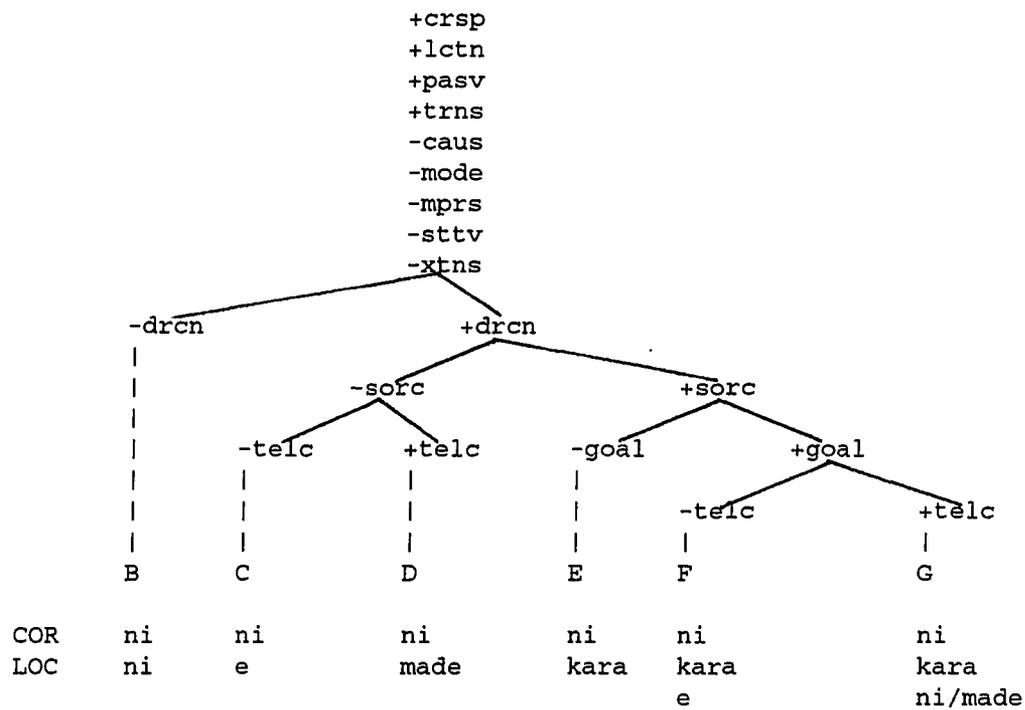


Figure 4.15 Subtypes: Non-stative PVC-15 (2)

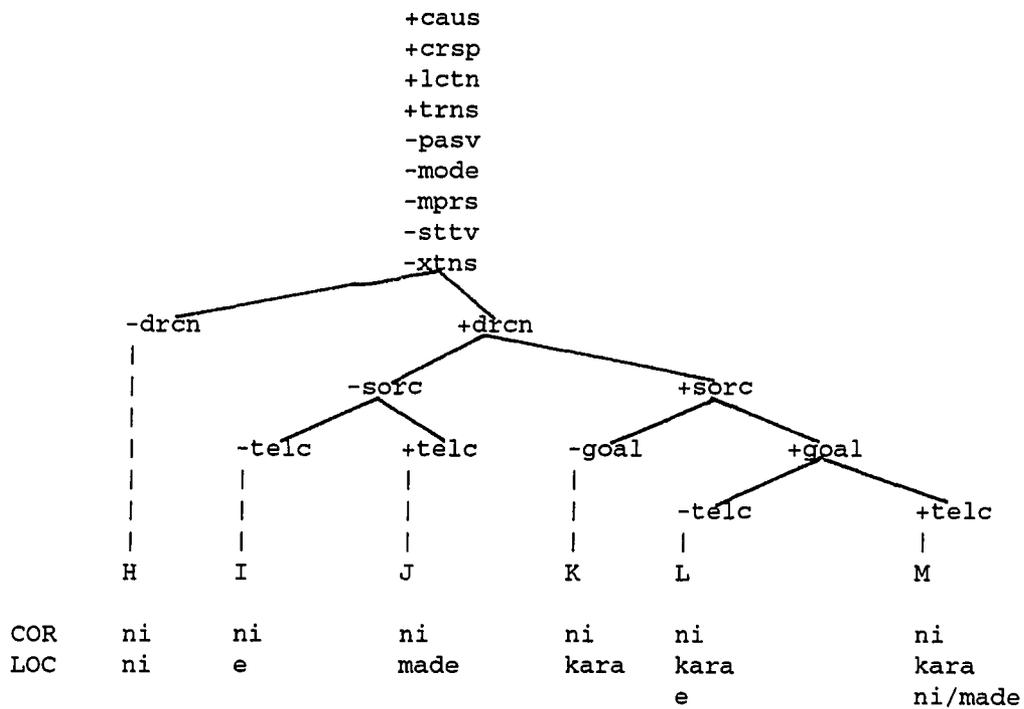


Figure 4.16 Subtypes: Non-stative PVC-15 (3)

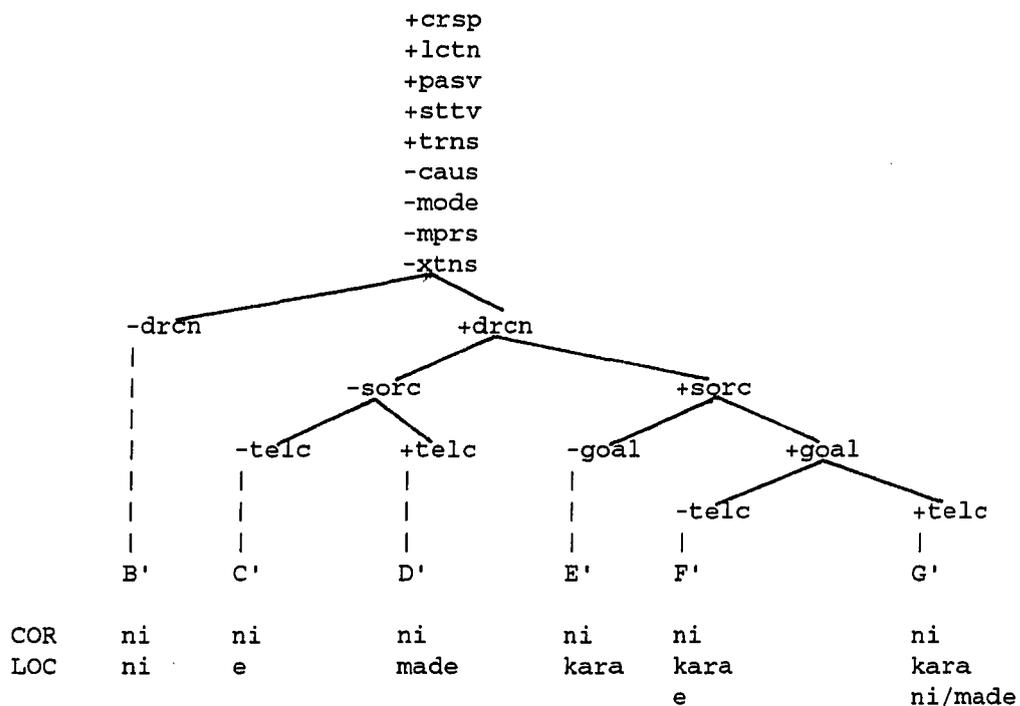


Figure 4.19 Subtypes: Stative PVC-15 (2)

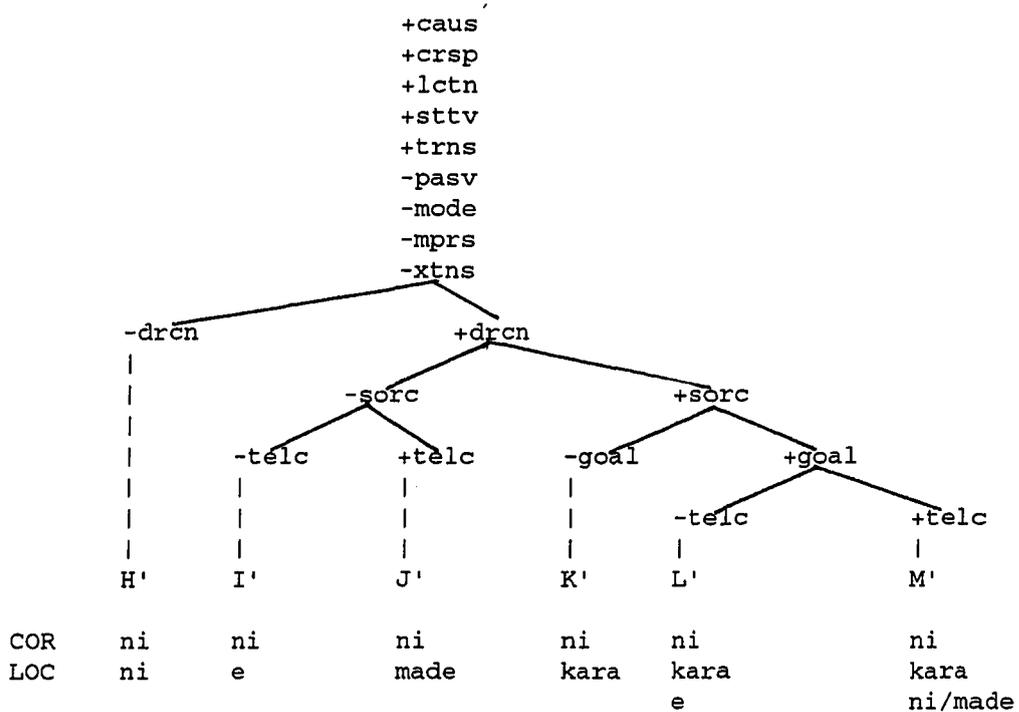


Figure 4.20 Subtypes: Stative PVC-15 (3)

(124) PVC-15-A

Tanaka	ga	Suzuki	ni	koko	de
	Nom		by	here	at
1ndex	2ndex	3ndex	4ndex	5ndex	6ndex
+N	+P	+N	+P	+N	+P
					-drcn
					-trmn
	itazura	o	mitukatta.		
	mischief	Acc	was found		
	7ndex	8ndex	9ndex		
	+N	+P	+V		
			+crsp		
			+lctn		
			+trns		
			-caus		
			-mode		
			-mprs		
			-pasv		
			-sttv		
			-xtns		
			2 ([+Nom])		
			2 [+actr]		
			2 [+AGT]		
			4 [+COR]		
			4 [-assn]		
			6 [+LOC]		
			6 -drcn		
			-trmn		
			8 ([+Acc])		
			8 [+PAT]		

'Tanaka was found up to mischief at this place by Suzuki.'

The verb *mitukaru* is derivationally related to *mitukaru* in PVC-5-2 class.

4.7.2.2 PVC-15-B

Verbs in Subtype B have a cluster of the features [+crsp, +lctn, +pasv, +trns, -caus, -drcn, -mprs, -xtns]. They require that both the COR and the LOC complement be marked with the

postposition *ni* [+P,-xtns,-assn]. In the matrix of verbs these postpositions are both represented as [-assn]. The verbs in this subtype carry a so-called adversity passive interpretation. For example, in (125) below, the tear in the actress's eyes is not welcomed by the AGT, the director.

(125) PVC-15-B

Kantoku	ga	zyoyuu	ni	me	ni
director	Nom	actress	by	eyes	at
1ndex	2ndex	3ndex	4ndex	5ndex	6ndex
+N	+P	+N	+P	+N	+P
			-assn		-assn

namida	o	tamerareta
tears	Acc	was filled
7ndex	8ndex	9ndex
		+V
		+crsp
		+lctn
		+pasv
		+trns
		-caus
		-mode
		-mprs
		-sttv
		-xtns
		2([+Nom])
		2[+actr]
		2[+AGT]
		4[+COR]
		4[-assn]
		6[+LOC]
		6[-assn]
		8([+Acc])
		8[+PAT]

'The director was displeased that his actress filed her eyes with tears.'

4.7.2.3 FVC-15-C

Verbs in Subtype C have a cluster of the following features: [+crsp,+drcn,+lctn,+pasv,+trns,-caus,-mprs,-mode,-sorc,-sttv,-telc,-xtns]. They require that the COR complement be marked with the postposition *ni* [+P,-xtns,-assn] and the LOC complement with *e* [+P,-sorc,-trmn]. In the matrix of verbs these postpositions are represented as [-assn] and [-sorc,-trmn]. The verbs in this subtype carry so-called adversity passive interpretations. For example, in (126) below, the phone call to the house by the woman is not pleasing to Tanaka.

(126) PVC-15-C

Tanaka	ga	onna	ni	uti	e
	Nom	woman	by	house	toward
1ndex	2ndex	3ndex	4ndex	5ndex	6ndex
+N	+P	+N	+P	+N	+P
			-assn		-sorc
					-trmn
	denwa	o	kakerareta		
	phone	Acc	made to receive		
	7ndex	8ndex	9ndex		
			+V		
			+crsp		
			+lctn		
			+pasv		
			+trns		
			-caus		
			-mode		
			-mprs		
			-sttv		
			-xtns		
			2([+Nom])		
			2[+actr]		
			2[+AGT]		
			4[+COR]		
			4[-assn]		
			6[+LOC]		
			6 -sorc		
			-trmn		
			8([+Acc])		
			8[+PAT]		

'Tanaka was made to receive a phone call by (the) woman at home.'

'Tanaka was displeased by the woman calling him at his house.'

4.7.2.4 PVC-15-D

Verbs in Subtype D share a cluster of the following features: [+crsp,+drcn,+lctn,+pasv,+telc,+trns,-caus,-mprs,-mode,-sorc,-sttv,-xtns]. They require that the COR complement be marked with the postposition *ni* [+P,-xtns,-assn] and the LOC

complement with *made* [+P,-sorc,+trmn]. In the matrix of verbs these postpositions are represented as [-assn] and [-sorc,+trmn]. The verbs in this subtype bear the so-called adversity passive interpretation. For example, in (13) below, Tanaka's seeing Suzuki's wife off at the station is not welcomed by Suzuki.

(127) PVC-15-D

Suzuki	ga	Tanaka	ni	eki	made
	Nom	woman	by	station to	
1index	2index	3index	4index	5index	6index
+N	+P	+N	+P	+N	+P
			-assn		-sorc
					-trmn
	tuma	o	miokurareta		
	wife	Acc	was seen off		
	7index	8index	9index		
			+V		
			+crsp		
			+drcn		
			+lctn		
			+pasv		
			+telc		
			+trns		
			-caus		
			-mode		
			-mprs		
			-sorc		
			-sttv		
			-xtns		
			2 ([+Nom])		
			2 [+actr]		
			2 [+AGT]		
			4 [+COR]		
			4 [-assn]		
			6 [+LOC]		
			6 -sorc		
			-trmn		
			8 ([+Acc])		
			8 [+PAT]		

'Suzuki was affected in an adverse manner by Tanaka's seeing his wife off at the station.'

Verbs in Subtype E have a cluster of the features [+crsp,+drcn,+lctn,+pasv,+sorc,+trns,-caus,-goal,-mprs,-mode,-sttv,-xtns]. They require that the COR complement be marked with the postposition *ni* [+P,-xtns,-assn] and the LOC complement with *kara* [+P,+sorc,+trmn]. In the matrix of verbs these postpositions are represented as [-assn] and [+sorc,+trmn]. The verbs in this subtype have the so-called adversity passive interpretation. For example, in (128) below, Suzuki's summoning Tanaka's secretary from Tanaka's office was not well received by Tanaka.

(128) PVC-15-E

Tanaka	ga	Suzuki	ni	zimusyo	kara
	Nom		by	office	from
1ndex	2ndex	3ndex	4ndex	5ndex	6ndex
+N	+P	+N	+P	+N	+P
			-assn		+sorc
					+trmn
	hisyo	o	yobidasareta		
	secretary	Acc	was called out		
	7ndex	8ndex	9ndex		
			+V		
			+crsp		
			+drcn		
			+lctn		
			+pasv		
			+sorc		
			+trns		
			-caus		
			-goal		
			-mode		
			-mprs		
			-sttv		
			-xtns		
			2([+Nom])		
			2[+actr]		
			2[+AGT]		
			4[+COR]		
			4[-assn]		
			6[+LOC]		
			6 +sorc		
			+trmn		
			8([+Acc])		
			8[+PAT]		

'Tanaka was affected in an adverse manner by Suzuki calling his secretary out from his office.'

4.7.2.6 PVC-15-F

Verbs in Subtype F share a cluster of the features: [+crsp, +drcn, +goal, +lctn, +pasv, +sorc, +trns, -caus, -mprs, -mode, -sttv, -telc, -xtns]. They require that the COR complement be marked with the

postposition *ni* [+P,-xtns,-assn] and the macro-locus with *kara* [+P,+sorc,+trmn] for source complement and with *e* [+P,-sorc,-trmns] for atelic goal complement. In the matrix of verbs these postpositions are represented as [-assn], [+sorc,+trmn], and [-sorc,-trmn], respectively. The verbs in this subtype give the so-called adversity passive interpretation to the verb. For example, in (129) below, Tanaka is in trouble since the *yakuza* sent a large sum of money through a bank to Tanaka's office.

Tanaka	ga	yakuza	ni	ginkoo	kara
	Nom		by	bank	from
1ndex	2ndex	3ndex	4ndex	5ndex	6ndex
+N	+P	+N	+P	+N	+P
			-assn		+sorc
					+trmn
	zimusyo	e	taikin	o	okurareta
	office	to	money	Acc	was sent
	7ndex	8ndex	9ndex	10ndex	11ndex
	+N	+P	+N	+P	+V
		-sorc			+crsp
		-trmn			+drcn
					+goal
					+pasv
					+sorc
					+trns
					-caus
					-goal
					-mode
					-mprs
					-sttv
					-telc
					-xtns
					2 ([+Nom])
					2 [+actr]
					2 [+AGT]
					4 [+COR]
					4 [-assn]
					6 [+LOC]
					6 [+sorc]
					+trmn
					8 [+LCC]
					8 -sorc
					-trmn
					10 ([+Acc])
					10 [+PAT]

'Tanaka was sent a large sum of money by the yakuza from a bank to his office.

4.7.2.7 PVC-15-G

Verbs in Subtype G have a cluster of the features:

[+crsp,+drcn,+goal,+lctn,+pasv,+sorc,+telc,+trns,-caus,-mprs,-mode,-sttv,-xtns]. They require that the COR complement be marked with the postposition *ni* [+P,-xtns,-assn] and the macro-locus with *kara* [+P,+sorc,+trmn] for the source complement and with *made* [+P,-sorc,+trmns] for the telic goal complement. In the matrix of verbs these postpositions are represented as [-assn], [+sorc,+trmn], and [-sorc,+trmn], respectively. The verbs in this subtype give the so-called adversity passive interpretation to the verb. For example, in (130) below, Tanaka did not appreciate the bodyguard provided by the yakuza to 'protect' Tanaka on his way from his home to his office.

(16) PVC-15-G

Tanaka	ga	yakuza	ni	zitaku	kara
	Nom		by	home	from
1ndex	2ndex	3ndex	4ndex	5ndex	6ndex
+N	+P	+N	+P	+N	+P
			-assn		+sorc
					+trmn
	zimusyo	made	goei	o	tukerareta
	office	to	guard	Acc	was provided
	7ndex	8ndex	9ndex	10ndex	11ndex
	+N	+P	+N	+P	+V
		-sorc			+crsp
		+trmn			+drcn
					+goal
					+pasv
					+sorc
					+telc
					+trns
					-caus
					-goal
					-mode
					-mprs
					-sttv
					-xtns
					2 ([+Nom])
					2 [+actr]
					2 [+AGT]
					4 [+COR]
					4 [-assn]
					6 [+LOC]
					6 [+sorc]
					+trmn
					8 [+LOC]
					8 -sorc
					+trmn
					10 ([+Acc])
					10 [+PAT]

'Tanaka was given an escort by the yakuza from his home to his office.'

4.7.2.8 PVC-15-H

Verbs in Subtype H share a cluster of the features [+caus,+crsp,+lctn,+trns,-drcn,-mode,-mprs,-pasv,-sttv,-xtns]. They require that their COR and LOC complements be marked with the postposition *ni* [+P,-xtns,-assn]. In the matrix of verbs these postpositions are represented as [-assn]. The verbs of Subtypes H through M have been referred to as causative verbs in grammatical frameworks that allow more than one level of description. The verbs in Subtypes H through M include a morphosyntactic affix -(s)ase. The COR for the verbs in Subtype H exercises control over the action designated by the verb, although it is the AGT that instigates the action designated by the regent. For example, in (131), it is the director's wish to have the actress fill her eyes with tears, and it is the actress who actually controls the tears in her eyes.

(131) PVC-15-H

Kantoku	ga	zyoyuu	ni	me	ni
director	Nom	actress	by	eyes	at
1ndex	2ndex	3ndex	4ndex	5ndex	6ndex
+N	+P	+N	+P	+N	+P
			-assn		-assn

namida	o	tamesaseta
tears	Acc	made to fill
7ndex	8ndex	9ndex
		+V
		+caus
		+crsp
		+lctn
		+trns
		-mode
		-mprs
		-pasv
		-sttv
		-xtns
		2 ([+Nom])
		2 [+actr]
		2 [+AGT]
		4 [+COR]
		4 [-assn]
		6 [+LOC]
		-assn
		8 ([+Acc])
		8 [+PAT]

'The director let the actress fill her eyes with tears.'

4.7.2.9 PVC-15-I

Verbs in Subtype I have a cluster of the following features:

[+caus, +crsp, +drcn, +lctn, +trns, -mprs, -mode, -pasv, -sorc, -sttv, -telc, -xtns]. They require that the COR complement be marked with the postposition *ni* [+P, -xtns, -assn], and the LOC complement with *e* [+P, -sorc, -trmn]. In the matrix of verbs these postpositions are represented as [-assn] and [-sorc, -trmn]. In

contrast to the Subtype H, the COR instigates such action and the AGT goes along with the activity required for the instigated action. For example, in (132) below, Tanaka let the woman make the phone call to the house; and it is the woman who instigated the act of telephoning.

(132) PVC-15-I

Tanaka	ga	onna	ni	uti	e
	Nom	woman	by	house	toward
1index	2index	3index	4index	5index	6index
+N	+P	+N	+P	+N	+P
			-assn		-sorc
					-trmn

denwa	o	kakesaseta
phone	Acc	made to receive
7index	8index	9index
		+V
		+caus
		+crsp
		+drcn
		+lctn
		+trns
		-mode
		-mprs
		-pasv
		-sorc
		-sttv
		-telc
		-xtns
		2([+Nom])
		2[+actr]
		2[+AGT]
		4[+COR]
		4[-assn]
		6[+LOC]
		6[-sorc]
		-trmn
		8([+Acc])
		8[+PAT]

'Tanaka let the woman make a phone call to the house.'

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4.7.2.10 PVC-15-J

Verbs in Subtype J have a cluster of the following features: [+caus,+crsp,+drcn,+lctn,+pasv,+telc,+trns,-mprs,-mode,-sorc,-sttv,-xtns]. They require that the COR complement be marked with the postposition *ni* [+P,-xtns,-assn] and the telic goal LOC complement with *made* [+P,-sorc,+trmn]. In the matrix of verbs these postpositions are represented as [-assn] and [-sorc,+trmn]. In the example below, the AGT *Suzuki* initiated the action and let his secretary see Tanaka off at the station. The verb is telic since the PAT *Tanaka* was indeed in contact with the LOC, the station, when the action of seeing off took place. The COR, *Suzuki's* secretary, is the one who saw Tanaka off at the station.

(133) PVC-15-J

Suzuki	ga	hisyo	ni	eki	made
	Nom	secretary	by	house	at
1ndex	2ndex	3ndex	4ndex	5ndex	6ndex
+N	+P	+N	+P	+N	+P
			-assn		+trmn
					-sorc

Tanaka	o	miokuraseta
	Acc	was seen off
7ndex	8ndex	9ndex
		+V
		+caus
		+crsp
		+drcn
		+lctn
		+telc
		+trns
		-mode
		-mprs
		-pasv
		-sorc
		-sttv
		-xtns
		2([+Nom])
		2[+actr]
		2[+AGT]
		4[+COR]
		4[-assn]
		6[+LOC]
		6 -sorc
		+trmn
		8([+Acc])
		8[+PAT]

'Suzuki let his secretary see Tanaka off at the station.'

4.7.2.11 PVC-15-K

Verbs in Subtype K share a cluster of the following features: [+caus,+crsp,+drcn,+lctn,+sorc,+trns,-goal,-mode,-mprs,-pasv,-sttv,-xtns]. They require that the COR

complement be marked with the postposition *ni* [+P,-xtns,-assn] and the LOC complement with *kara* [+P,+sorc,+trmn]. In the matrix of verbs, these postpositions are represented as [-assn] and [+sorc,+trmn]. In example (134) below, the AGT *Suzuki* let the COR, his son, raise the PAT, the son's head, from the pillow by his son's own will.

(134) PVC-15-K

Suzuki	ga	musuko	ni	makura	kara
	Nom	son	by	pillow	from
Index	2ndex	3ndex	4ndex	5ndex	6ndex
+N	+P	+N	+P	+N	+P
			-assn		+sorc
					+trmn

atama	o	agesaseta
head	Acc	made to raise
7ndex	8ndex	9ndex
		+V
		+caus
		+crsp
		+drcn
		+lctn
		+sorc
		+trns
		-goal
		-mode
		-mprs
		-pasv
		-sttv
		-xtns
		2 ([+Nom])
		2 [+actr]
		2 [+AGT]
		4 [+COR]
		4 [-assn]
		6 [+LOC]
		6 [+sorc
		+trmn
		8 ([+Acc])
		8 [+PAT]

'Suzuki let his son raise his head from the pillow on his own.'

4.7.2.12 PVC-15-L

Verbs in Subtype L have a cluster of the features [+caus, +crsp, +drcn, +goal, +lctn, +sorc, +trns, -mode, -mprs, -pasv, -sttv, -telc, -xtns]. They require that the COR complement be marked

with the postposition *ni* [+P,-xtns,-assn] and the macro-locus with *kara* [+P,+sorc,+trmn] for source complement and with *e* [+P,-sorc,-trmn] for atelic goal complement. In the matrix of verbs these postpositions are represented as [-assn], [+sorc,+trmn], and [-sorc,-trmn], respectively. In (21) below, Suzuki instructed and let his secretary send a monetary donation from his bank account to the victims struck by the natural disaster. It should be noted that in (135), there is no confirmation regarding whether the monetary donation has been received by the victims. This is because the goal in (135) is atelic, not telic. The verbs in PVC-15-M below contrast with PVC-15-L, as explained in the section on PVC-15-M and in the example (136) below.

(135) PVC-15-L

Suzuki	ga	hisyo	ni	ginkoo	kara
	Nom		by	bank	from
1ndex	2ndex	3ndex	4ndex	5ndex	6ndex
+N	+P	+N	+P	+N	+P
			-assn		+sorc
	hisaisya	e	mimaikin	o	okuraseta
	victims	to	money	Acc	made to send
	7ndex	8ndex	9ndex	10ndex	11ndex
	+N	+P	+N	+P	+V
		+goal			+caus
					+crsp
					+drcn
					+goal
					+goal
					+sorc
					+trns
					-mode
					-mprs
					-pasv
					-sttv
					-telc
					-xtns
					2 ([+Nom])
					2 [+actr]
					2 [+AGT]
					4 [+COR]
					4 [-assn]
					6 [+LOC]
					6 +sorc
					+trmn
					8 [+LOC]
					8 -sorc
					-trmn
					10 ([+Acc])
					10 [+PAT]

'Suzuki let his secretary send a monetary donation to the disaster victims from the bank.'

4.7.2.13 PVC-15-M

Verbs in Subtype M share a cluster of the following features:

[+caus,+crsp,+drcn,+goal,+lctn,+sorc,+telc,+trns,-mode,-mprs,-pasv,-sttv,-xtns]. They require that the COR complement be marked with the postposition *ni* [+P,-xtns,-assn] and the macro-locus with *kara* [+P,+sorc,+trmn] for the source complement and *made* [+P,-sorc,+trmns] for the telic goal complement. In the matrix of verbs these postpositions are represented as [-assn], [+sorc,+trmn], and [-sorc,+trmn], respectively. The telic goal argument indicates that the monetary donation, the PAT, does indeed come into contact with the goal LOC, the victims.

(136) PVC-15--M

Suzuki	ga	hisyo	ni	ginkoo	kara
	Nom		by	bank	from
1ndex	2ndex	3ndex	4ndex	5ndex	6ndex
+N	+P	+N	+P	+N	+P
			-assn		+sorc
					+trmn
	hisaisya	made	mimaikin	o	okuraseta
	victims	to	money	Acc	made to send
	7ndex	8ndex	9ndex	10ndex	11ndex
	+N	+P	+N	+P	+V
		-sorc			+caus
		+trmn			+crsp
					+drcn
					+goal
					+goal
					+lctn
					+sorc
					+telc
					+trns
					-mode
					-mprs
					-pasv
					-sttv
					-xtns
					2 ([+Nom])
					2 [+actr]
					2 [+AGT]
					4 [+COR]
					4 [-assn]
					6 [+LOC]
					6 +sorc
					+trmn
					8 [+LOC]
					8 -sorc
					+trmn
					10 ([+Acc])
					10 [+PAT]

'Suzuki had his secretary send a monetary donation to the disaster victims from the bank (and the victims received the donation).'

Verbs in Subtype N have a cluster of the following features: [+caus,+crsp,+lctn,+pasv,+trns,-drcn,-mode,-mprs,-sttv,-xtns]. They require that their COR and LOC complements be marked with the postposition *ni* [+P,-xtns,-assn]. In the matrix of verbs these postpositions are represented as [-assn]. The verbs of Subtype N through S have been referred to as causativized passive verbs since these verbs include the derivational affixes *-(s)ase* and *-(r)are*. The COR for the verbs in Subtype N exercises control over the action designated by the verb, although it is the AGT that performs the action instigated by the COR. For example, in (23) it is director's wish to make the actress fill her eyes with tears, and it is the actress who actually ends up with her eyes being filled by tears. This verb is derivationally related to PVC-15-H.

(23) PVC-15-N

Zyoyuu	ga	kantoku	ni	me	ni
actress	Nom	director	by	eyes	at
1ndex	2ndex	3ndex	4ndex	5ndex	6ndex
+N	+P	+N	+P	+N	+P
			-assn		-assn

namida	o	tamesaserareta
tears	Acc	was made to fill
7ndex	8ndex	9ndex
		+V
		+caus
		+crsp
		+lctn
		+pasv
		+trns
		-drcn
		-mode
		-mprs
		-sttv
		-xtns
		2([+Nom])
		2[+actr]
		2[+AGT]
		4[+COR]
		4[-assn]
		6[+LOC]
		-assn
		8([+Acc])
		8[+PAT]

'The actress was made by the director to have her eyes fill with tears.'

4.7.2.15 PVC-15-0

Verbs in Subtype 0 have a cluster of the following features:

[+caus,+crsp,+drcn,+lctn,+pasv,+trns,-mode,-mprs,-sorc,-sttv,-telc,-xtns]. They require that the COR complement be marked with the postposition *ni* [+P,-xtns,-assn] and the LOC complement with *e* [+P,-sorc,-trmn]. In the matrix of verbs, these postpositions are

represented as [-assn] and [-sorc,-trmn]. As in Subtype H, the COR instigates such action and the AGT goes along with the activity required for the instigated action. The locus of control for the whole activity is on the COR, rather than on the AGT in Subtypes N and O, which is the reason for the 'passive' quality of such verbs. For example, in (138) below, the woman made Tanaka make a phone call to the house, and Tanaka is the one who makes the phone call to the house.

(138) PVC-15-O

Tanaka	ga	onna	ni	uti	e
	Nom	woman	by	house	at
1index	2index	3index	4index	5index	6index
+N	+P	+N	+P	+N	+P
			-assn		-sorc
					-trmn

denwa	o	kakesaserareta
phone	Acc	was made to place a phone call
7index	8index	9index
		+V
		+caus
		+crsp
		+drcn
		+lctn
		+pasv
		+trns
		-mode
		-mprs
		-sorc
		-sttv
		-telc
		-xtns
		2([+Nom])
		2[+actr]
		2[+AGT]
		4[+COR]
		4[-assn]
		6[+LOC]
		6[-sorc]
		-trmn
		8([+Acc])
		8[+PAT]

'Tanaka was made to place a phone call to the house by the woman.'

4.7.2.16 PVC-15-P

Verbs in Subtype P share a cluster of the following features: [+caus,+crsp,+drcn,+lctn,+pasv,+telc,+trns,-mprs,-mode,-sorc,-sttv,-xtns]. They require that the COR complement be

marked with the postposition *ni* [+P,-xtns,-assn] and the telic goal LOC complement with *made* [+P,-sorc,+trmn]. In the matrix of verbs these postpositions are represented as [-assn] and [-sorc,+trmn]. In the example below, the COR Suzuki initiates the action and lets his secretary see Tanaka off at the station. The verb is telic, since the PAT Tanaka is indeed in contact with the LOC, the station, when the action of seeing off takes place. The AGT, Suzuki's secretary, is the one who sees Tanaka off at the station. In terms of who is in control for the activity depicted in the verb, we can set up the hierarchy as the COR followed by the AGT. This is in accord with the control hierarchy for Subtypes N and O.

(139) PVC-15-P

Hisyo	ga	Suzuki	ni	eki	made
secretary	Nom		by	station at	
1ndex	2ndex	3ndex	4ndex	5ndex	6ndex
+N	+P	+N	+P	+N	+P
			-assn		-sorc
					+trmn

Tanaka	o	miokuraserareta
	Acc	was made to see off
7ndex	8ndex	9ndex
		+V
		+caus
		+crsp
		+drcn
		+lctn
		+pasv
		+telc
		+trns
		-mode
		-mprs
		-sorc
		-sttv
		-xtns
		2 ([+Nom])
		2 [+actr]
		2 [+AGT]
		4 [+COR]
		4 [-assn]
		6 [+LOC]
		6 -sorc
		+trmn
		8 ([+Acc])
		8 [+PAT]

'The secretary was made to see Tanaka off at the station by Suzuki.'

3.5.15.2.17. PVC-15-Q

Verbs in Subtype Q have a cluster of the features

[+caus, +crsp, +drcn, +lctn, +pasv, +sorc, +trns, -goal, -mode, -mprs,

-sttv,-xtns]. They require that the COR complement be marked with the postposition *ni* [+P,-xtns,-assn] and the LOC complement with *kara* [+P,+sorc,+trmn]. In the matrix of verbs, these postpositions are represented as [-assn] and [+sorc,+trmn]. In example (140) below, the AGT Suzuki lets COR, his son, raise the PAT, his son's head, from the pillow by his son's own will.

(140) PVC-15-Q

Musuko	ga	Suzuki	ni	makura	kara
son	Nom		by	pillow	from
Index	2ndex	3ndex	4ndex	5ndex	6ndex
+N	+P	+N	+P	+N	+P
			-assn		+sorc
					+trmn

atama	o	agesaserareta
head	Acc	was made to raise
7ndex	8ndex	9ndex

+V
+caus
+crsp
+drcn
+lctn
+pasv
+sorc
+trns
-goal
-mode
-mprs
-sttv
-xtns
2([+Nom])
2[+actr]
2[+AGT]
4[+COR]
4[-assn]
6[+LOC]
6|+sorc|
|+trmn|
8([+Acc])
8[+PAT]

'The son was made to raise his head from the pillow on his own by Suzuki.'

4.7.2.18 PVC-15-R

Verbs in Subtype R share a cluster of the features [+caus, +crsp, +drcn, +goal, +lctn, +pasv, +sorc, +trns, -mode, -mprs, -sttv, -telc, -xtns]. They require that the COR complement be

marked with the postposition *ni* [+P,-xtns,-assn] and the macro-locus with *kara* [+P,+sorc,+trmn] for the source complement and with *e* [+P,-sorc,-trmn] for the atelic goal complement. In the matrix of verbs, these postpositions are represented as [-assn], [+sorc,+trmn], and [-sorc,-trmn], respectively. In (27) below, Suzuki instructed and let his secretary send a monetary donation from his bank account to the victims struck by a natural disaster. It should be noted that in (27) there is no confirmation regarding the monetary donation's having been received by the victims. This is because the goal in (141) is atelic, not telic. The verbs in PVC-15-S below contrast with those in the PVC-15-R as the Subtype S has a telic goal argument as the LOC complement.

(27) PVC-15-R

Hisyo	ga	Suzuki	ni	ginkoo	kara
secretary	Nom		by	bank	from
1ndex	2ndex	3ndex	4ndex	5ndex	6ndex
+N	+P	+N	+P	+N	+P
			-assn		+sorc
					+trmn

hisaisya	e	mimaikin	o	okuraserareta
victims	to	money	Acc	was made to send
7ndex	8ndex	9ndex	10ndex	was sent
+N	+P	+N	+P	+V
	-sorc			+caus
	-trmn			+crsp
				+drcn
				+goal
				+lctn
				+pasv
				+sorc
				+trns
				-mode
				-mprs
				-sttv
				-telc
				-xtns
				2 ([+Nom])
				2 [+actr]
				2 [+AGT]
				4 [+COR]
				4 [-assn]
				6 [+LOC]
				6 [+sorc]
				+trmn
				8 [+LOC]
				8 -sorc
				-trmn
				10 ([+Acc])
				10 [+PAT]

'The secretary was made to send a monetary donation to the disaster victims from the bank by Suzuki.'

Verbs in Subtype S have a cluster of the following features: [+caus,+crsp,+drcn,+goal,+lctn,+pasv,+sorc,+telc,+trns,-mode,-mprs,-sttv,-xtns]. They require that the COR complement be marked with the postposition *ni* [+P,-xtns,-assn] and the macro-locus with *kara* [+P,+sorc,+trmn] for the source complement and *made* [+P,-sorc,+trmn] for the telic goal complement. In the matrix of verbs, these postpositions are represented as [-assn], [+sorc,+trmn], and [-sorc,+trmn], respectively. The telic goal argument indicates that the monetary donation, the PAT, indeed does come into contact with the goal LOC, the victims.

(142) PVC-15-S

Hisyo	ga	Suzuki	ni	ginkoo	kara
secretary	Nom		by	bank	from
1ndex	2ndex	3ndex	4ndex	5ndex	6ndex
+N	+P	+N	+P	+N	+P
			-assn		+sorc
					+trmn
	hisaisya	made	mimaikin	o	okuraserar
					eta
	victims	to	money	Acc	was made to
send					
	7ndex	8ndex	9ndex	10ndex	was sent
	+N	+P	+N	+P	+V
		-sorc			+caus
		+trmn			+crsp
					+drcn
					+goal
					+lctn
					+pasv
					+sorc
					+telc
					+trns
					-mode
					-mprs
					-sttv
					-xtns
					2([+Nom])
					2[+actr]
					2[+AGT]
					4[+COR]
					4[-assn]
					6[+LOC]
					6 +sorc
					+trmn
					8[+LOC]
					8 -sorc
					+trmn
					10([+Acc])
					10[+PAT]

'The secretary was made by Suzuki to send a monetary donation from the bank to the disaster victims (and the victims received the donation).'

4.7.2.20 Subtypes A' through S'

The Subtypes A' through S' are established to account for the negative forms of regent verbs in the PVC-15 class. They are stative counterparts of Subtypes A through S in class PVC-15.

For example, *mitukaranakatta* is the negative form of *mitukatta*. The verb *mitukatta* was introduced earlier as a verb which belongs to our Subtype A. In my analysis, the negative form *mitukaranakatta* is analyzed as the stative counterpart of our Subtype A. This is motivated by the following. The negative form is marked morphologically with an adjectival ending *-(a)nai* for non-past form as in *mitukaranai* and *-(a)nakatta* for past form. This follows the morphological marking for verbs with features [+V,+djct] such as *siroi* 'be white' or *oisii* 'be delicious':

<i>siroi</i>	is white
<i>sirikunai</i>	is not white
<i>sirokatta</i>	was white
<i>sirokunakatta</i>	was not white
<i>mitukaru</i>	to be found
<i>mitukaranai</i>	to not be found
<i>mitukatta</i>	was found
<i>mitukaranakatta</i>	was not found

Syntactically, the negative forms of verbs are not amenable to the attachment of the aspect-marker *-te iru*. Both *mitukaranakute iru* and *mitukaranakatte iru* are ungrammatical. This is also the case for stative verbs.

I represent negative forms of verbs such as *mitukaranai* and *mitukaranakatta* as stative counterparts of the corresponding

non-stative, or non-negative forms of verbs. I represent these stative counterparts by a prime added to the non-stative subtypes in section 4.7.2.

The syntactic distributions of the A'-S' verbs are identical to the distributions of their non-stative declarative counterparts. Since the only differences in the matrices for these Subtypes A' through S' are the features of stativity and negation, I will simply list the examples of these stative verbs with their non-stative counterparts. The numbers in the third column refer to the full sentences presented earlier for the non-stative counterparts.

Subtypes	examples	[-sttv] counterparts and reference to the examples
PVC-15-A'	<i>mitukaranakatta</i>	<i>mitukatta</i> (10)
PVC-15-B'	<i>tamerarenakatta</i>	<i>tamerareta</i> (11)
PVC-15-C'	<i>kakerarenakatta</i>	<i>kakerareta</i> (12)
PVC-15-D'	<i>miokurarenakatta</i>	<i>miokurareta</i> (13)
PVC-15-E'	<i>yobidasarenakatta</i>	<i>yobidasareta</i> (14)
PVC-15-F'	<i>okurarenakatta</i>	<i>okurareta</i> (15)
PVC-15-G'	<i>tukerarenakatta</i>	<i>tukerareta</i> (16)
PVC-15-H'	<i>tamesasenakatta</i>	<i>tamesaseta</i> (17)
PVC-15-I'	<i>kakesasenakatta</i>	<i>kakesaseta</i> (18)
PVC-15-J'	<i>miokurasenakatta</i>	<i>miokuraseta</i> (19)
PVC-15-K'	<i>agesasenakatta</i>	<i>agesaseta</i> (20)
PVC-15-L'	<i>okurasenakatta</i>	<i>okuraseta</i> (21)
PVC-15-M'	<i>okurasenakatta</i>	<i>okuraseta</i> (22)
PVC-15-N'	<i>tamesaserarenakatta</i>	<i>tamesaserareta</i> (23)
PVC-15-O'	<i>kakesaserarenakatta</i>	<i>kakesaserareta</i> (24)
PVC-15-P'	<i>miokuraserarenakatta</i>	<i>miokuraserareta</i> (25)
PVC-15-Q'	<i>agesaserarenakatta</i>	<i>agesaserareta</i> (26)
PVC-15-R'	<i>okuraserarenakatta</i>	<i>okuraserareta</i> (27)
PVC-15-S'	<i>okuraserarenakatta</i>	<i>okuraserareta</i> (28)

4.8 PRIMARY VERB CLASS 16 (PVC-16)

The verbs in PVC-16 share a cluster of the features [+trns,+lctn,+crsp,+mode]. There have been no examples of verbs in this class found so far in the primary data I examined, indicating that the verbs in this class are limited in occurrence in naturalistic data. The analysis below is offered for plausible examples based on my intuition, and these are limited to non-impersonal, non-extension verbs.

The example of verbs in this class are derivationally related to verbs in the PVC-10, 12, and 14. The verbs in PVC-16 are marked morphologically, distributionally, and functionally compared to the verbs in other classes to which they are derivationally related. The COR is marked by *ni* and the MNS is marked either by *to* or *de*. The majority of verbs in PVC-16 include either the causative suffix *-(s)ase*, the passive affix *-(r)are*, or the former followed by the latter, *-(s)aserare*.

4.8.1 Subtypes within PVC-16

I establish Subtypes for verbs in this class as presented in Figures 4.22 through 4.31. The verbs in this class are either non-stative (Subtypes A through BB) or stative (Subtypes A' through BB'). The verbs in the non-stative PVC-16 Subtypes may occur with the aspect-marking form *-te iru*, while those in the stative PVC-16 Subtypes may not. The feature association in Figure 4.23 concerns the MNS complement. As I established earlier in the section on PVC-2, when the regent requires that the MNS

complement be marked by *de* [+P,-drcn,+trmn], the verb bears the feature [-assn]. When the regent requires the MNS complement to be marked with *to* [+P,+assn], the verb bears the [+assn] feature. The two morphosyntactic features causative [+caus] and passive [+pasv] and their distributional and functional properties have been introduced in the section on PVC-15: causative, passive, and causative passive verbs are represented by features [+caus], [+pasv], and [+caus,+pasv], respectively in the matrix. The affixes *-(s)ase*, *-(r)are*, and *-(s)ase-rare* signal that the verb bears a feature [+caus], [+pasv], or a combination of features [+caus,+pasv], respectively.

The localistic features in (4) through (10), the features [+drcn], [+sorc], and [+telc], have been established earlier for verbs in PVC-13. It should be noted that the distinction between atelic and telic verbs that was required for non-directional locational verbs in the class of PVC-13 and 14 is neutralized and not applicable to the non-directional verbs in PVC-16. That is, the distinction between telic and atelic verbs is no longer maintained as a branching of the non-directional verbs here. This is due to the fact that the aspect-marking form *-te iru* attached to PVC-16 verbs uniformly gives a progressive rather than a resultative interpretation. However, this telicity distinction still applies for directional verbs in PVC-16, specifically for source and goal arguments. In these respects PVC-16 is quite similar to PVC-15.

In Figures 4.23 through 4.31 I list postpositions that identify the COR, LOC and MNS for each of these Subtypes of verbs in PVC-16. The asterisk * attached to the individual subtype such as E* in Figure 4.26 below indicates that there have been no plausible examples found of verbs that belongs to that subtype.

	+V	
	+crsp	
	+lctn	
	+mode	
	+trns	
	-mprs	
	-xtns	
-sttv		+sttv
Figures 4.23 - 4.31		A'-BB'

Figure 4.22 PVC-16 Subtypes

	+V	
	+crsp	
	+lctn	
	+mode	
	+trns	
	-mprs	
	-sttv	
	-xtns	
-assn		+assn
Figure 4.24		Figure 4.25

Figure 4.23 Non-stative PVC-16 (1)

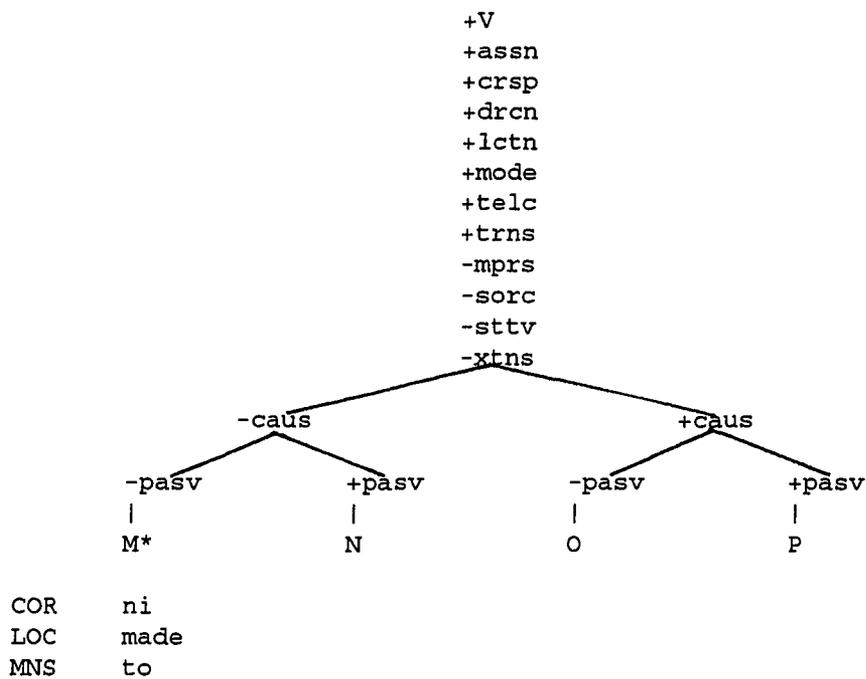


Figure 4.28 Non-stative PVC-16 (6)

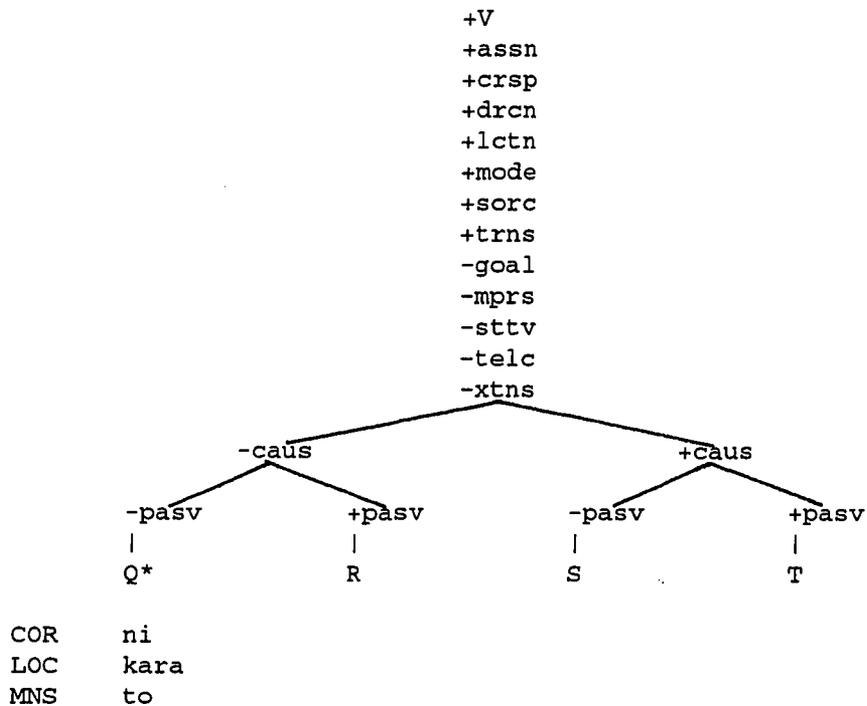


Figure 4.29 Non-stative PVC-16 (7)

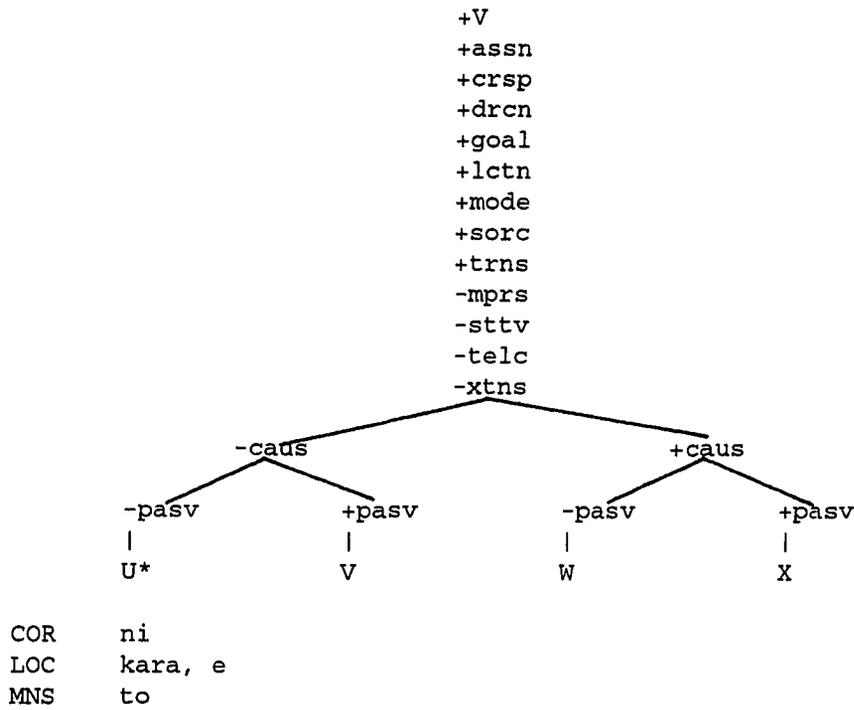


Figure 4.30 Non-stative PVC-16 (8)

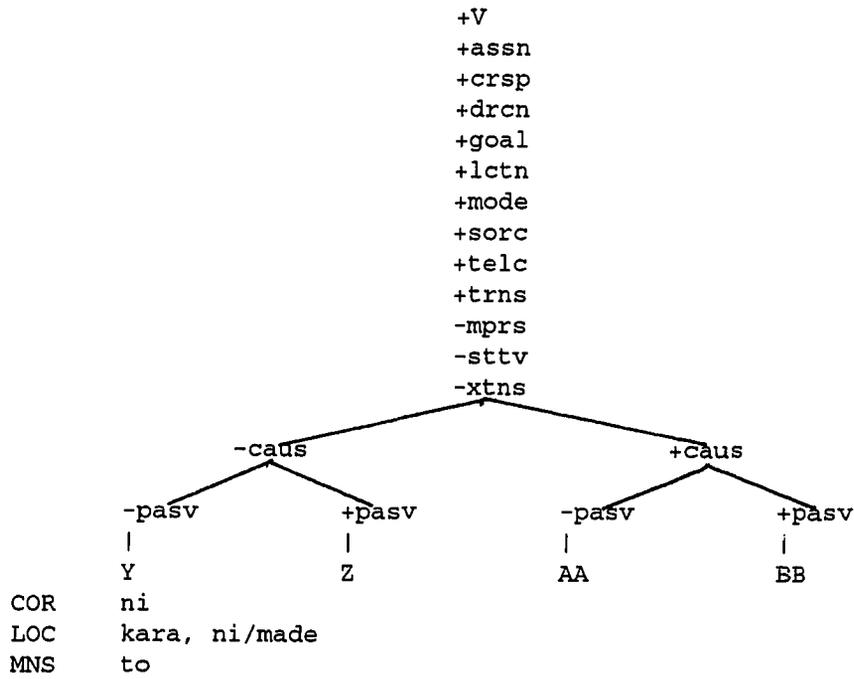


Figure 4.31 Non-stative PVC-16 (9)

The stative Subtypes A' through BB' differ from the corresponding non-stative Subtypes A through BB in terms of stativity. The matrix should look exactly the same except that [-sstv] for Subtypes A through X is replaced by [+sttv] for Subtypes A' through X'. Thus I do not repeat the features and the subcategorization trees for the Subtypes A' through BB'. It should also be noted that verbs in Subtypes A' through BB' are morphologically marked by the stative negative affixes *-(a)nai* or *-(a)nakatta*.¹⁸

4.8.2 Analysis of verbs in PVC-16

In this section I present an example for each of these subtypes.

4.8.2.1 PVC-16-A

The verbs in Subtype A share a cluster of the features [+crsp, +lctn, +mode, +trns, -assn, -caus, -mprs, -pasv, -sttv, -xtns].

They require their COR and LOC complements to be marked with the postposition *ni* [+P, -assn] and the MNS complement with *de* [+P, -drcn, +trmn]. In the matrix of verbs these postpositions are represented as [-assn] and [-drcn, +trmn], respectively. Morphologically, verbs in Subtype A are unmarked. This properly differentiates Subtype A from Subtypes B, C, and D. The Subtypes B through D are morphologically marked.

(143) PVC-16-A

Doitu	ga	Igirisu	ni	kogyooryoku	de
Germany	Nom	England	by	industrial power	at
1ndex	2ndex	3ndex	4ndex	5ndex	6ndex
+N	+P	+N	+P	+N	+P
			-assn		+trmn
					-drcn

GNP	ni	sa	o	tuketa
GNP	by	distinction	Acc	marked
7ndex	8ndex	9ndex	10ndex	11ndex
+N	+P	+N	+P	+V
	-assn			+crsp
				+lctn
				+mode
				+trns
				-assn
				-caus
				-mprs
				-pasv
				-sttv
				-xtns
				2([+Nom])
				2[+actr]
				2[+AGT]
				4[+COR]
				4[-assn]
				6[+MNS]
				6 +trmn
				-drcn
				8[+LOC]
				8[-assn]
				10([+Acc])
				10[+PAT]

'Germany is markedly different in GNP from England with respect to industrial power.'

4.8.2.2. PVC-16-B

The verbs in Subtype B share a cluster of the features [+crsp, +lctn, +mode, +pasv, +trns, -assn, -caus, -drcn, -mprs, -sttv, -xtns]. They require their COR and LOC complements to be

marked with the postposition *ni* [+P,-assn] and their MNS complement with *de* [+P,-drcn,+trmn]. In the matrix of verbs these postpositions are represented as [-assn] and [-drcn,+trmn], respectively. Morphologically, verbs in Subtype B are marked with the so-called passive suffix *-(r)are*. In (144) below, the AGT England was affected by the distinction in GNP accomplished by the COR Germany with its industrial power. That is, there is a sense of adversity marked by the suffix *-(r)are*.

(144) PVC-16-B

Igirisu	ga	Doitu	ni	kogyooryoku	de
England	Nom	Germany	by	industrial power	at
1ndex	2ndex	3ndex	4ndex	5ndex	6ndex
+N	+P	+N	+P	+N	+P
			-assn		-drcn
					+trmn

GNP	ni	sa	o	tukerareta
GNP	by	distinction	Acc	was marked
7ndex	8ndex	9ndex	10ndex	11ndex
+N	+P	+N	+P	+V
	-assn			+crsp
				+lctn
				+mode
				+pasv
				+trns
				-assn
				-caus
				-drcn
				-mprs
				-sttv
				-xtns
				2 ([+Nom])
				2 [+actr]
				2 [+AGT]
				4 [+COR]
				4 [-assn]
				6 [+MNS]
				6 -drcn
				+trmn
				8 [+LOC]
				8 [-assn]
				10 ([+Acc])
				10 [+PAT]

'There was a marked distinction between higher GNP attained by Germany through her industrial power and the GNP in England. England was adversely affected by this distinction.'

4.8.2.3 PVC-16-C

The verbs in Subtype C share a cluster of the features [+caus, +crsp, +lctn, +mode, +trns, -assn, -mprs, -pasv, -sttv, -xtns].

They require that their COR and LOC complements be marked with the postposition *ni* [+P, -assn] and their MNS complement with *de* [+P, -drcn, +trmn]. In the matrix of verbs these postpositions

are represented as [-assn] and [-drcn,+trmn], respectively.

Morphologically, verbs in Subtype C are marked with the causative suffix -(s)ase. In (145) below, England let Germany distinguish itself in its GNP by means of its industrial power, and Germany's GNP did surpass the GNP in England. That is, there is a sense of control attributed to Germany, the COR, and the AGT, England went along with it.

(145) PVC-16-C

Igirisu	ga	Doitu	ni	kogyooryoku	de
England	Nom	Germany	by	industrial power	at
1ndex	2ndex	3ndex	4ndex	5ndex	6ndex
+N	+P	+N	+P	+N	+P
			-assn		-drcn
					+trmn

GNP	ni	sa	o	tukesasete
GNP	by	distinction		Acc cause to mark
7ndex	8ndex	9ndex	10ndex	11ndex
+N	+P	+N	+P	+V
	-assn			+caus
				+crsp
				+lctn
				+mode
				+trns
				-assn
				-mprs
				-pasv
				-sttv
				-xtns
				2 ([+Nom])
				2 [+actr]
				2 [+AGT]
				4 [+COR]
				4 [-assn]
				6 [+MNS]
				6 [-drcn]
				+trmn
				8 [+LOC]
				8 [-assn]
				10 [+Acc]
				10 [+PAT]

'England allowed Germany to achieve a higher GNP. The Germans were able to achieve this distinction with their industrial power.'

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4.8.2.4 PVC-16-D

The verbs in Subtype D share a cluster of the following features: [+caus,+crsp,+lctn,+mode,+pasv,+trns,-assn,-mprs,-sttv,-xtns]. They require that their COR and LOC complements be marked with the postposition *ni* [+P,-assn] and their MNS complement with *de* [+P,-drcn,+trmn]. In the matrix of the verb these postpositions are represented as [-assn] and [-drcn,+trmn], respectively. Morphologically, verbs in Subtype D are marked with the causative passive suffix *-(s)aserare*. In example (145) below, the AGT England was forced to let Germany distinguish itself in its superior GNP, which Germany achieved through its industrial power. There is a sense of non-control attributed to England in its relationship with Germany. The COR takes an action, which bring about the end result the AGT, England, does not welcome.

(146) PVC-16-D

Igirisuga	Doitu	ni	kogyooryoku	de	
EnglandNom	Germanyby		industrial power	at	
1ndex	2ndex	3ndex	4ndex	5ndex	6ndex
+N	+P	+N	+P	+N	+P
			-assn		-drcn
					+trmn

GNP	ni	sa	o	tukesaserareta
GNP	by	distinction	Acc	was forced to mark
7ndex	8ndex	9ndex	10ndex	11ndex
+N	+P	+N	+P	+V
	-assn			+caus
				+crsp
				+lctn
				+mode
				+pasv
				+trns
				-assn
				-mprs
				-sttv
				-xtns
				2([+Nom])
				2[+actr]
				2[+AGT]
				4[+COR]
				4[-assn]
				6[+MNS]
				6 -drcn
				+trmn
				8[+LOC]
				8[-assn]
				10([+Acc])
				10[+PAT]

'England was powerless to affect Germany's ability to distinguish itself in its GNP by means of German industrial power.'

4.8.2.5 PVC-16-E

There have been no plausible examples so far of verbs in Subtype E. Such a verb, if located, should have a cluster of the

features [+assn,+crsp,+lctn,+mode,+trns,-caus,-drcn,-imprs,-pssv,-sttv,-xtns].

4.8.2.6 PVC-16-F

The verbs in Subtype F share a cluster of the features [+assn,+crsp,+lctn,+mode,+pssv,+trns,-caus,-drcn,-imprs,-sttv,-xtns].

Verbs in Subtype F require their COR and LOC complements to be marked with the postposition *ni* [+P,-assn] and their MNS complement with *to* [+P,+assn]. In the matrix of verbs these postpositions are represented as [-assn] and [+assn], respectively. Morphologically, verbs in Subtype F are marked with the passive suffix -(r)are.

In (147) below, the AGT Suzuki was affected in an adverse manner by his secretary's conclusion of the contract with Tanaka at the land sale. The AGT Suzuki did not welcome this action by his secretary.

(147) PVC-16-F

Suzuki	ga	hisyo	ni	Tanaka	to
	Nom	secretary	by	with	
1index	2ndex	3ndex	4ndex	5ndex	6ndex
+N	+P	+N	+P	+N	+P
			-assn		+assn

totibaikyaku	de	keiyaku	o	kawasareta.
land sale	at	contract	Acc	was exchanged.
7ndex	8ndex	9ndex	10ndex	11index
+N	+P	+N	+P	+V
		-drcn		+assn
		+trmn		+crsp
				+lctn
				+mode
				+pasv
				+trns
				-caus
				-drcn
				-mprs
				-sttv
				-xtns
				2([+Nom])
				2[+actr]
				2[+AGT]
				4[+COR]
				4[-assn]
				6[+assn]
				6[+MNS]
				8[+LOC]
				8 -drcn
				+trmn
				10([+Acc])
				10[+PAT]

'Suzuki was adversely affected by his secretary concluding the contract with Tanaka for the land sale.'

4.8.2.7 PVC-16-G

The verbs in Subtype G share a cluster of the features [+assn,+caus,+crsp,+lctn,+mode,+trns,-drcn,-mprs,-pssv,-sttv,-xtns].

Verbs in Subtype G require that their COR and LOC complements be marked with the postposition *ni* [+P,-assn] and the MNS complement with *to* [+P,+assn]. In the matrix of verbs, these postpositions are represented as [-assn] and [+assn], respectively. Morphologically, verbs in Subtype F are marked with the causative suffix *-(s)ase*.

In (148) below, the AGT Suzuki had his secretary conclude the contract with Tanaka for the land sale. The COR, Suzuki's secretary, merely implemented the AGT's wish.

(148) PVC-16-G

Suzuki	ga	hisyo	ni	Tanaka	to
	Nom	secretary	by		with
1ndex	2ndex	3ndex	4ndex	5ndex	6ndex
+N	+P	+N	+P	+N	+P
			-assn		+assn
totibaikyaku	de	keiyaku	o	kawasasetta.	
land sale	at	contract	Acc	forced to exchange	
7ndex		8ndex	9ndex	10ndex	11ndex
+N	+P	+N		+P	+V
		-drcn			+assn
		+trmn			+caus
					+crsp
					+lctn
					+mode
					+trns
					-drcn
					-mprs
					-pasv
					-sttv
					-xtns
					2 ([+Nom])
					2 [+actr]
					2 [+AGT]
					4 [+COR]
					4 [+assn]
					6 [+MNS]
					6 [+assn]
					8 [+LOC]
					8 -drcn
					+trmn
					10 ([+Acc])
					10 [+PAT]

'Suzuki had his secretary conclude the contract with Tanaka for the land sale.'

4.8.2.8 PVC-16-H

The verbs in Subtype H share a cluster of the following features: [+assn,+caus,+crsp,+lctn,+mode,+pssv,+trns,-drcn,-mprs,+pssv,-sttv,-xtns].

Verbs in Subtype H require their COR and LOC complements to be marked with the postposition *ni* [+P,-assn] and the MNS complement with *to* [+P,+assn]. In the matrix of the verb, these postpositions are represented as [-assn] and [+assn], respectively. Morphologically, verbs in Subtype H are marked with the causative passive suffix *-(s)aserare*.

In (149) below, the AGT secretary was forced by the COR Suzuki to conclude the contract with Tanaka for the land sale, and the AGT did not welcome such a predicament although the AGT took an action to implement the COR's wish.

(149) PVC-16-H

Hisyo	ga	Suzuki	ni	Tanaka	to
secretary	Nom		by	with	
1ndex	2ndex	3ndex	4ndex	5ndex	6ndex
+N	+P	+N	+P	+N	+P
			-assn		+assn
totibaikyaku	de	keiyaku	o	kawasaserareta	
.					
land sale	at	contract	Acc	was forced to	exchange.
7ndex	8ndex	9ndex	10ndex	11ndex	
+N	+P	+N	+P	+V	
	-drcn			+assn	
	+trmn			+caus	
				+crsp	
				+lctn	
				+mode	
				+pasv	
				+trns	
				-drcn	
				-mprs	
				-sttv	
				-xtns	
				2 ([+Nom])	
				2 [+actr]	
				2 [+AGT]	
				4 [+COR]	
				4 [-assn]	
				6 [+MNS]	
				6 [+assn]	
				8 [+LOC]	
				8 -drcn	
				+trmn	
				10 ([+Acc])	
				10 [+PAT]	

'The secretary was forced by Suzuki to conclude the contract with Tanaka for the land sale.'

4.8.2.9 PVC-16-I

There have been no plausible examples so far of verbs in Subtype I. Such a verb, if located, should have a cluster of the features [+assn,+crsp,+drcn,+lctn,+mode,+trns,-caus,-mprs,-pssv,-sorc,-sttv,-telc,-xtns].

4.8.2.10 PVC-16-J

The verbs in Subtype J share a cluster of the features [+assn,+drcn,+crsp,+lctn,+mode,+pssv,+trns,-caus,-mprs,-sorc,-sttv,-telc,-xtns].

Verbs in Subtype J require their COR, LOC and MNS complements to be marked with the postpositions *ni* [+P,-assn], *e* [+P,-sorc,-trmn], and *to* [+P,+assn], respectively. In the matrix of verbs, these postpositions are represented as [-assn], [-sorc,-trmn], and [+assn], respectively. Morphologically, verbs in Subtype J are marked with the passive suffix -(r)are.

In (150), the AGT Suzuki is affected in an adverse manner by the COR, his secretary, who keeps trying to get in contact with Tanaka in New York. The implication is that the secretary has been unsuccessful in making contact.

(150) PVC-16-J

Suzuki	ga	hisyo	ni	New York	e
	Nom	secretary	by		toward
1ndex	2ndex	3ndex	4ndex	5ndex	6ndex
+N	+P	+N	+P	+N	+P
			-assn		-sorc
					-trmn

Tanaka	to	renraku	o	torituzukerareta.
	with	connection	Acc	was kept taking
7ndex	8ndex	9ndex	10ndex	11ndex
+N	+P	+N	+P	+V
	+assn			+assn
				+crsp
				+drcn
				+lctn
				+mode
				+pasv
				+trns
				-caus
				-mprs
				-sorc
				-sttv
				-telc
				-xtns
				2([+Nom])
				2[+actr]
				2[+AGT]
				4[-assn]
				4[+COR]
				6 -sorc
				-trmn
				6[+LOC]
				8[+assn]
				8[+MNS]
				10([+Acc])
				10[+PAT]

'Suzuki was affected in an adverse manner by his secretary who kept on trying to make contact with Tanaka in New York.'

4.8.2.11 PVC-16-K

The verbs in Subtype K share the features

[+assn,+caus,+crsp, +drcn,+lctn,+mode,+trns,-mprs,-pasv,-sorc,
-sttv,-telc,-xtns].

Verbs in Subtype K require their COR LOC and MNS complements to be marked with the postpositions *ni* [+P,-assn], *e* [+P,-sorc,-trmn]. and *to* [+P,+assn] respectively. In the matrix of verbs, these postpositions are represented as [-assn], [-sorc,-trmn] and [+assn] respectively. Morphologically, verbs in Subtype K are marked with the causative suffix -(s)ase.

In (151) the AGT Suzuki instigated an action on the part of the COR, his secreatry, who in turn kept trying to make contact with Tanaka in New York. The implication is that the secretary has been unsuccessful in securing that connection.

(151) PVC-16-K

Suzuki	ga	hisyo	ni	New York	e
	Nom	secretary	by		toward
1ndex	2ndex	3ndex	4ndex	5ndex	6ndex
+N	+P	+N	+P	+N	+P
			-assn		-sorc
					-trmn

Tanaka	to	renraku	o	torituzukesasete.
	with	connection	Acc	forced to continue
taking				
7ndex	8ndex	9ndex	10ndex	11ndex
+N	+P	+N	+P	+V
	+assn			+assn
				+caus
				+crsp
				+drcn
				+lctn
				+mode
				+trns
				-mprs
				-pasv
				-sorc
				-sttv
				-telc
				-xtns
				2 ([+Nom])
				2 [+actr]
				2 [+AGT]
				4 [-assn]
				4 [+COR]
				6 [-sorc
				-trmn
				6 [+LOC]
				8 [+assn]
				8 [+MNS]
				10 ([+Acc])
				10 [+PAT]

'Suzuki made his secretary keep on trying to make contact with
Tanaka in New York .'

The verbs in Subtype L share a cluster of the features [+assn,+caus,+crsp,+drcn,+lctn,+mode,+pasv,+trns,-mprs,-sorc,-sttv,-telc,-xtns].

Verbs in Subtype L require their COR, LOC and MNS complements to be marked with the postpositions *ni* [+P,-assn], *e* [+P,-sorc,-trmn], and *to* [+P,+assn], respectively. This postposition marking follows that of Subtypes J and K. In the matrix of the verb, these postpositions are represented as [-assn], [-sorc,-trmn], and [+assn] respectively. Morphologically, verbs in Subtype K are marked with the causative passive suffix *-(s)aserare*.

In (152) the secretary was affected in an adverse manner by the COR, Suzuki, who made the secretary keep trying to make contact with Tanaka in New York. Suzuki instigate the action so that the COR, his secretary, kept trying to connect with Tanaka in New York. The implication is that the secretary has been unsuccessful in securing that connection, and the secretary in turn was affected by that in an adverse manner.

(152) PVC-16-L

Hisyo	ga	Suzuki	ni	New York	e
secretary	Nom		by		toward
1ndex	2ndex	3ndex	4ndex	5ndex	6ndex
+N	+P	+N	+P	+N	+P
			-assn		-sorc
					-trmn

Tanaka	to	renraku	o	torituzukesaserareta.
	with	connection	Acc	was forced to
continue				taking
7ndex	8ndex	9ndex	10ndex	11ndex
+N	+P	+N	+P	+V
		-drcn		+assn
		+trmn		+caus
				+crsp
				+drcn
				+lctn
				+mode
				+pasv
				+trns
				-mprs
				-sorc
				-sttv
				-telc
				-xtns
				2 ([+Nom])
				2 [+actr]
				2 [+AGT]
				4 [-assn]
				4 [+COR]
				6 -sorc
				-trmn
				6 [+LOC]
				8 [+assn]
				8 [+MNS]
				10 ([+Acc])
				10 [+PAT]

'The secretary was forced by Suzuki to keep trying to connect with Tanaka in New York.'

4.8.2.13 PVC-16-M

There have been no plausible examples so far of verbs in Subtype M. Such a verb, if located, should have a cluster of the

features [+assn,+crsp,+drcn,+lctn,+mode,+trns,-caus,-mprs,-pssv,
-sorc,-sttv,-telc,-xtns].

4.8.2.14 PVC-16-N

The verbs in Subtype N share a cluster of the following features: [+assn,+crsp,+drcn,+lctn,+mode,+pasv,+trns,-caus,-mprs,
-sorc,-sttv,-telc,-xtns].

Verbs in Subtype N require their COR, LOC and MNS complements to be marked with the postpositions *ni* [+P,-assn], *made* [+P,-sorc,+trmn], and *to* [+P,+assn], respectively. This postposition constellation will also be followed by verbs in Subtypes O and P. In the matrix of the verb, these postpositions are represented as [-assn], [-sorc,+trmn], and [+assn], respectively. Morphologically, verbs in Subtype K are marked with the passive suffix -(r)are.

In (153), the AGT Suzuki was displeased with his secretary, the COR, who had contacted Tanaka about a matter regarding personnel.

(153) PVC-16-N

Suzuki	ga	hisyo	ni	zinzi	made
	Nom	secretary	by	personnel	to
1index	2index	3index	4index	5index	6index
+N	+P	+N	+P	+N	+P
			-assn		-sorc
					+trmn

Tanaka	to	kakawari	o	motareta.
	with	connection	Acc	was had
7index	8index	9index	10index	11index
+N	+P	+N	+P	V
	+assn			+assn
				+crsp
				+drcn
				+lctn
				+mode
				+pasv
				+telc
				+trns
				-caus
				-mprs
				-sorc
				-sttv
				-xtns
				2([+Nom])
				2[+actr]
				2[+AGT]
				4[-assn]
				4[+COR]
				6 -sorc
				+trmn
				6[+LOC]
				8[+assn]
				8[+MNS]
				10([+Acc])
				10[+PAT]

'Suzuki was affected in an adverse manner by his secretary, who had contacted Tanaka regarding a personnel matter.'

4.8.2.15 PVC-16-0

The verbs in Subtype 0 share a cluster of the following features: [+assn,+caus,+crsp,+drcn,+lctn,+mode,+telc,+trns,-mprs,-pasv,-sorc,-sttv,xtns].

Verbs in Subtype 0 require their COR, LOC and MNS complements to be marked with the postpositions *ni* [+P,-assn], *made* [+P,-sorc,+trmn] and *to* [+P,+assn] respectively. This postposition marking is shared by Subtypes N and P as well. In the matrix of verbs, these postpositions are represented as [-assn], [-sorc,+trmn], and [+assn], respectively. Morphologically, verbs in Subtype 0 are marked with the causative suffix *-(s)ase*.

In (154) the AGT Suzuki instigated an action and let the COR, his secretary, connect with Tanaka regarding personnel matter. The control of the event resides with the AGT.

(154) OVC-16-0

Suzuki	ga	hisyo	ni	zinzi	made
	Nom	secretary	by	personnel	to
1ndex	2ndex	3ndex	4ndex	5ndex	6ndex
+N	+P	+N	+P	+N	+P
			-assn		-sorc
					+trmn

Tanaka	to	kakawari	o	motaseta.
	with	connection	Acc	forced to have
7ndex	8ndex	9ndex	10ndex	11ndex
+N	+P	+N	+P	+V
	+assn			+assn
				+caus
				+crsp
				+drcn
				+lctn
				+mode
				+telc
				+trns
				-mprs
				-pasv
				-sorc
				-sttv
				-xtns
				2 ([+Nom])
				2 [+actr]
				2 [+AGT]
				4 [-assn]
				4 [+COR]
				6 -sorc
				+trmn
				6 [+LOC]
				8 [+assn]
				8 [+MNS]
				10 ([+Acc])
				10 [+PAT]

'Suzuki let his secretary contact Tanaka in a matter concerning personnel.'

4.8.2.16 PVC-16-P

The verbs in Subtype P share a cluster of the features [+assn,+caus,+crsp,+drcn,+lctn,+mode,+pasv,+telc,+trns,-mprs,-sorc,-sttv,-xtns].

Verbs in Subtype P require their COR, LOC and MNS complements to be marked with the postpositions *ni* [+P,-assn], *made* [+P,-sorc,+trmn], and *to* [+P,+assn], respectively. This postposition marking is shared by Subtypes O and P as well. In the matrix of the verb, these postpositions are represented as [-assn], [-sorc,+trmn] and [+assn] respectively. Morphologically, verbs in Subtype P are marked with the causative passive suffix -(s)aserare.

In (155) the COR, Suzuki, instigated an action and let the AGT, his secretary, contact Tanaka regarding a personnel matter. The control of the event resides with the COR.

(155) PVC-16-P

Hisyo	ga	Suzuki	ni	zinzi	made
secretary	Nom		by	personnel	to
1index	2index	3index	4index	5index	6index
+N	+P	+N	+P	+N	+P
			-assn		-sorc
					+trmn
Tanaka	to	kakawari	o	motaserareta.	
	with	connection	Acc	was forced to have	
7index	8index	9index	10index	11index	
+N	+P	+N	+P	+V	
	+assn			+assn	
				+caus	
				+crsp	
				+drcn	
				+lctn	
				+mode	
				+pasv	
				+telc	
				+trns	
				-mprs	
				-sorc	
				-sttv	
				-xtns	
				2 ([+Nom])	
				2 [+actr]	
				2 [+AGT]	
				4 [+COR]	
				4 [-assn]	
				6 -sorc	
				+trmn	
				6 [+LOC]	
				8 [+assn]	
				8 [+MNS]	
				10 ([+Acc])	
				10 [+PAT]	

'The secretary was forced by Suzuki to have a connection with Tanaka on a matter of personnel.'

4.8.2.17 PVC-16-Q

There have been no plausible examples so far of verbs in Subtype Q. Such a verb, if located, should have a cluster of the features [+assn,+crsp,+drcn,+lctn,+mode,+sorc,+trns,-caus,-goal,-mprs,-pssv,-sttv,-xtns].

4.8.2.18. PVC-16-R

The verbs in Subtype R share a cluster of the features [+assn,-caus,+crsp,+drcn,+lctn,+mode,+pasv,+sorc,+trns,-goal,-mprs,-sttv,-xtns].

Verbs in Subtype R require their COR, LOC and MNS complements to be marked with the postpositions *ni* [+P,-assn], *kara* [+P,+sorc,+trmn], and *to* [+P,+assn], respectively. This postposition marking is shared by Subtypes S and T as well. In the matrix of the verb, these postpositions are represented as [-assn], [+sorc,+trmn], and [+assn], respectively. Morphologically, verbs in Subtype R are marked with the passive suffix -(r)are.

In (156) the AGT, Suzuki, is affected in an adverse manner by the COR, his secretary, who instigated an action to conclude old business from Tokyo with Tanaka. The control of the event resides on the COR, not on the AGT.

(156) PVC-16-R

Suzuki	ga	hisyo	ni	Tookyoo	kara
	Nom	secretary	by		from
1index	2ndex	3ndex	4ndex	5ndex	6ndex
+N	+P	+N	+P	+N	+P
			-assn		+sorc
					+trmn
Tanaka	to	kettyaku	o	tukerareta	
	with	conclusion	Acc	was forced to have	
7ndex	8ndex	9ndex	10ndex	11index	
+N	+P	+N	+P	+V	
	+assn			+assn	
				+crsp	
				+drcn	
				+lctn	
				+mode	
				+pasv	
				+sorc	
				+trns	
				-caus	
				-goal	
				-mprs	
				-sttv	
				-xtns	
				2 ([+Nom])	
				2 [+actr]	
				2 [+AGT]	
				4 [-assn]	
				4 [+COR]	
				6 [+sorc]	
				+trmn	
				6 [+LOC]	
				8 [+assn]	
				8 [+MNS]	
				10 ([+Acc])	
				10 [+PAT]	

'Suzuki had his secretary settle old business for him with Tanaka from Tokyo.'

4.8.2.19 PVC-16-S

The verbs in Subtype S share a cluster of the following features: [+assn,+caus,+crsp,+drcn,+lctn,+mode,+sorc,+trns,-goal,-mprs,-pasv,-sttv,-xtns].

Verbs in Subtype S require their COR, LOC and MNS complements to be marked with the postpositions *ni* [+P,-assn], *kara* [+P,+sorc,+trmn], and *to* [+P,+assn], respectively. This postposition marking is shared by Subtypes R and T as well. In the matrix of the verb, these postpositions are represented as [-assn], [+sorc,+trmn] and [+assn], respectively. Morphologically, verbs in Subtype S are marked with the causative suffix *-(s)ase*.

In (157) the AGT, Suzuki, instigated an action and let the COR, his secretary, conclude old business with Tanaka from Tokyo. The control of the event resides with the AGT, not with the COR.

(157) PVC-16-S

Suzuki	ga	hisyo	ni	Tookyoo	kara
	Nom	secretary	by		from
1ndex	2ndex	3ndex	4ndex	5ndex	6ndex
+N	+P	+N	+P	+N	+P
			-assn		+sorc
					+trmn

Tanaka	to	kettyaku	o	tukesaseta
	with	conclusion	Acc	forced to have
7ndex	8ndex	9ndex	10ndex	11ndex
+N	+P	+N	+P	+V
	+assn			+assn
				+caus
				+crsp
				+drcn
				+lctn
				+mode
				+sorc
				+trns
				-goal
				-mprs
				-pasv
				-sttv
				-xtns
				2 ([+Nom])
				2 [+actr]
				2 [+AGT]
				4 [-assn]
				4 [+COR]
				6 [+sorc
				+trmn
				6 [+LOC]
				8 [+assn]
				8 [+MNS]
				10 ([+Acc])
				10 [+PAT]

'Suzuki let (his) secretary conclude (old business) from Tokyo with Tanaka.'

4.8.2.20 PVC-16-T

The verbs in Subtype T share a cluster of the features [+assn,+caus,+crsp,+drcn,+lctn,+mode,+pasv,+sorc,+trns,-goal,-mprs,-sttv,-xtns].

Verbs in Subtype S require their COR, LOC and MNS complements to be marked with the postpositions *ni* [+P,-assn], *kara* [+P,+sorc,+trmn], and *to* [+P,+assn], respectively. This postposition marking is shared by Subtypes R and S as well. In the matrix of the verb, these postpositions are represented as [-assn], [+sorc,+trmn], and [+assn], respectively. Morphologically, verbs in Subtype O are marked with the causative passive suffix *-(s)aserare*.

In (158) the COR, Suzuki, instigated an action and let the AGT, his secretary, conclude old business with Tanaka from Tokyo and the secretary followed Suzuki's instructions. The control of the event resides with the COR, not with the AGT.

(158) PVC-16-T

Hisyo	ga	Suzuki	ni	Tookyookara	
secretary		Nom	by	from	
1ndex	2ndex	3ndex	4ndex	5ndex	6ndex
+N	+P	+N	+P	+N	+P
			-assn		+sorc
					+trmn
Tanaka	to	kettyaku		o	tukesaserareta
	with	conclusion		Acc	was forced to have
7ndex	8ndex	9ndex	10ndex	11ndex	
+N	+P	+N	+P	+V	
	+assn			+assn	
				+caus	
				+crsp	
				+drcn	
				+lctn	
				+mode	
				+pasv	
				+sorc	
				+trns	
				-goal	
				-mprs	
				-sttv	
				-xtns	
				2([+Nom])	
				2[+actr]	
				2[+AGT]	
				4[-assn]	
				4[+COR]	
				6[+sorc]	
				+trmn	
				6[+LOC]	
				8[+assn]	
				8[+MNS]	
				10([+Acc])	
				10[+PAT]	

'The secretary was forced by Suzuki to conclude (old business) from Tokyo with Tanaka.'

4.8.2.21 PVC-16-U

There have been no plausible examples so far of verbs in Subtype U. Such a verb, if located, should have a cluster of the features [+assn,+crsp,+drcn,+goal,+lctn,+mode,+sorc,+trns,-caus,-mprs,-pasv,-sttv,-telc,-xtns]

4.8.2.22 PVC-16-V

The verbs in Subtype V share a cluster of the features [+assn,+crsp,+drcn,+goal,+lctn,+mode,+pasv,+sorc,+trns,-caus,-mprs,-sttv,-telc,-xtns].

Verbs in Subtype V require their COR and MNS complements to be marked with the postpositions *ni* [+P,-assn], and *to* [+P,+assn], respectively. In the matrix of verbs, these postpositions are represented as [-assn], and [+assn], respectively. In addition, verbs in Subtype V require macro-locus LOC complements for a terminus source and a non-terminus goal. These LOC complements are marked with the postpositions *kara* [+P,+sorc,+trmn], and *e* [+P,-sorc,-trmn], respectively. In the matrix of verbs, these postpositions are represented as [+sorc,+trmn] and [-sorc,-trmn], respectively. Morphologically, verbs in Subtype V are marked with the passive suffix -(r)are.

In (159) the AGT, Suzuki, was affected in an adverse manner by the COR, his secretary, who kept trying from Tokyo to connect with Tanaka who was in New York. The implication is that the connection had not been accomplished.

(159)

Suzuki	ga	hisyo	ni	Nyuu Yooku	e
	Nom	secretary	by		toward
1ndex	2ndex	3ndex	4ndex	5ndex	6ndex
+N	+P	+N	+P	+N	+P
			-assn		-sorc
					-trmn

Tookyoo	kara	Tanaka	to
	from		with
7ndex	8ndex	9ndex	10ndex
+N	+P	+N	+P
	+sorc		+assn
	+trmn		

renraku	o	torituzukerareta.
connection	Acc	was continued taking
11index	12ndex	13ndex
+N	+P	+V
		+assn
		+crsp
		+drcn
		+goal
		+lctn
		+mode
		+pasv
		+sorc
		+trns
		-caus
		-mprs
		-sttv
		-telc
		-xtns
		2 ([+Nom])
		2 [+actr]
		2 [+AGT]
		4 [-assn]
		4 [+COR]
		6 -sorc
		-trmn
		6 [+LOC]
		8 +sorc
		+trmn
		8 [+LOC]
		10 [+assn]
		10 [+MNS]
		12 ([+Acc])
		12 [+PAT]

'Suzuki was displeased with his secretary who kept on trying to make contact from Tokyo with Tanaka in New York.'

4.8.2.23 PVC-16-W

The verbs in Subtype W share a cluster of the following features: [+assn,+caus,+crsp,+drcn,+goal,+lctn,+mode,+sorc,+trns,-mprs,-pasv,-sttv,-telc,-xtns].

Verbs in Subtype W require their COR and MNS complements to be marked with the postpositions *ni* [+P,-assn] and *to* [+P,+assn], respectively, while their macro-locus LOC complements are marked with *e* [+P,-sorc,-trmn] and *kara* [+P,+sorc,+trmn]. The complement marking is done in the same manner for verbs in Subtypes V and X. In the matrix of the verb, these postpositions are represented as [-assn] for *ni*, [+assn] for *to*, [+sorc,+trmn] for *kara*, and [-sorc,-trmn] for *e*. Morphologically, verbs in Subtype W are marked with the causative suffix *-(s)ase*.

In (160) the AGT, Suzuki, instigated an action to let the COR, his secretary, keep trying to connect with Tanaka in New York from Tokyo. The implication is that the secretary had been unsuccessful in making that connection.

(160) PVC-16-W

Suzuki	ga	hisyo	ni	Nyuu Yooku	e
	Nom	secretary	by		toward
1ndex	2ndex	3ndex	4ndex	5ndex	6ndex
+N	+P	+N	+P	+N	+P
			-assn		-sorc
					-trmn

Tookyoo	kara	Tanaka	to
	from		with
7ndex	8ndex	9ndex	10ndex
+N	+P	+N	+P
	+sorc		+assn
	+trmn		
	renraku	o	torituzukesaseta.
	connection	Acc	forced to keep taking
	11ndex	12ndex	13ndex
	+N	+P	+V
			+assn
			+caus
			+crsp
			+drcn
			+goal
			+lctn
			+mode
			+sorc
			+trns
			-caus
			-mprs
			-pasv
			-sttv
			-telc
			-xtns
			2 ([+Nom])
			2 [+actr]
			2 [+AGT]
			4 [-assn]
			4 [+COR]
			6 -sorc
			-trmn
			6 [+LOC]
			8 +sorc
			-trmn
			8 [+LOC]
			10 [+assn]
			10 [+MNS]
			12 ([+Acc])
			12 [+PAT]

'Suzuki made his secretary keep on trying from Tokyo to connect with Tanaka in New York.'

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4.8.2.24 PVC-16-X

The verbs in Subtype X share a cluster of the features [+assn,+caus,+crsp,+drcn,+goal,+lctn,+mode,+pasv,+sorc,+trns,-mprs,-sttv,-telc,-xtns].

Verbs in Subtype W require their COR and MNS complements to be marked with the postpositions *ni* [+P,-assn] and *to* [+P,+assn], respectively, while their macro-locus LOC complements are marked with *e* [+P,-sorc,-trmn] and *kara* [+P,+sorc,+trmn]. The complement marking is done in the same manner for verbs in Subtypes V and W. In the matrix of verbs, these postpositions are represented as [-assn] for *ni*, [+assn] for *to*, [+sorc,+trmn] for *kara* and [-sorc,-trmn] for *e*. Morphologically, verbs in Subtype X are marked with the causative passive suffix *-(s)aserare*.

In (161) the secretary was affected in an adverse manner by the COR, Suzuki, who made the secretary keep trying to make contact with Tanaka in New York. Suzuki instigated an action so that the COR, his secretary, kept trying to connect from Tokyo with Tanaka in New York. The implication is that the secretary had been unsuccessful in securing the contact.

(161) PVC-16-X

Hisyo	ga	Suzuki	ni	Nyuu Yooku	e
secretary	Nom		by		toward
1ndex	2ndex	3ndex	4ndex	5ndex	6ndex
+N	+P	+N	+P	+N	+P
			-assn		-sorc
					-trmn

Tookyoo	kara	Tanaka	to
	from		with
7ndex	8ndex	9ndex	10ndex
+N	+P	+N	+P
	+sorc		+assn
	+trmn		
renraku	o	torituzukesaserareta.	
connection	Acc	was forced to continue taking	
11ndex	12ndex	13ndex	
+N	+P	+V	
		+assn	
		+caus	
		+crsp	
		+drcn	
		+lctn	
		+mode	
		+pasv	
		+trns	
		-mprs	
		-sorc	
		-sttv	
		-telc	
		-xtns	
		2 ([+Nom])	
		2 [+actr]	
		2 [+AGT]	
		4 [+COR]	
		4 [-assn]	
		6 [+LOC]	
		6 -sorc	
		-trmn	
		8 [+LOC]	
		8 +sorc	
		+trmn	
		10 [+assn]	
		10 [+MNS]	
		12 ([+Acc])	
		12 [+PAT]	

'The secretary was forced by Suzuki to keep trying to connect from Tokyo with Tanaka in New York.' 492

4.8.2.25 PVC-16-Y

There have been no plausible examples so far of verbs in Subtype Y. Such a verb, if located, should have a cluster of features [+assn,+crsp,+drcn,+lctn,+mode,+telc,+trns,-caus,-mprs,-pasv,-sorc,-sttv,-xtns].

4.8.2.26 PVC-16-Z

The verbs in Subtype Z share a cluster of the following features: [+assn,+crsp,+drcn,+lctn,+mode,+pasv,+telc,+trns,-caus,-mprs,-sorc,-sttv,-xtns].

Verbs in Subtype Z require their COR and MNS complements to be marked with the postpositions *ni* [+P,-assn] and *to* [+P,+assn], respectively. In addition, the verbs in Subtype Z require a macro-locus complement, a terminus source marked with *kara* [+P,+sorc,+trmn] and a terminus goal marked with *made* [+P,-sorc,+trmn]. This postposition marking for a macro-locus will be followed by verbs in Subtypes AA and BB below. In the matrix of verbs, these postpositions are represented as [-assn] for *ni*, [-sorc,+trmn] for *made*, [+sorc,+trmn] for *kara*, and [+assn] for *to*, respectively. Morphologically, verbs in Subtype Z are marked with the passive suffix -(r)are.

In (162) the AGT, Suzuki, was affected in an adverse manner by the COR, his secretary, who had some connection with Tanaka regarding matters ranging from personnel to the budget.

Suzuki	ga	hisyo	ni	zinzi	kara
	Nom	secretary	by	personnel	to
1ndex	2ndex	3ndex	4ndex	5ndex	6ndex
+N	+P	+N	+P	+N	+P
			-assn		+sorc
					+trmn

yosan	made	Tanaka	to
budget	to		with
7ndex	8ndex	9ndex	10ndex
+N	+P	+N	+P
	-sorc		+assn
	+trmn		

kakawari	o	motareta.
connection	Acc	was had
11index	12ndex	13ndex
+N	+P	V
		+assn
		+crsp
		+drcn
		+goal
		+lctn
		+mode
		+pasv
		+sorc
		+telc
		+trns
		-caus
		-mprs
		-sttv
		-xtns
		2([+Nom])
		2[+actr]
		2[+AGT]
		4[-assn]
		4[+COR]
		6 +sorc
		+trmn
		6[+LOC]
		8 -sorc
		+trmn
		8[+LOC]
		10[+assn]
		10[+MNS]
		12([+Acc])
		12[+PAT]

'Suzuki was affected in an adverse manner by his secretary, who had contacted Tanaka about matters ranging from personnel to the budget.'

4.8.2.27 PVC-16-AA

The verbs in Subtype AA share a cluster of the following features: [+assn,+caus,+crsp,+drcn,+lctn,+mode,+telc,+trns,-mprs,-pasv,-sorc,-sttv,-xtns].

Verbs in Subtype AA require their COR and MNS complements to be marked with the postpositions *ni* [+P,-assn] and *to* [+P,+assn], respectively. In addition, the verbs in Subtype AA require a macro-locus complement, a terminus source marked with *kara* [+P,+sorc,+trmn], and a terminus goal marked with *made* [+P,-sorc,+trmn]. This postposition marking for a macro-locus is followed by verbs in Subtypes Y, Z, and BB as well. In the matrix of the verb, these postpositions are represented as [-assn] for *ni*, [-sorc,+trmn] for *made*, [+sorc,+trmn] for *kara*, and [+assn] for *to*, respectively. Morphologically, verbs in Subtype AA are marked with the causative suffix *-(s)ase*.

In (163) the AGT, Suzuki, instigated an action and let the COR, his secretary, have some connection with Tanaka regarding matter ranging from personnel to budget. The control of the event resides with the AGT.

(163) PVC-16-AA

Suzuki	ga	hisyo	ni	zinzi	kara
	Nom	secretary	by	personnel	to
Index	2ndex	3ndex	4ndex	5ndex	6ndex
+N	+P	+N	+P	+N	+P
			-assn		-sorc
					+trmn

yosan	made	Tanaka	to
budget	to		with
7ndex	8ndex	9ndex	10ndex
+N	+P	+N	+P
	-sorc		+assn
	+trmn		

kakawari	o	motaseta.
connection	Acc	caused to have
11ndex	12ndex	13ndex
+N	+P	V
		+assn
		+caus
		+crsp
		+drcn
		+goal
		+lctn
		+mode
		+sorc
		+telc
		+trns
		-mprs
		-pasv
		-sttv
		-xtns
		2([+Nom])
		2[+actr]
		2[+AGT]
		4[-assn]
		4[+COR]
		6 +sorc
		+trmn
		6[+LOC]
		8 -sorc
		+trmn
		8[+LOC]
		10[+assn]
		10[+MNS]
		12([+Acc])
		12[+PAT]

'Suzuki forced his secretary to be in contact with Tanaka on matters ranging from personnel to the budget.'

4.8.2.28 PVC-16-BB

The verbs in Subtype BB share a cluster of the features [+assn,+caus,+crsp,+drcn,+lctn,+mode,+pasv,+telc,+trns,-mprs,-sorc,-sttv,-xtns]

Verbs in Subtype BB require their COR and MNS complements to be marked with the postpositions *ni* [+P,-assn] and *to* [+P,+assn] respectively. In addition, the verbs in Subtype BB require a macro-locus complement, a terminus source marked with *kara* [+P,+sorc,+trmn] and a terminus goal marked with *made* [+P,-sorc,+trmn]. This postposition marking pattern is the same as the one for verbs in Subtypes Z and AA above. In the matrix of the verb, these postpositions are represented as [-assn] for *ni*, [-sorc,+trmn] for *made*, [+sorc,+trmn] for *kara*, and [+assn] for *to*, respectively. Morphologically, verbs in Subtype BB are marked with the causative passive suffix -(s)aserare.

In (164) below, the COR, Suzuki, instigated an action and let the AGT, his secretary, have some connection with Tanaka on matters ranging from personnel to the budget. The control of the event resides with the COR.

(164) PVC-16-BB

Hisyo	ga	Suzuki	ni	zinzi	kara
secretary	Nom		by	personnel	to
1ndex	2ndex	3ndex	4ndex	5ndex	6ndex
+N	+P	+N	+P	+N	+P
			-assn		+sorc
					+trmn

yosan	made	Tanaka	to
budget	to		with
7ndex	8ndex	9ndex	10ndex
+N	+P	+N	+P
	-sorc		+assn
	+trmn		

kakawari	o	motaserareta.	
connection	Acc	was forced to have	
11ndex	12ndex	13ndex	
+N	+P	+V	
		+assn	
		+caus	
		+crsp	
		+drcn	
		+goal	
		+lctn	
		+mode	
		+pasv	
		+sorc	
		+telc	
		+trns	
		-mprs	
		-sttv	
		-xtns	
		2 ([+Nom])	
		2 [+actr]	
		2 [+AGT]	
		4 [-assn]	
		4 [+COR]	
		6 +sorc	
		+trmn	
		6 [+LOC]	
		8 -sorc	
		+trmn	
		8 [+LOC]	
		10 [+assn]	
		10 [+MNS]	
		12 ([+Acc])	
		12 [+PAT]	

'The secretary was forced by Suzuki to contact Tanaka on matters
ranging from personnel to the budget.'

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In this section, I have presented plausible examples of verbs in PVC-16. The case frames of these verbs are characterized as being saturated, and more features are marked with a positive sign than in other classes, indicating that these verbs are highly marked in terms of distribution and function, and thus perhaps less easily processed.

It should be noted here that most of verbs introduced in this section have the following shared grammatical property: the PAT of these verbs may easily be incorporated into the regent, changing the dependency relationship. For example, the following verbs may be replaced by intransitive, extension verbs on the right, changing the transitivity.

keiyaku o kawasu *keiyaku suru* 'to contract'
kettyaku o tukeru *kettyaku saseru* 'to settle'
renraku o torituzukeru *renraku situzukeru* 'to get in touch'

The PAT may be totally incorporated as in the following:

kakawari o motu *kakawaru* 'to be connected/related/linked'

There are exceptions to this amenability to the PAT incorporation:

sa o tukeru 'to mark the difference'¹⁹

NOTES

¹-i is an inflectional affix for non-past tense for adjectival verbs [+V,+djct]. The past tense counterpart is -katta.

²De Guzman (1978) proposes the feature 'affected' as a semantic feature of her agentive verbs in Tagalog. The class affected means that the physical state of the co-occurring object is affected whereas the class non-affected means that the object is not affected in the same manner. The affect verbs are further divided into two on the basis of kinds of change: change of states or non-physical superficial change. There is no syntactic test proposed to determine the types of affectedness or changes.

³Kiyosawa (1990) among others proposes that the affix -garu carries different meanings according to the type of adjectival stems with which the suffixation occurs. The adjectives are divided into two classes in her analysis: *kanzyoo* 'emotive' adjectives and *zokusei* 'attributive' adjectives. The former is divided further into those describing emotion and those describing sensation. She observes that: (a) -garu attached to attributive adjectives has the interpretation 'appears to be'; and (b) -garu attached to her emotive adjectives has the interpretation, 'pretend to be'. This parsing is, however, problematic.

First, according to Kiyosawa, when the emotive adjective *hazukasii* has the suffix -garu, it should be interpreted as 'appear to be' rather than 'pretend to be'. However the sentence 2 with the -garu suffix has both interpretations, 2.a. and 2.b.:

1. Simamura wa hirei ga hazukasikatta.
2. Simamura wa hirei o hazukasigatta.
 - 2.a. Shimamura appeared to be ashamed of his rudeness.
 - 2.b. Simamura pretended to be ashamed of his rudeness.

⁴ The regent *koeru* has an additional selectional feature that is not specified in the matrix since it has no bearing on my dependency analysis. This is the feature quantity ([+qnty]). It is a cover term for numeric quantification, including time, distance, age, etc.

⁵In the sentence below, the AGT *hahaoya* 'mother' is perceived as inalienable from the MNS *kodomotati* 'children'

Hahaoya ga kodomotati de omotya o katazukesasete.
 mother Nom children at toys Acc forced to put way
 'The mother forced her children to put away toys on their own.'

⁶The anaphoric rule to identify *zibun* is not addressed in this thesis. It should be dealt with in conjunction with studies on linking and semantic interpretation in dependency grammar.

⁷According to Starosta, there are similar constructions in Tagalog and Songhai that give two readings just as in the Japanese examples. Examples from Songhai below are modified from examples (204) and (205) in Starosta (1978:554). The letter L indicates the locative case form.

Ali	neere	bari	di	Musa	se.
	sell	horse	Acc		L
AGT		PAT		COR	
'Ali sold the horse to Mousa.'					

Garba	neere	ndi	bari	di	Musa	se
AGT	sell	cause	horse	Acc	COR	L
a. 'Garba had Mousa sell the horse.'						
b. 'Garba had the horse sold to Mousa, e.g.,						
c. 'Garba had someone sell the horse to Mousa.'						

⁸The following is a grammatical sentence.

Zubon ga dookeisyoku da.
 'The pair of pants is of the same hue.'

⁹Taylor's transitive, transfer, information verbs include transitive verbs referring to the transaction of information: verbs of speaking, asking, hearing, replying, saying, learning, teaching, explaining and inquiring, among others. His transitive, transfer, locomotion verbs include verbs of sending out, sending around, sending, returning, delivering, and turning around, among others. (Taylor 1971: 476-477)

¹⁰The regent *hasiraseta* in (84a) belongs to PVC-7 and differs from the regent *hasiraseta* in (84) in terms of two features: transitivity and correspondence.

¹¹This type of correspondence between transitives and intransitives on a semantic principle is noted under the cover term of 'yuutai' verbs by Hayatsu and others. (Hayatsu 1987)

¹²As introduced earlier in the discussion of PVC-5-8 through PVC-5-14 verbs, the term 'macro-locus' refers to an abstract or concrete location linguistically encoded as two or more individual LOC complement chunks. The macro-locus is not part of the structure of the sentence, and has only an indirect relation to the linguistic structure.

¹³The word 'purattofoumu' in (95) is not a phonemic representation but a transliteration of Kawabata's rendition of the English word 'platform' in katakana, the non-cursive Japanese syllabary used especially to write foreign words.

¹⁴I have observed a similar correlation for intransitive locational verbs that occur with a macro-locus encoded by source and goal LOC complements, PVC-5-8 and 9.

¹⁵The word *ponpon* in this respect is like a bare quantifier being floated. *Sanbon* 'three bottles' can be moved to any of the ^ locations without changing the meaning.

^*Sensei ga ^biiru o sanbon mesiaagatta.*
'The teacher had three bottles of beer'

The classifier *-bon* shows the natural connection to PAT.

On the other hand, the quantifier *sannin* 'three persons' cannot occur in the preverbal position. It only occurs either at the very beginning of the sentence or between the postposition *ga* and *biiru*, which indicates that the quantifier *sannin* is an adjunct. The fact that *sannin* lacks a natural connection to PAT (=beer) is shown by the personal classifier *-nin*.

¹⁶MNS complements are in general hard to distinguish from MNS adjuncts. In addition to the question-pull, the following diagnostics were used to distinguish MNS complements from adjuncts: preposing, topicalization, semantic scope check by scrambling, and causativization tests. These diagnostics were introduced earlier in chapter 2, section 3.1.

¹⁷The complementhood for 'ring' is determined by the diagnostics of preposing, topicalization, semantic scope-check after scrambling, and causativization, in addition to the question pull. If preposed, the LOC actant 'ring' bears a contrastive meaning. If topicalized, the LOC actant is interpreted only in terms of contrastive meaning. The changes in the linear sequence do not make any difference to the fact that the PAT and the MNS actants are both in the ring. The causativization of the verb does not make any difference in the semantic scope of the LOC. Therefore, *dohyoo* 'ring' is a complement.

¹⁸The suffix *-(a)nai* is used for the non-past tense form of the verb, while *-(a)nakkata* is used for the past tense form as in:

<i>arukanai</i>	'does not walk'
<i>arukanakatta</i>	'did not walk'
<i>tabenai</i>	'does not eat'
<i>tabenakatta</i>	'did not eat'

Suffixes *-i* and *-katta* are of course the regular tense suffixes for stative verbs in Japanese, e.g. *aka-i* 'is red', *aka-katta* 'was red'.

¹⁹The details of such changes in arity and necessary morphological and inflectional adjustments are dealt with in the fifth chapter.

CHAPTER 5. VERBAL DERIVATION IN JAPANESE

5.1 DERIVATION PATTERNS AND PROCESSES

During the analysis of syntactic subcategorizations of Japanese verbs in 16 primary verb classes, I have achieved a fit between semantic, syntactic, and morphological properties of verbs, and I have found the gratifying symmetry throughout the system. Most notably, such fit and symmetry have been observed in the types of extension predicates presented in corresponding intransitive and transitive classes. Another symmetry to be noted is in the patterns of LOC complements observed in both intransitive and corresponding transitive classes. Verbs that share a common root have been observed in various subclasses throughout the system, and the differences in perspective associated with membership in different classes has been formally accounted for.

5.2 DERIVATIVES

Throughout the syntactic analysis of verbs in the previous chapter, I have noted the derivational relationship existing among the verbs within individual primary verb classes as well as across the boundaries of the primary verb classes. These derivational relationships among verbs have been quite extensive in volume and in variation.

In the following section, however, I will take a single verb root *iku* 'to go' as an example to illustrate the extent and variations of

derivational relationships, since verb entries containing this root occur in most of the possible syntactic classes. All the *iku* examples I have found in my primary data source, Kawabata's *Snow country* are marked by (YU) at the end. I have included further plausible examples based on my intuition to fill out the list of derived forms. These examples are not marked by (YU). Examples are accompanied by their membership designation in the primary verb classes and their glosses.

- (1)
- PVC-1-A Simamura ga iku (YU)
 `Simamura goes.'
- PVC-1-C4 kore kara onna ni ai ni iku (YU)
 `(Simamura is going to see his woman.
- PVC-1-C4 Simamura mo tatiagatte iku (YU)
 `Simamura also stands up and goes.'
- PVC-1-C7 go-roppo iku(YU)
 `(Komako) takes five or six teps.'
- PVC-2-B Simamura ga mohuku de iku
 `Simamura goes in his funeral clothes.'
- PVC-2-D Simamura ga Komako to ikiataru.
 `Simamura encounters Komako.'
- PVC-3-A Saikun ga Simamura ni ikaseru
 `Simamura's wife let Simamura go.'
- PVC-3-F Simamura ni azemiti ga ikeru/ikareru
 `Simamura can traverse the road.'
- PVC-3-G Simamura ga Komako yori ikeru/ikareru
 `Simamura can go more than Komako could.'
- PVC-4-B Saikun ga Simamura ni mohuku de ikareru
 `Simamura's wife is affected in an adverse manner
 by Simamura's going out in his funeral outfit.'
- PVC-4-C Saikun ga Simamura ni mohuku de ikaseru
 `Simamura's wife let Simamura go out in his
 funeral outfit.'
- PVC-4-E Saikun ni Simamura ga mohuku de ikaserareru
 `Simamura is forced by his wife to go out in his
 funeral outfit.'

- PVC-5-2 hitori de yu ni iku (YU)
 `(Simamura) goes to the bath alone.'
- PVC-5-4 Simamura ga yama o iku
 Simamura walks through the mountains.'
- PVC-5-5 hutari wa hatesinaku tooku e iku (YU)
 `The couple travels afar.'
- PVC-5-6 yuki no iro wa soko made ikanai (YU)
 `the color of snow does not reach there'
- PVC-5-7 Simamura ga Tookyoo kara iku
 `Simamura goes from Tokyo.'
- PVC-5-8 soko kara ten e hirogatte iku (YU)
 `(The Milky Way) spread to the heavens (or
 `to heaven') from there.'
- PVC-5-9 Simamura ga Tookyoo kara yukiguni made iku
 `Simamura goes from Tokyo to the snow country.'
- PVC-5-10 azemiti o mura no hoo e itta (YU)
 `(Komako) went down the road toward the village.'
- PVC-5-11 azemiti o mura made iku.
 `(Simamura) goes down the road to the village.'
- PVC-5-12 azemiti o koko kara mura made iku.
 `(Simamura) goes down the road from here to the
 village.'
- PVC-5-13 azemiti o koko kara mura no hoo e iku. `(Simamura)
 goes down the road from here toward the village.'
- PVC-5-14 azemiti o koko kara mura made iku. `(Simamura)
 goes down the road from here to the village.'
- PVC-5-15 azemiti o koko kara mura made ikanai.
 `(Simamura) does not go down the road from here to
 the village.'
- PVC-6-A Simamura ga mohuku de yukiguni ni iku
 `Simamura goes to the snow country in his
 funeral outfit.'
- PVC-6-B Simamura ga mohuku de yukigini e iku
 `Simamura goes toward the snow country in his
 funeral clothes.'
- PVC-6-C Simamura ga mohuku de yukigini made iku
 `Simamura goes to the snow country in his funeral
 clothes.'
- PVC-7-a Tanaka ga Simamura ni zimusyo e ikareru
 `Tanaka is affected by Simamura's going to the
 office.'
- PVC-7-b Tanaka ga Simamura ni zimusyo e ikaseru
 `Tanaka forces Simamura to go toward the office.'
- PVC-7-c Simamura ga Tanaka ni zimusyo e ikaserareru
 `Simamura is forced by Tanaka to go to the
 office.'
- PVC-7-d Simamura ga zitaku yori yukiguni e iku
 `Simamura goes to the snow country rather than to
 his own house.'

- PVC-8a Simamura ni zidoosya de tonarimati made ikeru
'Simamura is able to go to the neighboring town in
the car.'
- PVC-8b Hikoozyoo made kuruma de ryokoosya ni koosoku ga
ikareru. 'To reach the airport (LOC) it is possible
for the travelers (COR) to go on the highway
(PAT) in an automobile (MNS).'
- PVC-9-C Tanaka ga Simamura ga ikaserareru
'Tanaka can force Simamura to go.'
- PVC-9-C1 Tanaka ga Simamura o hayaku ikaserareru
'Tanaka can force Simamura to go quickly.'
- PVC-9-C2 Tanaka ga Simamura o aruite ikaseru
'Tanaka makes Simamura go on foot.'
- PVC-9-C7 Tanaka ga Simamura o go-roppo ikaseru
'Tanaka makes Simamura go on foot five or six
steps.'
- PVC-9-F Tanaka ga Simamura o ikaseru
'Tanaka forces Simamura to go.'
- PVC-10-A Saikun ga Simamura o mohuku de ikaseta
'Simamura's wife forced Simamura to go out in a
funeral outfit.'
- PVC-11-C Suzuki ga Tanaka ni Simamura o ikaseru¹
'Suzuki let Tanaka make Simamura go out.'
- PVC-11-D Tanaka ga Suzuki ni Simamura o ikaserareru
'Tanaka is affected by Suzuki's forcing Tanaka to
make Simamura go.'
- PVC-12-a Suzuki ga Tanaka ni kurumaisu de Simamura o
zimusyo e ikaseru. 'Suzuki lets Tanaka force
Simamura to go to the office in a wheel chair.'
- PVC-12-b Tanaka ga Suzuki ni Simamura o kurumaisu de
zimusyo e ikaserareru. 'Tanaka is affected by
Suzuki's forcing Tanaka to make Simamura go to
the office in a wheel chair.'

- PVC-13-1 Komako ga Simamura ni onsen ni ikaseta `Komako forced Simamura to go to the hot spring.'
- PVC-13-1-C1 Komako ga Simamura o onsen ni hayaku ikaseta `Komako forced Simamura to go early to the hot spring.'
- PVC-13-1-C2 Komako ga Simamura o onsen ni isoide ikaseta `Komako forced Simamura to go in a hurry to the hot spring.'
- PVC-13-1-C7 Komako ga Simamura o onsen ni sankai ikaseta `Komako forced Simamura to go to the hot spring three times.'
- PVC-13-4 Komako ga iyagaru Simamura o sakamiti o ikaseta `Komako forced the unwilling Simamura to go uphill.'
- PVC-13-5 Tanaka ga Simamura o zimusyo e ikaseru `Tanaka forces Simamura to go toward his office.'
- PVC-13-6 Komako ga Simamura o eki made ikaseta `Komako forced Simamura to go to the station.'
- PVC-13-7 Komako ga Simamura o yado kara ikaseta `Komako forced Simamura to go from the inn.'
- PVC-13-8 Komako ga Simamura o rooka kara heya no hoo e ikaseta `Komako forced Simamura to go from the hallway toward his room.'
- PVC-13-9 Saikun ga Simamura o zitaku kara zimusyo ni ikaseta `Simamura's wife forced Simamura to go from his house to his office.'
- PVC-13-15 Saikun ga Simamura o zimusyo ni ikasenakatta `Simamura's wife forced Simamura not to go to his office.'
- PVC-14-A Saikun ga Simamura o mohuku de yukiguni ni ikasu/ikaseru `Simamura's wife forces Simamura to go to the snow country in his funeral outfit.'
- PVC-14-C Saikun ga Simamura o mohuku de yukigini e ikasu/ikaseru `Simamura's wife forces Simamura to go toward the snow country in his funeral outfit.'
- PVC-14-D Saikun ga Simamura o mohuku de yukigini made ikasu/ikaseru `Simamura's wife forces Simamura to go to the snow country in his funeral outfit.'
- PVC-14-E Saikun ga Simamura o mohuku de zitaku kara ikasu/ikaseru `Simamura's wife forces Simamura to go from his house in his funeral outfit.'
- PVC-14-F Saikun ga Simamura o mohuku de zitaku kara zimusyo e ikasu/ikaseru `Simamura's wife forces Simamura to go from his house toward his office in his funeral outfit.'
- PVC-14-G Saikun ga Simamura o mohuku de zitaku kara zimusyo made ikasu/ikaseru `Simamura's wife forces Simamura to go from his house to his office in his funeral outfit.'

- PVC-15-H Suzuki ga Tanaka ni Simamura o zimusyo ni ikaseru
`Suzuki let Tanaka force Simamura go to
(Simamura's) office.'(i.e. Suzuki tells Tanaka to
force Simamura to report to the office)
- PVC-15-I Suzuki ga Tanaka ni Simamura o zimusyo no hoo e
ikaseru `Suzuki let Tanaka force Simamura to go
toward (Simamura's) office.'(i.e. Suzuki tells
Tanaka to send Simamura away to the office)
- PVC-15-J Suzuki ga Tanaka ni Simamura o zimusyo made
ikaseru `Suzuki let Tanaka force Simamura to go to
(Simamura's) office.'(i.e. Suzuki tells Tanaka to
send Simamura to the office)
- PVC-15-K Suzuki ga Tanaka ni Simamura o zimusyo kara
ikaseru `Suzuki let Tanaka force Simamura to go
from (Simamura's) office.'(i.e. Suzuki tells
Tanaka to send Simamura from the office)
- PVC-15-L Suzuki ga Tanaka ni Simamura o zimusyo kara
Tookyoo e ikaseru `Suzuki let Tanaka force
Simamura to go from (Simamura's) office toward
Tokyo.'(i.e. Suzuki tells Tanaka to send Simamura
from the office toward Tokyo)
- PVC-15-M Suzuki ga Tanaka ni Simamura o zimusyo kara
Tookyoo made ikaseru `Suzuki let Tanaka force
Simamura to go from (Simamura's) office to
Tokyo.'(i.e. Suzuki tells Tanaka to send Simamura
from the office to Tokyo)
- PVC-15-N Tanaka ga Suzuki ni Simamura o zimusyo ni
ikaserareru `Tanaka is forced by Suzuki to make
Simamura go to (Simamura's) office'(i.e. Tanaka
is affected by Suzuki's telling Tanaka to force
Simamura to report to the office.)
- PVC-15-O Tanaka ga Suzuki ni Simamura o zimusyo no hoo e
ikaserareru `Tanaka is forced by Suzuki to make
Simamura go toward (Simamura's) office.'(i.e.
Tanaka is affected by Suzuki's telling Tanaka to
send Simamura away to the office)
- PVC-15-P Tanaka ga Suzuki ni Simamura o zimusyo made
ikaserareru `Tanaka is forced by Suzuki to make
Simamura go to (Simamura's) office.'(i.e. Tanaka
is affected by Suzuki's telling Tanaka to send
Simamura to the office)
- PVC-15-Q Tanaka ga Suzuki ni Simamura o zimusyo kara
ikaserareru `Tanaka is forced by Suzuki to make
Simamura go from (Simamura's) office.'(i.e. Tanaka
is affected by Suzuki's telling Tanaka to send
Simamura from the office)
- PVC-15-R Tanaka ga Suzuki ni Simamura o zimusyo kara
Tookyoo e ikaserareru `Tanaka is forced by Suzuki
to make Simamura go from (Simamura's) office
toward Tokyo.' (i.e. Tanaka is affected by
Suzuki's telling Tanaka to send Simamura from the

office toward Tokyo)
 PVC-15-S Tanaka ga Suzuki ni Simamura o zimusyo kara
 Tookyoo made ikaserareru `Tanaka is forced by
 Suzuki to make Simamura go from (Simamura's)
 office to Tokyo.' (i.e. Tanaka is affected by
 Suzuki's telling Tanaka to send Simamura from the
 office to Tokyo)

In (1) there are 73 examples of a verb with a common root, with differing degrees of saturation in terms of contextual features in their lexical matrices. The verb *iku* in PVC-1-A has a single contextual feature which is marked by a positive sign, and constitutes the least marked member of the verbs presented in (1). On the other hand, the verb *ikaresaseru* in PVC-14-S is the most marked verb: nine case frame-related features are marked by the positive sign.

These 73 verbs are presented below with the subcategorization tree in Figure 5.1:

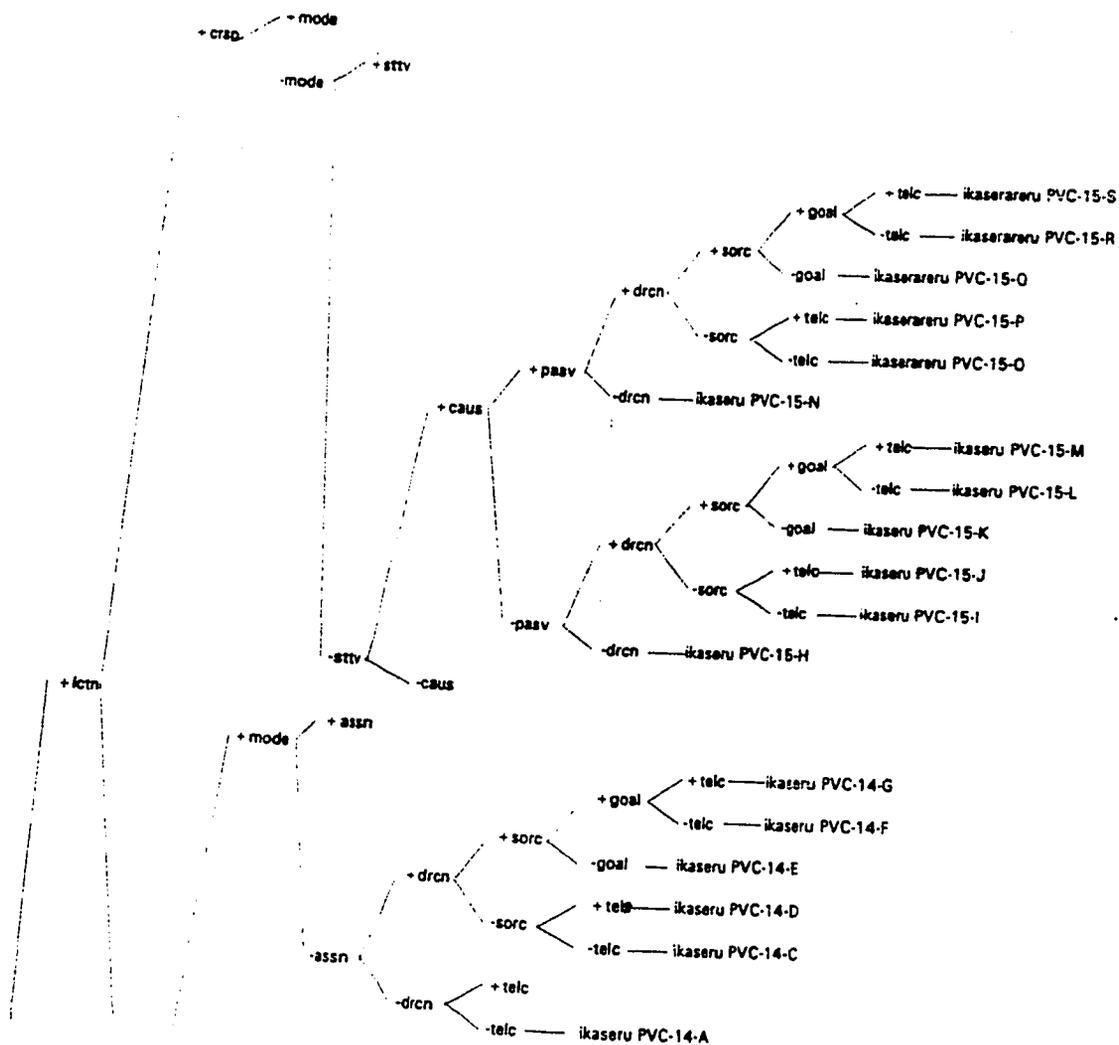


Figure 5 Derivatives: Verb iku 'to go'

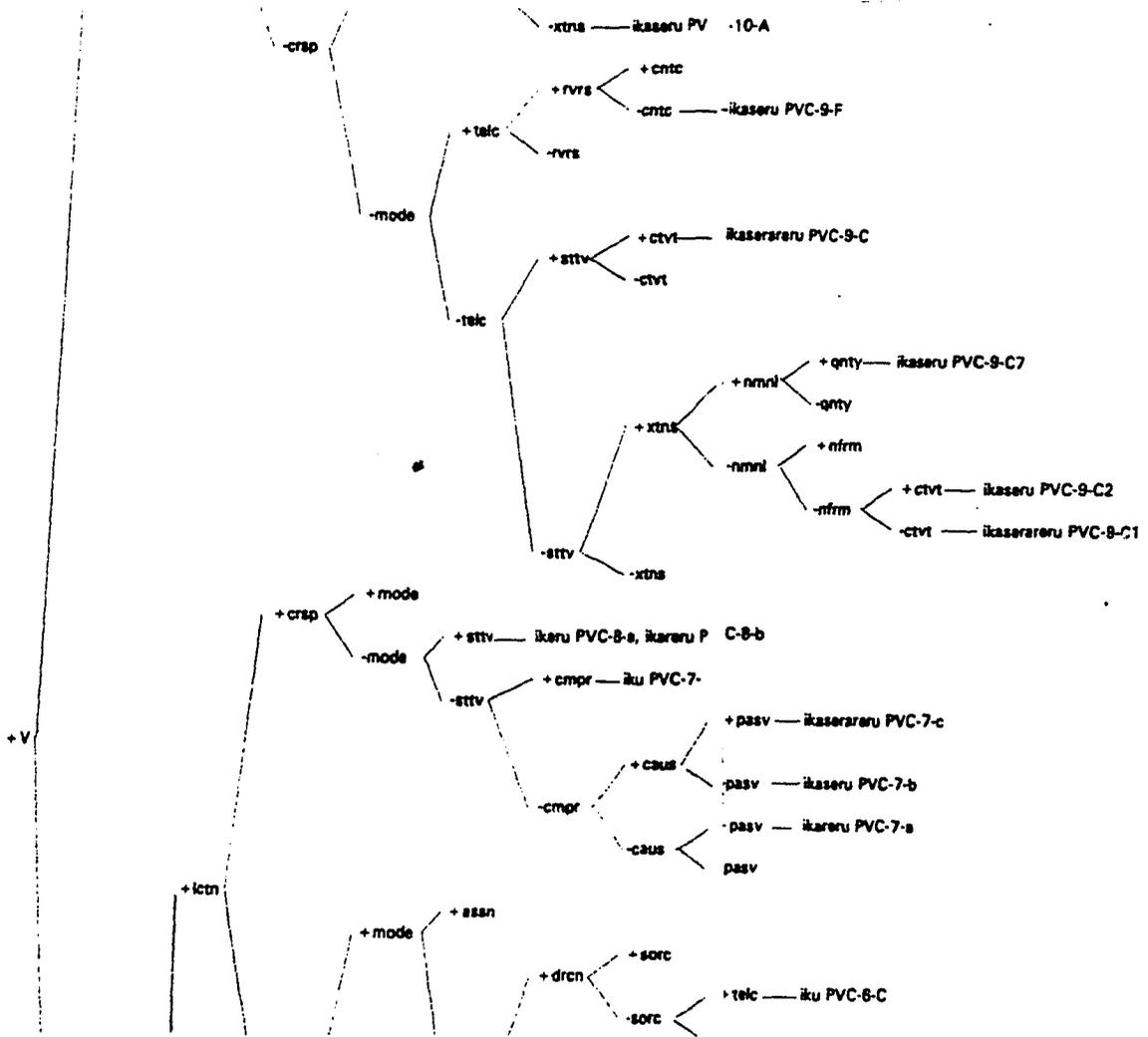


Figure 5 Derivatives: Verb iku 'to go' (Continued)

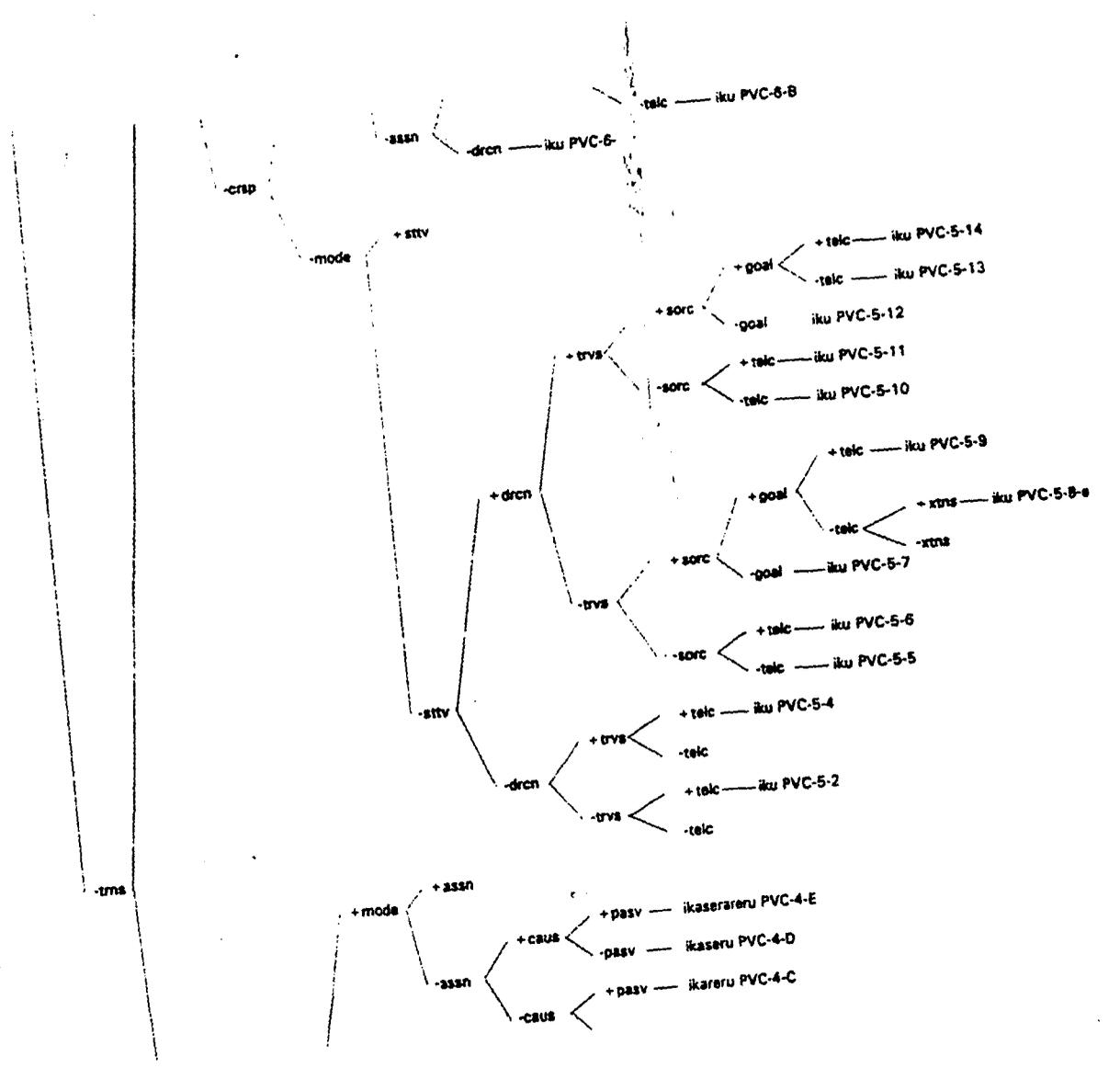


Figure 5 Derivatives: Verb iku 'to go' (Continued)

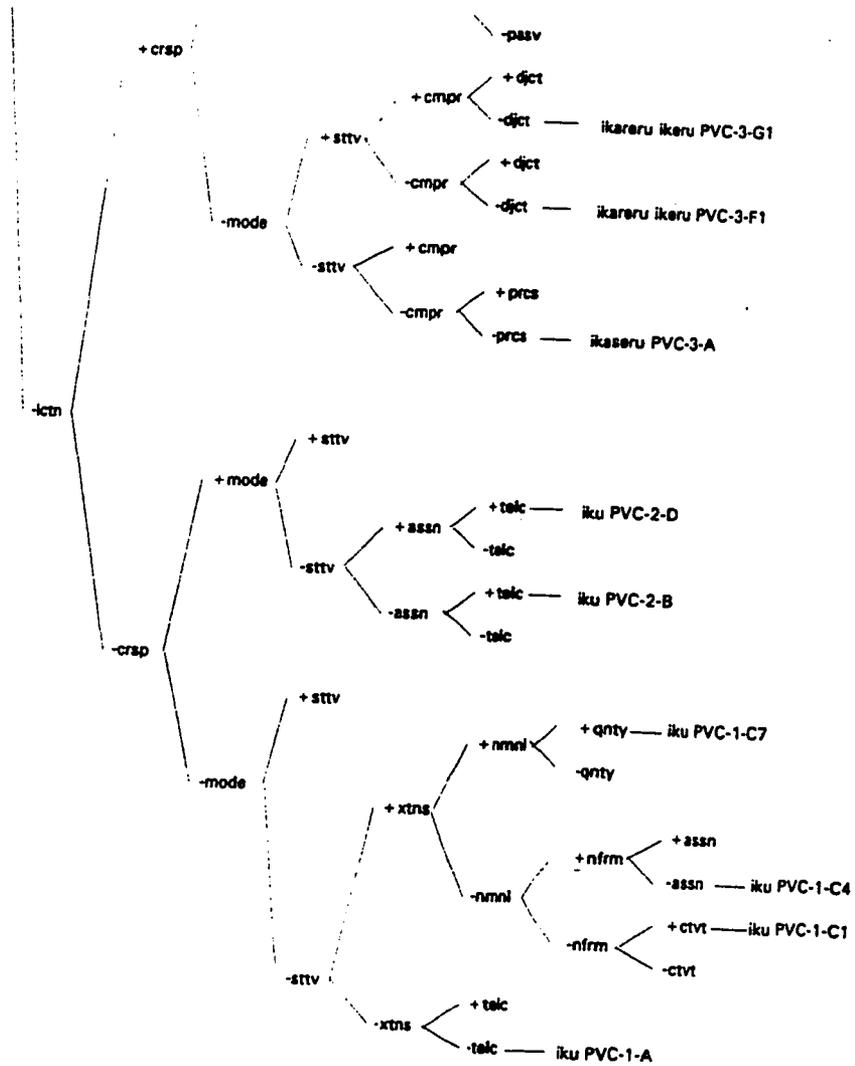


Figure 5 Derivatives: Verb *iku* 'to go' (Continued)

In the conceptual event framework, every verb in Figure 5.1 represents a differing perspective of the action of 'going' in their respective lexical matrices. That is, the lexical matrices of these verbs are examples of the perspective-shifting constructions in Japanese.

Every one of these verbs with a common root given in Figure 5.1 is analogically related to every other one. Thus we can define derivational rules for any two branches in the subcategorization tree. For example, the verb *iku* in PVC-1-A is related to the verb *iku* in PVC-5-9. The derivational analysis captures the relationship between clauses via the derivational relationship between the head words of the clauses (cf. Starosta 1988: 148-149). The derivational relationship between the head words is represented as the difference in the lexical matrices of these two verbs in (2) and (3) below:

(2) *iku-1a*
 -*crsp*
 -*lctn*
 -*mode*
 -*mprs*
 -*sttv*
 -*telc*
 -*trns*
 -*xtns*
 ?[+actr]
 ?([+Nom])
 ?[+PAT]

It should be noted that there will not be any actual indices in abstract lexical entries. Therefore, the features [+actr], ([+Nom], and [+PAT] in

(2) are identified by '?' instead of numerical indices. In the sentence identified as PVC-1-A in (1), the PAT case relation will be linked to Simamura for semantic interpretation. In abstract lexical entries it is not necessary to list any contextual features² that are predictable by general rule from non-contextual features by general rule. For example, a contextual feature ?[+AGT] is introduced by a general rule:

```
[+trns] --> [?[+AGT]]
```

(3) iku-59

```
+drcn
+goal
+lctn
+sorc
-crsp
-mprs
-mode
-sttv
-telc
-trns
-trvs
-xtns
?([+Nom])
?[+actr]
?[+PAT]
?|+sorc|
  |+trmn|
?[+LOC]
?|-sorc
  |+trmn|
?[+LOC]
```

The pair-wise comparison between two verbs, *iku* in (2) lifted from example PVC-1-A and *iku* in (3) lifted from example PVC-5-9, reveals the following possibilities in capturing the meaningful generalizations in the derivational process. The pair-wise comparison shows that these two homophonous verbs differ in the number of their required complements. The verb *iku-1a* requires a PAT only while *iku-59* requires

a macro-locus, source LOC and goal LOC. The comparison also indicates that in either of their matrices, no realignment of the PAT or other case relations exists. Furthermore, the two related verbs are identical in form. Therefore, this is an example of 'zero derivation'. To be more precise, the derivational relationship between these two verbs requires neither recentralization (reinterpretation of the PAT as a different situational role) nor a difference in morphological marking, but includes the change in the 'arity', or the number of required complements. The verb *iku-1a* requires the PAT alone, while the verb *iku-59* requires a PAT plus the two LOC complements, which constitute a macro-locus.

Let us take another example. The verb *ikaseru* lifted from the example identified as PVC-7-b in (9) has a lexical matrix (4):

(4) ikaseru-7b

```

+V
+caus
+crsp
+drcn
+lctn
-mode
-mprs
-pasv
-sorc
-sttv
-telc
-trns
-trvc
-xtns
?([+Nom])
?[+actr]
?[+PAT]
?[+COR]
?[-assn]
?[+LOC]
?|-sorc|
|-trmn|

```

(In the example identified as PVC-7b in (1), Tanaka is linked to the PAT, and Simamura to the COR.)

When the same pair-wise comparison is applied to the verbs *iku* in (2) and *ikasetu* in (4), we see differences in their lexical matrices are as follows:

The arity in (2) is one, or the PAT only, while the arity in (4) is three, or the PAT, the COR, and the LOC. There is a difference on the actant itself that bears the PAT status: in (2) Simamura is the PAT, while in (4) Tanaka is the PAT and Simamura bears the COR case relation. In other words, the derivational relationship obtaining between (2) and (4) includes not only the difference in arity, but also case relation realignment with recentralization. Furthermore, there is a difference in the form of the verbs, *iku* (2) and *ikaseru* (4). This is, therefore,

not a case of zero derivation, but involves a distinctive morphological marking by the suffix *-(s)ase-*. The head verb with this morphological marking requires the COR complement, while the unmarked one does not. We capture the relationship between clauses by the derivational relationship between the head words of the clauses without resorting to the powerful transformational mechanism epitomized in such terms as 'predicate raising', the rule that has long been used in analyses that assume that *-(s)ase* is a separate verb.

Let us take another example. The verb *ikaseta* lifted from PVC-13-5 has a lexical matrix (5):

- (5) *ikaseta*-13,5
- +V
 - +caus
 - +drcn
 - +lctn
 - +trns
 - crsp
 - mode
 - mprs
 - pasv
 - sorc
 - sttv
 - telc
 - trvc
 - xtns
 - ?([+Nom])
 - ?[+actr]
 - ?[+AGT]
 - ?[+PAT]
 - ?([+Acc])
 - ?[+LOC]
 - ?|-sorc|
 - |-trmn|

When we apply the same pair-wise comparison to the verbs *iku* in (2) and *ikaseta* in (5), we see differences in their lexical matrices as follows:

The arity in (2) is one, or the PAT only, while the arity in (5) is three, or the PAT, the AGT and the LOC. There is no difference in the actant itself which bears the PAT status; in both (2) and (5) the walker, *Simamura*, is the PAT. There is a difference, however, in the case form assigned to mark the PAT. In (2) it is the nominative *ga*, while in (5) the PAT is marked by the accusative *o*. There is no realignment of case relations, but simply a difference in the required number of complements. The derivational relationship between (5) and (2) also involves distinctive morphological marking by the suffix *-(s)ase-*. The verb with this morphological marking in (5) requires an AGT. This contrasts with the verb in (4), where the COR, not the AGT is required. That is, the verb *ikaseru* in (4) is in the intransitive class while the head verb *ikaseru* in (5) is a member of the set of verbs in the transitive class.

5.3 ANALOGICAL RULES

The derivational relationships that hold between (2) and (3), between (2) and (4), between (2) and (5), and between (4) and (5) are formulated by way of analogical rules, called 'lexical derivational rules'. Lexical derivation rules presented in this section are constrained as follows:

The left side of the rules includes all and only the information required to identify the class of words undergoing the rule. The right side includes only 1) anything that is different from what is found on the left and which is not predictable from the other features on the right, plus 2) anything that appears on the left and carries over.

Furthermore, these lexical derivation rules may be divided into four possible types of derivational relationships defined in terms of the change in arity and resulting recentralization. The arity refers to the number of required complements. Recentralization is the change in 'alignment' between case relations and situational roles that involves a PAT case relation. These four subtypes are defined in the four cells below:

	+recentralization	-recentralization
+arity change		
-arity change		

For example, the derivational relationship between (2) and (3) is stated as (6) below. It should be noted that in (6) through (10), the words themselves are not part of the rule. They are included in the rule presentation for the sake of clarity. In this and subsequent formulations of the rules the [] indicates word boundaries. Therefore, the X in [X] is the entire word.

(6)

iku-1a	:	iku-59
-crsp		+drcn
-lctn		+goal
-mode		+lctn
-mprs		+sorc
-sttv		-crsp
-telc		-mode
-trns		-mprs
-xtns		-sttv
		-telc
		-trns
		-trvs
		-xtns
		?[+LOC]
		?[+LOC]

[X] : [X]

In (6) there are no caseforms on either side of the rule, since all caseforms are predictable from case relations and/or non-contextual features of a verb, e.g. anything that you might state with a Nom feature could be said with the AGT or actr or PAT or [-trns], etc. An example of such predictable contextual feature was given earlier in the discussion of derivatives and abstract lexical entries in section 4.2, where a contextual feature ?[+AGT] was introduced by a general rule: [+trns] --> [?[+AGT]].

In (6) there are no indices of contextual features on the left side of the rule. Therefore, the indices on the two LOC complements are marked with ?s. These ?s in turn refer to the indices of any external referent whose situational role has been associated with grammatical functions in the lexical matrix. In this example, they refer to a macro-locus defined by a source LOC and a goal LOC.

The fact that this is an instance of zero derivation is indicated by the [X] : [X] part of the same rule, where neither X is marked with any affixation. It should be noted that the derivational relationship specified in (6) does not involve recentralization, but includes a change in arity. The arity of the verb on the left is one, while the arity of the verb on the right is three since the right side of the rule includes two LOC complements, which constitute a macro-locus.

Similarly, analogical rules will be formulated for the derivational relationship that holds between (2) and (4), (2) and (5) and (4) and (5) as illustrated in (7), (8) and (9), respectively.

(7)

iku-1a	:	ikaseru-7b
-crsp		+caus
-lctn		+crsp
-mode		+drcn
-mprs		+lctn
-sttv		-mode
-telc		-mprs
-trns		-pasv
-xtns		-sorc
m[+PAT]		-sttv
		-telc
		-trns
		-trvc
		-xtns
		m[+COR]
[Xru]	:	[Xsaseru]

The m in the analogical rule (7) above refers to the index of any external referent whose situational role has been associated with the COR grammatical functions in the lexical matrix. Since this derivational relationship is marked by a causative affix -(s)ase-, this

must be accommodated for by the application of the analogical rules stated in (7). This is indicated by the [Xru] : [Xsase] part of the rule.

The derivational relationship specified in (7) involves recentralization. This is indicated in the analogical rule: the PAT on the left has an m-index that marks the COR on the right, and the implied PAT on the right must match some other situational role. This derivational relationship also includes changes in arity. The head verb on the left has the arity value one, while the head verb on the right has the arity value three. Furthermore, the head verb *ikaseru* here belongs to the verbs in the intransitive class. It is stated clearly in the matrix by the presence of the feature [-trns] on the right. This construction, or a verb of this shape has been referred to as a 'ni-causative'.

(8)			
iku-1a	:	ikaseru-13,5	
-crsp		+caus	
-lctn		+drcn	
-mode		+lctn	
-mprs		+trns	
-sttv		-crsp	
-telc		-mode	
-trns		-mprs	
-xtns		-pasv	
		-sorc	
		-sttv	
		-telc	
		-trvc	
		-xtns	
		n[+AGT]	
		p[+LOC]	
[Xru]	:	[Xsaseru]	

In (8) the indices n and p refer to the indices of any external referent whose situational role has been associated with grammatical functions in the lexical matrix. Since this derivational relationship is marked by a causative affix *-(s)ase-*, this must be accommodated for by the application of analogical rules stated in (8). This is indicated by the [Xru] : [Xsaseru] part of the rule. The same rule indicates that this derivational relationship does not involve recentralization. However, the rule suggests that there is a required adjustment on the marking of the non-actor PAT on the right side of the rule. That is, since there is an actor AGT on the right side of the rule, the PAT can no longer be an actor PAT in the same lexical matrix. Therefore, this non-actor PAT must be marked by [+Acc], not by [+Nom]. The rule involves changes in the arity value: 1 on the left and 3 on the right. The fact that the verb *ikaseru* here belongs to the verbs in the transitive class is stated clearly in the matrix: there is an AGT that is marked with the [+Nom] postposition and the implied PAT that is to be marked with [+Acc] postposition in the lexical matrix on the right. The verbs of this matrix configuration are referred to as 'o causatives'.

(9)
 ikaseru-7b : ikaseru-13,5

+caus		+caus	
+crsp		+drcn	
+drcn		+lctn	
+lctn		+trns	
-mode		-crsp	
-mprs		-mode	
-pasv		-mprs	
-sorc		-pasv	
-sttv		-sorc	
-telc		-sttv	
-trns		-telc	
-trvc		-trvc	
-xtns		-xtns	
m[+COR]		n[+AGT]	
n[+PAT]		m[+PAT]	

[X] : [X]

In (9) the indices m, and n refer to the indices of any external referent whose situational role has been associated with grammatical functions in the lexical matrix. The fact that this is an instance of zero derivation is indicated by the [X] : [X] part of the rule.

It should be noted that the derivational relationship specified in the analogical rule (9) is an example of recentralization without a change of arity. The PAT on the left has an n-index that marks the AGT on the right, and the PAT on the right has an m-index that marks the COR on the left. If the PAT is the perceptual center of the perspective imposed by the verb, then there is a different situational role mapped onto the PAT of two related verbs, corresponding to different perspectives imposed by the verbs.

Let us take the derivational relationship existing between the head verbs *ikaseru* in PVC-15-K and *ikaserareru* in PVC-15-Q. Analogical rule (10) illustrates such a relationship.

(10)
ikaseru-15k : *ikaserareru*-15q

+caus		+caus	
+crsp		+crsp	
+drcn		+drcn	
+lctn		+lctn	
+sorc		+pasv	
+trns		+sorc	
-goal		+trns	
-mode		-goal	
-mprs		-mode	
-pasv		-mprs	
-sttv		-sttv	
-xtns		-xtns	
m[+AGT]		n[+AGT]	
n[+COR]		m[+COR]	

[Xru] : [Xrareru]

In (10), indices *m* and *n* refer to the indices of any external referent whose situational role has been associated with grammatical functions in the lexical matrix.

Since this derivational relationship includes affixation of *-(r)are-3*, in the derivational process, we must include a morphological rule to account for this fact, which is assumed to be a part of every derivational rule. In (10), the [X] : [Xrare] part of the rule indicates this.

There are realignments among complements in this derivation process. However, this realignment does not affect the PAT. The realignments involve the AGT and COR: the AGT on the left side has an

m-index that marks the COR on the right; and the COR on the left side has an n-index while this index marks the AGT on the right. There are no changes in the number of complements. In other words, the derivational relationship specified in analogical rule (10) is an example of a derivation that has neither recentralization nor a change of arity.

Analogical rules presented in (6) through (10) represent the four possible types of derivational relationships defined in terms of arity change and the recentralization. They are summarized in (11), filling each of the four cells introduced earlier in this section:

(11)

	+recentralization	-recentralization
+arity change	(7)	(6) (8)
-arity change	(9)	(10)

In the recentralized, lexical, derivational rule with the change of arity value, (7), we observe the following. There is a realignment between the case relations and situational roles. This realignment involves a PAT. There is also a change in the numbers of required complements. Let us compare (12) and (13):

(12) Simamura ga iku 'Simamura goes.' (from PVC-1-A in (1))

(13) Tanaka ga Simamura ni zimusyo e ikaseru 'Tanaka forces Simamura to go to the office.' (from PVC-7-b in (1))

In (12) the verb *iku* has one as its arity value, and this corresponds to the PAT. The external referent of the PAT is Simamura.

In (13) the verb *iku* has three as its arity value: PAT, COR and LOC. The external referent of the PAT is Tanaka, the COR is Simamura, and LOC is the office. Since the PAT Simamura in (12) is realigned as the COR in (13), the derivational relationship includes recentralization. There is a change in arity value, one in (12) and three in (13). Therefore, this derivation *iku* : *ikaseru* is an example of recentralized derivation with an arity change.

In the recentralizing, lexical, derivational rule without a change of arity value, (9), we observe the following. There is a realignment between the case relations and situational roles. This realignment involves a PAT. However there is no change in the numbers of required complements. Let us compare (13) and (14).

(13) Tanaka ga Simamura ni zimusyo e ikaseru 'Tanaka forces Simamura to go toward the office.' (from PVC-7-b in (1))

(14) Tanaka ga Simamura o zimusyo e ikaseru 'Tanaka forces Simamura to go toward the office.' (from PVC-13-5 in (1))

In (14), Tanaka is the external referent of AGT, Simamura of PAT, and office of LOC, obtaining the arity value three. This arity value is identical to that of (13) above. However, Tanaka as the PAT in (13) is realigned with the AGT in (14). Since the realignment involves a PAT, the lexical derivation rule *ikaseru* : *ikaseru* is an example of recentralization without the change of arity value.

The lexical derivational rules without recentralization are of two types: those with the change of arity value, (6) and (8), and those without such change, (10). Realignment between the case relation and

situational role may occur, but such realignment does not affect a PAT as in (10).

For example in (15), which is identical to PVC-5-9 in (1), the verb *iku* has three as its arity value: PAT, source LOC, and goal LOC.

(15) Simamura ga Tookyoo kara yukiguni made iku.
'Simamura goes from Tokyo to the snow country.'

In (15) Simamura is the external referent of PAT, Tokyo of the source LOC and the snow country of the goal LOC. In (12) the verb *iku* has one as its arity value, and this corresponds to the PAT. The external referent to PAT is Simamura. The verbs *iku* in (12) and (15) differ in the arity: one in (12) versus three in (15). There is no recentralization involved: Simamura is the external referent of PAT both in (12) and (15). The lexical derivational rule (6) indicates the differing perspective that involves the arity change but not recentralization.

In the lexical derivational rule accompanied neither by a change of arity value nor by recentralization (10), we observe the following. There is a realignment between the case relations and situational roles. However this realignment does not involve a PAT. Let us compare (16), which is identical to PVC-15-K in (1), with (17), which is identical to PVC-15-Q in (1):

(16)
Suzuki ga Tanaka ni Simamura o zimusyo kara ikaseru
'Suzuki let Tanaka force Simamura to go from (Simamura's) office.'
(i.e. Suzuki tells Tanaka to send Simamura from the office)

(17)

Tanaka ga Suzuki ni Simamura o zimusyo kara ikaserareru 'Tanaka is forced by Suzuki to make Simamura go from (Simamura's) office.' (i.e. Tanaka is affected by Suzuki's telling Tanaka to send Simamura from the office)

Example (15) and (16) have an identical arity value: four.

In (16) the external roles associated with AGT, COR, PAT and LOC are Suzuki, Tanaka, Simamura, and the office, respectively. In (17), however, the external participant associated with the AGT is Tanaka and with the COR is Suzuki. The referents to PAT and LOC remain the same. The realignment of case relations and the external referent does not involve a PAT. Therefore, no recentralization is involved in the lexical derivation rule (10). This derivation rule represents differing perspectives, one without a passive connotation and one with a passive connotation.

The analogical rules presented so far comprise just a fraction of the derivational relationships observed during my work on the syntactic subcategorization of Japanese verbs. As I mentioned earlier, we can formulate analogical rules to account for the derivational relationship for any of the two branches in the subcategorization tree presented in (2). These derivational relationships are the statements of perspective shifts.

NOTES

¹In my dialect, *ikasesaseru* does not exist although it apparently does in some other dialects and has been reported in the transformational literature. The causative marker *-(s)as-* form takes over the expected causative marker *-(s)ase-* in the position that is followed by another causative marking suffix *-(s)ase-*. That is, duplication of the same causative suffix is not acceptable in my dialect.

²A feature is contextual if it refers to a context, that is, it specifies a feature required to be present on a dependent. Such contextual features can be met or violated only by the lexical heads of sister attributes within the same construction (Starosta 1988: 21).

³Comparing *ikaseru* to *ikaserareru*, the only difference is *-rare-*; the *-ase-* came from a different rule which is not involved here.

CHAPTER 6. CONCLUSIONS AND RAMIFICATIONS

6.1 SUMMARY OF THE STUDY

The analysis presented here is the result of a study of grammatical principles governing perspective-shifting constructions in Japanese. The analysis is conducted in accordance with the principles and constraints of the lexibase version of the lexicalist dependency theory of syntax. The analysis is based on naturalistic data from Japanese, selections from literary works by Nobel Prize winner Yasunari Kawabata. Example sentences are taken from contemporary prose by Kawabata who is not a linguist. Therefore, these examples have provided me with a broad range of constructions relatively free from distortions introduced by the observers paradox. The data from Kawabata's novel were adapted and supplemented with plausible examples based on my own intuition and cross-checked with other native non-linguist speakers.

In chapter 1 I have defined perspective-shifting constructions, and correlated derivational relationships that hold between the two words exhibiting perspective shifts. In the same chapter, I identified previous works which dealt with perspective shifts in the Japanese language going back to the 1930s.

In chapter 2 I defined the domain of verb subcategorization in a dependency grammar, and identified and evaluated lexically driven dependency analyses of verbs conducted in Japan from 1898 to the present. In the same chapter I accomplished two refinements in the

method of applying the lexicase version of the dependency framework to Japanese: I revised and enhanced the case marking systems in Japanese presented by Lee (1989), and I augmented the diagnostics for complementhood. The revised and enhanced case-marking system and the augmented diagnostics are utilized for the analyses described in the subsequent chapters.

In chapters 3 and 4 I accomplished a major expansion of the earlier lexicase grammatical subcategorizations of Japanese verbs, establishing 16 primary verb classes and numerous subclasses. I described the intransitive class of verbs, or Primary Verb Classes 1-8 in chapter 3, and the transitive class of verbs, or Primary Verb Classes 9-16 in chapter 4. I noted the potential derivational relations applying among verbs in the individual Primary Verb Classes and their subtypes. In Chapters 3 and 4, I accounted for observations about lexical gaps.

In chapter 5 I accounted for examples of derivational relationships between the head words of constructions as perspective shifts, and presented perspective-shifting within a constrained formalism without resorting to the powerful transformational mechanism. I described numerous examples of potential derived verbs in Japanese and their relationship to other derivatives (1) within the primary verb classes, (2) across the primary verb classes sharing the same transitivity feature, and (3) across the boundary set by the transitivity feature. In the same chapter I established a typology of

derivational relationships that obtained among verbs that share a common root *ik-* 'to go', and suggested the universality of four cells of derivational relationships.

6.2 CONTRIBUTIONS

The analysis presented here makes the following contributions: descriptive, applicational, and theoretical.

6.2.1 Descriptive contributions

The study presented here makes a general and descriptive contribution to Japanese linguistic studies on several points.

6.2.1.1 General

As a part of my preliminary work I defined the domain of Japanese verb subcategorization in a dependency grammar and identified and evaluated lexically driven dependency analyses of verbs done in Japan from 1898 to the present.

6.2.1.2 Case-marking systems in Japanese

I revised the previous lexicase analysis of the Japanese case-marking systems done by Lee (1989) by including the previously unaccounted-for postposition *yori*, accusative LOC marking *o*, and complementizer *ni*.

I expanded Lee's analysis of Japanese modal postpositions (Lee 1989) by the inclusion of the previously unaccounted-for modal

postpositions *dake*, *bakari*, *made₂*, *sae*, and *sika*. I revised the subcategorization of modal postpositions by introducing two additional features 'combination' abbreviated as [cmbn] and 'negative polarity', abbreviated as [ngtv]. The understanding of information-packaging marked with these modal postpositions in the primary data of selected works by Kawabata became crucial in determining complement case relations linked to modal postpositions.

Based on the enhanced case-marking system, I revised the mapping scheme of case relations and case forms.

6.2.1.3 Syntactic subcategorization of verbs

Preliminarily, before the subcategorization of verbs, I developed and tested the validity of the three diagnostics to distinguish complements from adjuncts. These diagnostics are preposing, topicalization, and causativization. They have been used to distinguish complements from adjuncts in addition to the question pull test, the diagnostic used in previous lexicase studies of 'pro-drop' languages. The addition of these three diagnostics became significant in determining the complementhood of MNS and COR phrases.

I accomplished significant expansion and revision of verb subcategorization for Japanese, building on the previous studies conducted in the lexicase framework, Taylor (1971), Starosta and Nomura (1984), Unetani, Shin and Starosta (1987), and Lee (1989). The primary naturalistic data, selections from works by Yasunari Kawabata, a Nobel

Prize winner, contained examples challenging to any grammatical framework. These examples enhanced subcategorizations previously established in accordance with a limited number of examples based primarily on the intuition of a single native speaker who is also a linguist. I supplemented selected examples from Kawabata's literary work as necessary with plausible examples based on my own intuition.

In this dissertation, I proposed various features required in a syntactic subcategorization of verbs in Japanese. Most notably, I used co-occurrence and interpretation with an aspect marker in order to determine syntactic subtypes within the individual primary verb classes.

The inspiration to use aspectual markers, *-te iru* and *-te simau*, for verb classification came from previous works by Kindaichi (1955, 1976).¹ I have also benefited from the Vendlerian distinction between activity verbs and achievement verbs (Vendler 1967:97,121). The feature telicity [telc] is defined strictly in terms of the way native speakers interpret the aspect-marking forms *-te iru* or *-te simau*.² I established 16 primary classes of verbs based on the dependency between the complements and the regent using constrained feature notations, and described the verbs with examples including their plexical matrices in two major classes: intransitive for Primary Verb Classes 1-8 and transitive for Primary Verb classes 9-16. The dependency analysis required adjectives and copulas to be included in the 16 primary verb classes, and not to be separated from others at the onset of analysis.

Within each primary verb class I established subtypes using syntactic criteria.

I came across a rich inventory of impersonal constructions in the intransitive class. The existence of impersonal constructions in Japanese had been noted by only a few examples in previous work.

I observed and noted the general pattern: a smaller number of examples are readily available in naturalistic data for the regent verbs with a larger number of positively marked contextual features in their lexical matrix in both major classes. Plausible example sentences that include such a regent verb are processed by native speakers, but with some difficulty. These example sentences must be offered to consultants at least twice for processing.

I achieved a fit between semantic, syntactic, and morphological properties of verbs, and found a gratifying symmetry of subcategories throughout the system. Most notably, such fit and symmetry have been observed in the types of extension predicates presented in both intransitive and transitive classes of verbs. Another symmetry to be noted is for various types of LOC complements observed in both intransitive and transitive classes of verbs.

During the process of subcategorizing verbs, I verified the applicability of the lexibase version of a lexicon-driven dependency framework to the syntactic subcategorization of verbs in naturalistic data.

6.2.1.4 Derivations

I captured examples of derivational relationships between the heads of constructions as perspective shifts. I analyzed these examples of perspective-shifting constructions and presented them via the principled and constrained formalism in lexicase.

I noted the massive potentials for derivational relationships and perspective-shifting among verbs within a primary verb class and across the primary verb classes in the same transitivity class, and finally across the primary verb classes in the differing transitivity classes in Japanese. There are, for example, at least 73 verbs that share the common root *ik-* 'to go', as shown in chapter 5. They include both morphologically unmarked and marked derivatives.

On the basis of representative examples chosen from a set of 73 examples, I formulated a 4-cell typology of derivational relationships based on two features, recentralization and changes in arity.

6.2.2 Theoretical contributions

I have now tested the applicability of the lexicase version of lexically driven dependency analysis to naturalistic data, a selection of literary work by Yasunari Kawabata. The result has been very encouraging.

I correlated the perspective shift with the derivational relationships that holds between the two verbs sharing a common root, and analyzed them within a constrained grammatical formalism.

I established a typology of derivational relationships that may have universal implications.

I proposed additional diagnostics to separate adjuncts from complements: preposing, topicalization, and causativization. These tests supplement the 'question pull' diagnostic used in previous lexibase studies of 'pro-drop' languages. Distinguishing complement from adjuncts is the essential task for the subcategorization of the verb within a dependency framework. The cross-linguistic validity of these three tests remains to be tested.

I captured the relationship between clauses via the relationship between the head words of the clauses without resorting to the powerful transformational mechanism. I demonstrated that this constrained monostratal analysis makes it possible to state the facts about lexical gaps in a principled manner.

I demonstrated that the notion of Aktionsarten or action types established in Kindaichi (1955) and Vendler (1967) is compatible with dependency analysis by introducing the feature telicity [telc] as a non-contextual feature in the lexical matrices in both intransitive and transitive classes of verbs. The telicity feature was used to distinguish subtypes in some of the primary verb classes.

I demonstrated that the lexicase linking conventions that were established previously on the sentence level are in principle applicable in a domain larger than the sentence. The indices x or y or z in the particular lexical matrix may be identified with complements or adjuncts in the previous and sometimes succeeding paragraphs in the primary data.

I contributed examples of impersonal construction in Japanese to the inventory of cross-linguistic impersonal constructions.

I proposed a hypothesis to be tested cross-linguistically, the saturation hypothesis. The more positive signs that are assigned to the non-contextual case frame features in the matrix, the higher the saturation. The sentence with a higher degree of case frame saturation is more difficult to process.

6.2.3 Applicational contributions

The analytical procedures followed in this study have the potential to be applied to the study of the Japanese language in domains other than literary works: domains representing interpersonal communicative activities such as dialogues, domains strictly defined by tasks, or domains defined historically or regionally.

Grammatical representations in lexical matrices in the lexicase dependency framework, being constrained and explicit, have potential value in natural language processing. For example, contextual features in the matrix will be used to structure a module to indicate the relationship between complements and the head verb, enabling this module

to output a feature structure for individual words to be processed to construct a grammatical sentence or to check the validity of a given sentence.

Furthermore, by applying the same validity check procedure for two arbitrarily given sentences, the details of equivalency or non-equivalency between the two head verbs may be captured. This equivalency information has potential use for lexicographers. Not only could they specify the grammatical representation based on dependency analysis in the dictionary, they could include details of related words in the dictionary.

The present study has potential application to the field of language teaching.

The general pattern I observed of resistance by non-linguist native speakers to the highly saturated matrices suggests that this information should be useful in language teaching. We can introduce the verb in a principled sequence, verbs with a lesser degree of saturation being introduced prior to the verbs with a higher degree of saturation. This will enable the learner to build and internalize a new linguistic system more effectively.

The present study has potential application to further textual analysis.

The linking devices for semantic interpretation given as indices on case relations, some mediated by the feature ([+them]) in the lexical

matrix, serve as a powerful tool for accurate textual analysis. The indices assigned as x, y or z will be traced to the complements and adjuncts in the sentence within the paragraph or any paragraphs with discourse connectedness. In application to a literary work, we can capture the author's particular craft of information-packaging to effect a unique literary style by the careful analysis of indices x or y or z throughout the literary piece.

6.3 RESIDUAL TOPICS FOR FUTURE RESEARCH

6.3.1 General issues

During the course of analysis I have noted that there are a limited number of examples available for verbs in the following primary verb classes: Primary Verb Class 2, 3, 4, 6, 7, 8, 10, 11, 12, 14, and 15. The syntactic subcategorization of verbs needs to be enhanced by incorporating more naturalistic data as well as more plausible examples for verbs in these classes. Among them the need for study is most acute for verbs in Primary Verb Classes 4, 8, 12, and 16. They are verbs sharing three complements: COR, LOC, and MNS.

The contextual features established in this study need to be reevaluated as we enhance the syntactic subcategorization of verbs. The current features have been set up on the basis of the examples on hand. The features are there to be reevaluated constantly on the basis of new data. I see a particular need to evaluate the validity of five features I have used in this study according to additional data: 'process'

[prcs], 'telicity' [telc], 'stativity' [sttv], 'activity' [ctvt], and 'adjectival' [djct]. I see a potential logical connection between the features [+prcs] and [+telc], and a potential interplay among features [+sttv], [+ctvt] and [+djct].

Throughout the syntactic analysis of verbs in the individual primary verb classes, I noted the derivational relationships that obtained among the members within and across the primary verb classes. Not all derivational relationships described for individual verbs have been dealt with in chapter 5. In order to see the details and the extent of perspective-shifting constructions in Japanese, these observed derivational relationships must be captured in a constrained formalism.

6.3.2 Residual topics for future research

The analysis I presented subcategorizes head verbs in examples (1) and (2) below as [+trns, -lctn, -crsp, -mode, +sttv, +djct], where the first *ga* is [+Nom] and the second [+Acc]. In the analysis presented here I did not address the grammatical status of head verbs in (3) and (4). Had I accounted for (3) and (4), there could be an alternative analysis: [-trns, -lctn, -crsp, -mode, +sttv, +djct], where the first *ga* is [+modl] and the second [+Nom].

- (1) Suzuki *ga* mizu *ga* nomenai
 water is unable to drink
 'Suzuki cannot drink water.'
- (2) Suzuki *ga* mizu *ga* nomitai/hosii
 water is wanting to drink/desires
 'Suzuki wants to drink water/Suzuki desires water.'

- (3) Suzuki ga Doitugo ga umai
 German is good at
 'Suzuki is good at German.'
- (4) Suzuki ga kubi ga nagai
 neck long
 'Suzuki has a long neck.'

Examples (1) and (2) differ from examples (3) and (4) syntactically: in the former, the deletion of the second actant, mizu 'water' does not yield an ungrammatical sentence, while the deletion of the second actant in (3) and (4) yields an ungrammatical sentence:

- (1)' Suzuki ga nomenai
 (2)' Suzuki ga nomitai/hosii
 (3)' *Suzuki ga umai
 (4)' *Suzuki ga nagai.

On a very basic intuitive level, in (1) and (2) it is Suzuki who wants to drink or who cannot drink water, while in (3) and (4) it is not Suzuki who is good, or who is long, rather what is good is Suzuki's German and what is long is Suzuki's neck.

These syntactic and semantic/pragmatic considerations lead to an alternative analysis that assigns the following two case arrays: case array (c1) to head verbs in (1) and (2), versus case array (c2) to head verbs in (3) and (4).

- (c1) Suzuki ga mizu ga nomenai/nomitai/hosii
 AGT Nom PAT Acc
- (c2) Suzuki ga Doitugo/kubi ga umai/nagai
 Tpc PAT Nom

Although I have striven for a purely syntactic verb subcategorization in the current study, the examples such as (1)-(4)

suggest that there is an interaction between syntax and semantics. For example, a semantic feature such as alienability may be introduced to give a principled account for the transitivity. The PAT in (1) and (2) is alienable from the AGT, while the PAT in (3) and (4) is not. In these examples the alienable PAT occurs with transitive stative and the inalienable PAT occurs with intransitive stative verbs.

The remaining issues are (1) the extent of this type of interaction, and (2) if the extent of interaction warrants the incorporation of this information, how could we formulate the rules without resorting to rule features which compromise the generalizations drawn on syntactic grounds. That is, a generalization that requires rule features is not a true generalization. For issue (2) I have no further proposals at this time.

The feature of alienability seems to come up in another domain. In the discussion of intransitive non-locational, non-correspondent verbs, PVC-2, I introduced the postposition as a marker of the MNS complement. I adduced in addition to the question pull test three syntactic diagnostic tests to determine the complementhood of actants marked with *de*. The semantic feature alienability, again seems to interact with the syntax. In the examples below, the syntactic tests support an analysis by which actants marked with *de* in (5) through (8) are complements, while the same actant in (9) is an adjunct.

- (5) Yoko ga sinkenna koe de iu (YU2433)
 Nom serious voice at says
 'Yoko spoke seriously.'

- (6) Yoko ga utukusii me de Simamura o miru (YU2421-m)
 Nom pretty eyes at Acc looks
 'Yoko glances at Simamura with her beautiful eyes.'
- (7) Yoko ga mohuku de kuru
 Nom funeral clothe at comes
 'Yoko comes in her funeral dress.'
- (8) Yoko ga kurumaisu de kuru
 Nom wheel chair at comes
 'Yoko comes in the wheel chair.'
- (9) Yoko ga denwa de kuru
 Nom telephone at comes
 'Yoko comes in response to (Komako's) the telephone call.'

In (5) and (6) the MNS is a part of the PAT (5) or the AGT (6) and inalienable. In (7) and (8), the PAT is pragmatically inalienable from the MNS. Furthermore, the metaphoric relationship observed earlier holds in (7) and (8): the MNS is the container for the PAT, and the PAT is the containee. In (9), however, the MNS actant is alienable physically and pragmatically from the PAT and no metaphoric container/containee relationship holds between the MNS and the PAT. This alienable actant is an adjunct, not a complement.

Another example of the interaction of semantic features with the syntactic derivation of verbs is the feature [fctv], which was introduced in chapter 1. This semantic feature seems to function as a crucial factor in the derivational relationship between *anda*, the past tense form of *amu* 'knit' in PVC-9, *anda* in PVC-10, and *anda* in PVC-13, as in the examples below:

Oba ga seetaa o anda (PVC-9)
 'The aunt knit a sweater.'

Oba ga seetaa o keito de anda (PVC-10)
 'The aunt knit the seater with yarn.'

Oba ga keito o seetaa ni anda (PVC-13)
 'The aunt knit yarn into a sweater.'

These interactive features, which are based primarily on semantic or pragmatic information, may have further implications in the dependency analysis of Japanese verbs. It is certainly an interesting topic to pursue in the future.

The so-called representative *tari* forms² in (10), *detari* and *tizimattari*, and (11), *mietari*, in the present study are analyzed as non-ajectival predicates, or in the same class as in *benkyoo*, which was discussed in the section on PVC-1-C6.

(10) akai suso ga ooku detari tizimattari sita
 red skirt Nom much expose shrink did
 'The red skirts (of kimono) rose and fell a litte (as Komako waved her arms)' (YU2527)

(11) suso o naosu tetuki ga geisyahuu ni mietari sita
 skirt Acc arrange way Nom geisya-style as look-tari did
 'He noticed that she had a geisha's way of arranging her skirts.' (YU2518m)

Although the dependency relationship justifies the current analysis, the status of *-tari* itself is not clear to me at this time. I have treated it as a verbal suffix in this analysis since it occurred only with verbs in my data. However, I have come across one Kokugogaku study in which '*tari*' is treated as '*gentei o arawasu zyosi*', or 'the particle that represents a limitation' (Tokieida 1950:223).³ If Tokieda's proposal is right, we will have one more postposition with a well-defined distribution that does not mark a case relation. There will also be an interesting correlation between postpositions that occur as heads of co-dependent postpositional phrases taking nouns as

complements⁴ and putative postpositions that occur as the head of postpositional phrase, taking verbs as complements.⁵

NOTES

¹Kindaichi's concern was to subcategorize verbs solely by the aspects. He did not explicitly capture the verb as a head of a construction that requires at least one complement. Therefore, Kindaichi has only four classes of verbs based on the aspect marking *-te iru* form in his paper published originally in 1955 (Kindaichi 1955, 1976). Kindaichi's four classes are identical to Vendler's four types of verbs, activities, accomplishments, achievements, and states, presented in his discussion on verbs and times (Vendler 1967: 106).

²The term, 'representative' follows Martin (1975, 1988 :566-573). Suzuki calls the same form 'narabetateru kata' (Suzuki 1972:344-347). Suzuki, as most native Japanese linguists derives these forms by replacing *-te/-de/-katte* by *-tari/-dari/-kattari*. Suzuki claims that these forms merely describe the action and the state and do not play a major role in syntax. The syntactic function is strictly carried out and marked by the particular form of the verb 'suru', which comes after the representative form. (Suzuki 1972:346)

³Tokieda gives two examples: *Netari okitari no seikatu desu*, 'It's a life of lying down and getting up' and *Yondari kaitari dekimasu ka*, 'Can you read and write?'

⁴An example of co-dependent postpositional phrases that take noun complements is: *iki to kaeri to* 'on the way out and on the way back'.

⁵ An example of a putative that occur as the heads postpositional phrase with verbal codependents suggested here is *ri* in : *Suzuki ga ittari kittari suru*, 'Suzuki comes and goes.'

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