



Case in Complex Predicates

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CASE IN COMPLEX PREDICATES

(複雑述語の格)

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CONTENTS

ACKNOWLEDGMENTS	VII
ABBREVIATIONS	IX
ABSTRACT	1
INTRODUCTION	5
1 PREVIOUS STUDIES	9
1.1 Causatives	9
1.2 Ditransitives	15
1.3 V-V compounds	18
2 CAUSATIVES AND DITRANSITIVES	25
2.1 Causatives	25
2.1.1 Introduction	25
2.1.2 Biclausal properties	27
2.1.3 Double <i>o</i> constraint	30
2.1.4 The complement of v_{caus}	36
2.1.5 Position of arguments	40
2.1.5.1 Scrambling	40
2.1.5.2 Emphatic particles	41
2.1.5.3 Idioms	43
2.1.6 Case assignment	45
2.1.6.1 The dative on causee	45
2.1.6.2 Where it comes from	46
2.1.6.3 Passive	47

Contents

2.1.6.4	Desiderative	50
2.1.6.5	Potential	51
2.1.6.6	Indeterminate pronoun binding	52
2.1.6.7	Scope ambiguities	58
2.1.6.8	The case-assignment mechanism	60
2.1.7	Consequences	64
2.1.7.1	Double <i>o</i> Constraint again	64
2.1.7.2	Implications for a phase based theory	66
2.1.8	Conclusion	70
2.2	Ditransitives	70
2.2.1	Preliminaries	70
2.2.2	Ditransitives in Japanese	74
2.2.3	Floated Quantifiers	76
2.2.4	Two types of verbs	82
2.2.5	Double object verbs	86
2.2.6	Concluding Remarks	92
2.3	Locality in movement	92
2.3.1	Head-to-head movement	94
2.4	Summary	96
3	V-V COMPOUNDS	97
3.1	Introduction	97
3.2	Lexical and syntactic compounds	98
3.3	Further classification	99
3.4	Two types of control	107
3.4.1	Control-I	108
3.4.2	Control-II	109
3.5	The size of the complement	110
3.6	Case	118
3.6.1	Passivization	118
3.6.2	Potential constructions	120
3.7	<i>Sika...nai</i> construction	123
3.8	Restructuring	126

3.9	Raising verbs	128
3.10	Cinque's analysis	132
3.11	Control-II	137
3.11.1	Restructuring and incorporation	138
3.12	Control-I	140
3.12.1	The nature of <i>owaru</i>	141
3.13	Semantic weight	144
3.14	Summary	146
4	CONCLUDING REMARKS	149
4.1	Remaining issues	151
	BIBLIOGRAPHY	155

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ABBREVIATIONS

The following have been used in the glosses and in the main text:

ACC:	accusative
CAUS:	causative
CL:	numeral classifier
COMP:	complementizer
DAT:	dative
DES:	desiderative
DoC:	Double <i>o</i> Constraint
FUT	future tense
GEN:	genitive
HORT:	hortative
NOM:	nominative
NS.HON:	non-subject honorification
PASS:	passive
PAST:	past tense
POL:	Addressee-oriented honorification
POT:	potential
PRES:	present tense
Q:	complementizer / question marker
QF:	quantifier floating
S.HON:	subject honorification
TOP:	topic, introduced by <i>wa</i>
v_{caus} :	the causative head
V1:	leftmost verb in a two-verb predicate
V2:	rightmost verb in a two-verb predicate

ABSTRACT

The main topic of the present work is case assignment in complex predicates. The guiding hypothesis of this work is an idea originally formulated by Kishimoto (2007b), who argues that the case array of a construction is determined at the level where the external argument is merged. The idea can be regarded as the extended version of Burzio's generalization. I test this hypothesis against different types of complex predicates in Japanese: causatives, ditransitives and V-V compound verbs. In the course of the discussion, I also argue that the class of restructuring verbs in Japanese, as originally proposed by Miyagawa (1987), should be enlarged to include some types of V-V compounds.

PREVIOUS STUDIES. In the first chapter, I discuss some of the previous studies dealing with the same types of complex predicates tackled here. This has the role of setting up the stage and highlighting some of the problems that will be dealt with in the following chapters. I review some prominent studies regarding causatives, ditransitives and verbal complex predicates.

CAUSATIVES AND DITRANSITIVES. Chapter 2 is dedicated to causative constructions and ditransitives. I begin by discussing causatives and their paradoxical nature: they are both monoclausal and bi-clausal at the same time. One of the most prominent monoclausal property is the pattern of case assignment: causatives behave as if there is a single case domain, in spite of the fact that there are two predicates in the construction. The so-called Double *o* Constraint has been deemed responsible for this case pattern.

I then discuss the syntactic structure of causatives and the position of the arguments in these structures. With this background, I proceed to investigate the case assignment. It is usually assumed that the direct object of the base verb receives its case from the base verb itself, but I provide arguments against this analysis. Instead, the data show that both the causee and the object of the base verb receive their case from the causative head. This is in fact consistent with the hypothesis that the head projecting the subject (the causer, in this instance) is also the

head that determines the case array of the other arguments. This analysis is supported by data from desiderative and potential constructions, from the scope of emphatic particles like *mo* and from scopal properties of the arguments. I argue that the mechanism of case assignment in causatives is an instance of Multiple-Agree, as proposed by Hiraiwa (2005). Thus, due to the nature of Multiple-Agree, there are no locality constraints. The present approach has some interesting theoretical consequences. First, we begin to have an explanation for the so-called Double *o* Constraint, which I will suggest reflects in fact the impossibility of a head to assign the same case twice (although there is parametric variation). Secondly, the view advocated here has some consequences regarding the notion of phase, as proposed by recent work within the Minimalist Program framework. I argue that phases are not rigid, but flexible: a phase head may or may not become a phase, depending on other factors.

The second half of the chapter deals with ditransitive constructions, which, since the work of Marantz (1993) have been generally regarded as a type of complex predicates, consisting of two heads: an Applicative head and a verbal head. Recent work in Japanese ditransitives shows that, just like English, Japanese has both a double object construction and a postpositional construction (the equivalent of the English *to*-dative). In the double object constructions, there is a question whether both arguments share the same status of objects or if there is an asymmetry between them. Miyagawa & Tsujioka (2004) argue that in such constructions, the lower object (i.e. the theme argument) cannot undergo passivization since the process is blocked by the intervention of the higher argument. Their argument is based, in part, on the behavior of floated quantifiers. In the light of these data, Anagnostopoulou (2001) and McGinnis (1998) have argued that the case of the two arguments is assigned by different heads: the Goal by the *v* head and the Theme by the Appl head. In sections 2.2.4–2.2.5, I argue that this cannot be the case. First, I follow Kishimoto (2001b) and show that Japanese has two types of ditransitives: one class of verbs which always appear in the postpositional construction and one which always appear in the double object frame. By using verbs which always take two NP objects, Miyagawa & Tsujioka's arguments can be tested without making use of floated quantifiers. The results show that the putative locality conditions do not hold and that the two objects are equidistant to a higher head. In these constructions, too, I argue that the operation of Multiple-Agree is at work. Thus, causatives and ditransitives have a strikingly similar structure and case-assignment mechanism. However, there is an important difference between the two, which can be observed in passivization: causatives do not permit the lower object to be promoted to subject position, while ditransitives have that option. The chapter concludes with a discussion on this difference.

I argue that the relevant factor is the presence or the absence of incorporation of the lower verb into the higher one.

COMPLEX VERBS. In chapter 3, I turn to V-V complex predicates. I follow the classification proposed by Kageyama (1993): the V-V predicates enter into (i) raising constructions or into (ii) control constructions. Furthermore, as argued by Kageyama, the control constructions can be divided into two subclasses, each with its own properties. I will dub them control-I and control-II, respectively. In section 3.5 I argue against some recent analyses which claim that in control-II constructions, the lowest verbal head (V₂) doesn't project a verbal shell at all and that it is in fact a bare V. Using data from idioms and pro-verb construction, as well as data on passivization, I argue that these verbs must project.

Next, in §3.6 I turn to the question of case assignment in V-V constructions. For raising constructions, as predicted, case is assigned to the object in the lower verbal shell, precisely where the subject is merged. In control-II constructions, case is assigned in the higher verbal shell, again an expected result, since that is the level at which the subject is introduced in the derivation. However, for control-I constructions, the data show that the case of the object is assigned downstairs, apparently contradicting the guiding hypothesis of this work. However, data from *sika...nai* constructions indicate that control-I constructions are biclausal, while raising and control-II constructions behave as a single clause. This will play a role in explaining the problem noted above.

In §3.8 I review Miyagawa's analysis of restructuring predicates in Japanese. Next, I turn to raising V-V constructions and argue that they are a type of restructuring constructions, too. I argue that the raising verbs are a type of functional category projected above the main *v*P shell. The proposal is similar to Cinque's analysis of restructuring verbs in Romance and Germanic verbs (section 3.10). However, while Cinque argues that all restructuring constructions involve functional heads, I take a less restrictive view and assume that some restructuring constructions may involve semi-lexical categories as well. In fact, a good candidate is the class of control-II constructions, as I argue in section 3.11. However, restructuring in these constructions can be sometimes blocked, with interesting results.

Finally, in §3.12 I turn to control-I predicates and argue that, since they are biclausal, they do not fall under the scope of the hypothesis formulated by Kishimoto (2007b). These constructions consist of two lexical Vs and do not involve any kind of restructuring.

An additional argument for the view advocated here, namely that there are different degrees

Abstract

of restructuring, comes from the concept of semantic weight (§3.13): lexical items with less specific meaning tend to behave more like functional categories rather than lexical categories.

A few concluding remarks highlight the similarities and differences between the three types of constructions discussed in this work.

INTRODUCTION

The guiding line of the present work is based on an intuition originally formulated by Kishimoto (2007b), which states that in Japanese, the case of internal arguments is assigned by the same head that introduces the highest argument (the external argument). For simple predicates this seems trivial: in the standard split ν P approach (which I will assume throughout this dissertation), the ν head is responsible both for introducing the external argument and for the accusative case of the direct object. However, things get more complicated, hence more interesting, if one considers various complex predicate constructions, of which Japanese has plenty. If a predicate α is embedded into another one, β , in the structure $[\beta [\alpha]]$, will α still assign case to its internal argument(s) or will this operation be delayed until β has also discharged its thematic roles? The empirical data show that case assignment will be delayed until the level of β .

Why should this be? The answer has to do with the fact that syntactic derivation has two major domains: a thematic one, where the θ -roles are assigned, and a functional one, where grammatical features are checked. I assume that in the default case, the operations of the functional domain cannot take place before the thematic domain is completed.

Whether this analysis is best coached in terms of phases or something entirely different is not really relevant. I used the notion of phase as a useful device, but as far as I can see, there is nothing that hinges on that. However, the notion of phase is only the latest incarnation of the idea of ‘cycle’, which has been around for quite some time in generative grammar, so there might be something to it. Assume then that a phasal approach is correct. There are two phases in a clause: the ν P and the CP, and each phase is built, bottom-up, from its own lexical array. This means that (i) a phase is not completed until all the items in the lexical array are used. Moreover, Chomsky (2005) proposes that (ii) syntactic operations are triggered by phase heads. From (i) and (ii), it follows that for the ν phase, syntactic operations — case checking among them — do not take place before all the arguments have been introduced in the derivation, so that the lexical array is empty. In effect, this derives the same output as the hypothesis that case is assigned by

the same head that introduces the external argument. The same mechanism, however, will fail when it comes to complex predicates. Thus, the notion of phase will be slightly redefined in a manner which is more adequate empirically.

There is a distinction in generative grammar between structural (or abstract Case) and its morphological realization, case (or m-case). The former is assumed to be a universal feature, but the morphological realization of case is a language-specific option. In English, 'John' is the same in nominative or in accusative. But in a morphologically rich language like Icelandic, 'Mary' is *María* in nominative, but *Maríu* in accusative. All NPs must have abstract Case (as required by the Case Filter of the GB era), but (m-)case is a language-particular option. Thus, in both English and Icelandic, NPs have abstract Case, but only in Icelandic is the m-case visible. Here I will be concerned with the abstract / structural Case of arguments (which, incidentally, has an m-case realization in Japanese). That is to say, I am concerned with the licensing of arguments (if Case is understood as a licensing condition of NPs), not with its morphological expression.

One crucial assumption, which plays a central role in the argumentation, is that a morpheme α attached to a morpheme β cannot affect the properties of a third morpheme, γ . For instance, a passive head which selects a verb cannot affect the argument structure or the case array of another verb. While there are syntactic operations which can happen at a distance — notably case assignment — operations which alter the number of arguments and / or the case array of a verb must be strictly local. This is clear most of the times: nobody believes that a passivized matrix verb can delete the subject in an embedded clause. However, when it comes to complex predicates, the same might not be immediately obvious. The idea is also found in Miyagawa (1989), who assumes a string adjacency condition for passivization. The passive morpheme can absorb the case feature of the verb it attaches to, but it cannot 'skip one' and absorb the case of a different verb. In the same spirit, Di Sciullo & Williams (1987, p. 62) note that an affix can affect the argument structure of only the item to which it is attached.

Based on this assumption, the major tests which will be used for determining what are the case assigning heads are passivization and the potential construction. However, passivization is not always a reliable test. This is because it consists of two operations: case absorption and movement of the object to the subject position, and the movement operation might be blocked by locality conditions. On the other hand, the potential construction involves no movement, only case absorption, so there are instances where the passive is impossible but the potential construction is grammatical.

The hypothesis will be tested against three major classes of complex predicates: causatives, ditransitives and V-V complexes. There will be exceptions and apparent counterexamples, but this is what makes research interesting. Hopefully, I will be able to offer good explanations for the cases in which the working hypothesis appears to break down.

In chapter 1, I review some previous analyses of the issues. This also has the function of setting the stage for the later chapters.

In chapter 2, I discuss the causative constructions. Causatives have a paradoxical nature, in that they behave both as biclausal and monoclausal structures at the same time. I will argue that the paradox can be solved by stating that case assignment is delayed until the external argument has been merged. This will force a redefinition of the notion of phase, which, to my mind, is more adequate and has at least another welcome consequence in explaining the interaction between intransitives and passives. In addition, in the framework proposed here we can begin to understand the nature of the so-called Double *o* Constraint, which, although discovered decades ago, has had no satisfactory explanation so far.

The second half of chapter 2 deals with ditransitive verbs, which are considered (at least since the work of Marantz, 1993) to be a type of complex predicates. Some recent work has uncovered evidence which seems to suggest that in the Japanese double object construction, the case of the lower argument (the theme) is assigned by a lower verbal head (Appl), not by the higher *v* head. Here I will try to argue that this is not the case and that Japanese is in fact a true symmetric language, and that in double object constructions the *v* head assigns case to the two internal arguments, the goal and the theme, as predicted by the main hypothesis of this dissertation.

Next, in chapter 3, I consider verbal compounds of the form V1-V2. These compounds are subdivided into several classes, with distinct properties, which I argue represent different types of restructuring. One class, however, appears in a non-restructuring environment and the case of the internal arguments is assigned by a head lower than the one introducing the external argument. I argue that this is a bi-clausal construction and thus falls outside the scope of the hypothesis presented here.

These three types of complex predicates will be shown to behave uniformly with regard to case assignment: case is ‘withheld’ until the external argument has been merged in the derivation.

1 PREVIOUS STUDIES

In this chapter I briefly review some of the most prominent analyses proposed so far in the literature regarding the data tackled here. This will set the stage for the problems discussed in the following chapters. I discuss causatives in section 1.1, ditransitives in 1.2 and finally, V-V compounds in section 1.3 in the same order in which they will be discussed in later chapters.

1.1 CAUSATIVES

Causatives in Japanese have always been a tough nut to crack. The problem is that while they clearly have bi-clausal properties, as I will discuss in more detail in chapter 2, the case array of the NPs in a causative construction seems to be that of a simplex structure. Early analyses (e.g. Kuno, 1973) assumed that the structure starts out as a bi-clausal structure and it undergoes a process of restructuring which renders it mono-clausal. Other proposals were that causatives have a dual structure, one mono-clausal and another bi-clausal.

Syntactic causatives in Japanese are formed by the suffixation of the morpheme *sase* to the stem of the base verb if it is vocalic, and *ase* if the stem is a consonant:¹

- (1) a. *e/i* stem:
ne-ru \implies ne-sase-ru
b. consonant stem:
hasir-u \implies hasir-ase-ru

It has been known at least since Kuroda (1965b) that there are two major ‘flavors’ of productive causatives in Japanese: a coercive one (a ‘make’ reading) and a permissive one (a ‘let’ reading). These two types exhibit clear differences in their syntactic behavior. In what follows, I

¹Following the standard practice, Japanese examples have been written in *kunrei-siki* (phonemic transcription), while the references are in the Hepburn system (allophonic transcription).

1 Previous Studies

will refer to the coercive causative also as *o*-causative or ‘make’ causative, and to the permissive one as *ni*-causative, or ‘let’ causative.

The realization of arguments in causatives depends on (i) which of the two readings is selected and (ii) on the transitivity of the causativized verb:

(2) Intransitive:

John ga aruk-u. \implies
John NOM walk-PRES
“John walks.”

Coercive:

- (i) Bill ga John o aruk-ase-ru.
Bill NOM John ACC walk-CAUS-PRES
“Bill makes John walk.”

Permissive:

- (ii) Bill ga John ni aruk-ase-ru.
Bill NOM John DAT walk-CAUS-PRES
“Bill lets John walk.”

(3) Transitive:

John ga hon o yom-u. \implies
John NOM book ACC read-PRES
“John reads books.”

Coercive:

- (i) Bill ga John ni hon o yom-ase-ru.
Bill NOM John DAT book ACC yom-CAUS-PRES
“Bill makes John read books.”

Permissive:

- (ii) Same as (3-i)

As (2) shows, when an intransitive verb is causativized, its external argument appears with accusative in the coercive causative (2-i), but with dative in the permissive construction (2-ii). On the other hand, when a transitive verb is causativized (3), both the coercive and the permissive constructions have the same form: the causee appears with dative and the direct object of the lexical verb with accusative. These sentences are therefore ambiguous between the ‘make’ and the ‘let’ reading. The reason for this is that Japanese disallows two accusative marked NPs within the same clause. This will be discussed below, in §2.1.3.

In what follows, I will review some influential proposals regarding the structure of causative constructions, starting with the early analysis proposed by Kuroda (1965b), the restructuring approach of Kuno (1973) and up to the more recent work by Harley (1995). I also include a brief review of the lexicalist perspective, as espoused by Miyagawa (1987).

KURODA (1965B) In a very influential work, Kuroda sets up a complicated system of rules which account for the derivation of causatives and other constructions. Two of these rules are given in (4) and (5):

- (4) Constituent Subject Extraction (CSE)
 $(NP\text{-}ga\ X)_{Comp} \longrightarrow NP\text{-}ni\ (X)_{Comp}$

The CSE rule (dubbed “Subject *ni* Raising” in Kuroda, 1992a) raises an embedded subject into the matrix clause. After the rule applies, the raised subject appears marked with *ni*.

- (5) o-Phrase Deletion (simplified)
 $NP\text{-}o \longrightarrow \emptyset\ in\ env.\ __(XNP\text{-}oV)_{Comp}\text{-}sase.$

This rule, later known as “Counter-Equi Deletion” (see Kuroda, 1992a), deletes a matrix object when there is a coreferential NP in the embedded clause.

With these rules in place, let us see how causatives are derived in Kuroda’s system.

(i) Causatives derived from intransitive verbs:

(i-a) *Ni*-causatives start from the base form:

- (6) John-ga [Bill-ga hatarak]_{Comp} -sase-ta

The CSE rule (4) applies to (6), raising the embedded subject in the matrix clause.

(i-b) *O*-causatives start from the base in (7):

- (7) John-ga Bill-o (Bill-ga hatarak)_{Comp} -sase-ta

In (7), a rule of Pronominalization applies, deleting the embedded phrase *Bill-ga*. Thus, the actual surface form is derived.

(ii) For causatives derived from transitive verbs, the derivation proceeds as follows:

(ii-a) *Ni*-causatives are derived straightforwardly, by application of CSE, as in the case of intransitives.

(ii-b) O-causatives are a bit more problematic. The starting point is (8):

(8) John-ga Bill-o (Bill-ga hon-o kaw)_{Comp} -sase-ta

In (8), the matrix object *Bill-o* is first deleted by Counter-Equi. Subsequently, CSE applies, so the embedded subject is raised into the matrix clause and assigned *ni*. If instead of Counter-Equi, the rule of Pronominalization (i.e. Equi NP Deletion) applies, the output has the incorrect form **John-ga Bill-o hon-o kawaseta*. Throughout, *ni* is assumed to be marked, which presumably means that it corresponds to a preposition or inherent case.

These rules work very well at a descriptive level, and they capture not only causatives but other constructions as well. However, they don't explain much and are stipulative in nature.

KUNO (1973) While in Kuroda's approach causatives remain bi-clausal throughout the derivation², a different approach was taken by Kuno (1973). Causatives start out as clausal-embedding constructions of the form:

(9) [_{S1} [_{S2} [_{VP} [V-tense]] sase]

There are, however, two extra rules which render the structure monoclausal. First, Aux Deletion deletes the tense auxiliary in the embedded clause. Next, Verb Raising "attach[es] the tenseless verb to the constituent clause to the left of the matrix verb". Verb Raising is accompanied by an operation of tree-pruning which deletes the embedded (non-branching) S and VP nodes. Thus, after these transformations, the structure is in effect a single clause.

Tree-pruning was originally proposed by Ross (1967). A similar transformation is the Clause Reduction hypothesis of Aissen & Perlmutter (1976). Such analyses, however, have been abandoned in modern approaches. One major objection to deleting nodes is that it constitutes a violation of the Projection Principle, which states that what is projected at D-structure must be preserved at S-structure.

MIYAGAWA (1987) An analysis which gained some popularity in the 80's was that of dual structures. For example, Zubizarreta (1982) analyzes Romance restructuring and causative constructions as having a simultaneous dual structure: one mono-clausal and one bi-clausal.

²Although he mentions at a certain point that causatives are 'nonclausal embedding', a statement which he doesn't qualify any further.

At every syntactic level, the sentence is associated with a pair of structures. Of course, only one structure reaches PF. The same approach is taken by Miyagawa (1987) with regard to causatives. In his approach, causatives are lexical, not derived in the syntax. A causative construction is associated with a monoclausal structure, and, at the same time, with a biclausal structure.

The monoclausal structure accounts for the impossibility of:

- (10) *NP-ga NP-o NP-o V-caus

This is due to the fact that a single verb (here, the V-caus) cannot assign accusative twice.

On the other hand, the second structure accounts for the bi-clausal properties of causatives:

- (11) Taroo_i ga Hanako ni kare_i o hihan-sare-ta.
 T NOM H DAT he ACC criticize-CAUS-PAST
 “Taroo_i made Hanako criticize him_i.”

Here, in order to avoid a Condition B violation, the pronoun must be in a separate clause from the coindexed NP. The problem with dual structure analyses is how to decide which rules and filters apply to which structure. For instance, why doesn't binding theory apply to the simplex structure but only to the complex one?

HARLEY (1995) Another influential work is that of Harley (1995), whose basic tenets I will adopt in chapter 2. She proposes a very interesting analysis of causatives in Japanese, offering a parallel with ECM constructions: in coercive constructions, the causee raises into the matrix predicate in order to receive case. She also argues convincingly that in permissive causatives, the causee is generated in the matrix 'clause' and controls a PRO downstairs.

On the problem of the case pattern of causatives, she offers the following solution ((12) is slightly modified from Harley (1995)):

- (12) Mechanical case parameter:
- a. If one case feature is checked structurally in a clause, it is realized as Nominative (mandatory case).
 - b. If two case features are checked structurally in a clause, the second is realized as Accusative.
 - c. If three case features are checked structurally in a clause, the second is realized as Dative and the third as Accusative.

1 Previous Studies

It should be noted that Harley discusses about morphological realization of case (i.e. m-case, see the Introduction), not about structural Case. Thus, the Mechanical Case Parameter is a morphological filter, after the syntax. Her approach accommodates the observed case patterns in coercive causatives:

- (13) a. NP-ga NP-o V+caus
b. NP-ga NP-ni NP-o V+caus

Also, the Mechanical Case Parameter correctly predicts the impossibility of the following causative forms:³

- (14) a. *NP-ga NP-o NP-o V+caus
b. *NP-ga NP-o NP-ni V+caus

However, one is left wondering what the explanatory power of the principle (12) really is. Of course, it correctly predicts the data, but what does it really mean? Compare it with the rule for case marking proposed by Kuroda 30 years earlier:

- (15) ga/o-Insertion

$$\emptyset \longrightarrow \left\{ \begin{array}{ccc} \text{ga} & \text{in env.} & \# \\ \text{o} & & \text{NP-ga} \end{array} \right\} \#X\#\text{NP(o)}_\#$$
 where X does not contain #NP(o)#

(which should be interpreted as: (i) mark the first NP (bare or accusative) with *ga*; (ii) mark with *o* the NP (bare or accusative) which follows NP-*ga*.)

The truth is they are very similar: they both rely on which is the first NP and which is the second, and they do little more than just describing the data. The case assignment is, as the name of principle (12) says, mechanical. There is no explanation why the case patterns are the way they are and not different. In 30 years of research, our understanding of the case pattern in Japanese causatives had not progressed much, in spite of great theoretical advances.

³Excluding the verbs which inherently mark their object with dative.

1.2 DITRANSITIVES

Alongside the oblique goal construction (16-a), many languages have the option of expressing the goal as an object of the verb (16-b):

- (16) a. I gave the book to Mary.
 b. I gave Mary a book.

Both the theme and the goal in (16-b) are objects of the verb, hence the construction is dubbed double object construction. In English, the morphology of the verb remains unchanged, but in other languages (e.g. Chicheŵa) an applicative morpheme attaches to the verb in the double object construction.

For Japanese ditransitives it is hard to know if the construction is a double object verb or an oblique goal one. This is because the particle *ni* can be either a postposition or a dative case marking (Sadakane & Koizumi, 1995), so the marking of the arguments does not help. But before discussing the Japanese ditransitives, let us review what has become the standard analysis of double object constructions.

MARANTZ (1993) Marantz (1993) analyzes the double object construction as a complex predicate, involving multiple verbal shells. The low shell is the VP, which hosts the theme object. Above it, there is an applicative phrase, which takes the VP as its complement and also introduces the goal object in its specifier. Thus, the asymmetry between the goal and the theme can be explained. For instance, it has been known that the higher object, i.e. the goal, asymmetrically c-commands the theme (Larson, 1988). The structure he proposes is (17):


- (17) [_{VApplP} Goal Appl [_{VP} Theme V]]

The Appl head hosts the applicative morpheme, which may or may not have phonetic content. Another difference between the double object constructions and the oblique goal construction is that in the former, the goal has an affected reading, which is not available in the latter.

The applicative projection proposed by Marantz has virtually become the standard in the study of double object constructions. Pylkkänen (2008) further refined the analysis and proposed that there are two types of Appl heads, a high and a low one, each associated with different semantics.

One hot subject of debate in the literature on Japanese concerns the base generation order of arguments in ditransitive constructions. Given that scrambling can apply rather freely, it is hard to decide which is the base order. Several possibilities exist: (i) dative-accusative (ii) accusative-dative or (iii) both. For options (i) and (ii), the reverse order can be derived by syntactic movement. Moreover, there is the added ambiguity of the particle *ni*, as noted above.

MIYAGAWA (1997) Miyagawa's work questions the assumption that in ditransitives the order of the arguments can be derived from scrambling. Instead, he argues that both dative-accusative and accusative-dative orders are base generated. The main argument comes from the Chain Condition, which prohibits a configuration like (18) below:

- (18) $NP_i \dots anaphora_i \dots t_i$


In Japanese, (19) is possible:

- (19) (?)John ga [Hanako to Mary]_i o paatii-de otagai_i ni syookaisi-ta.
 John NOM [Hanako and Mary] ACC party-at each.other DAT introduce-PAST
 "John introduced Hanko and Mary to each other at the party."

Since (19) does not give rise to a Chain Condition violation, Miyagawa concludes that the accusative object must be base generated in its surface position, not moved there by scrambling over the IO. In his approach, there is no short-distance scrambling within the VP, at least not the A-movement variety. There are instances where the IO appears to have been scrambled over the DO, but he argues that these are instances of \bar{A} -movement.

He argues further that in the IO>DO order the IO is a dative marked NP, while in the DO>IO order, it is a PP. This position will be later refined in Miyagawa & Tsujioka (2004), see immediately below.

MIYAGAWA & TSUJIOKA (2004) Miyagawa & Tsujioka argue that, just like English, ditransitives can appear in two syntactic frames: a double object construction and a *to*-dative construction, i.e. a PP Goal. Adopting the framework of Marantz (1993), they argue that high-goals (which are interpreted as possessors) are dative marked NPs in the specifier of an applicative

head, above the theme. Low goals, interpreted as locations, on the other hand, are postpositional phrases located within the VP, below the ApplP. Moreover, they argue that while high goals are always to the left of the theme, low goals can be generated either above or below the theme. Thus, according to them, the following orders are possible:

- (20) a. high-goal ... low-goal ... theme
 b. high-goal ... theme ... low-goal

It follows that in the *ni* > *o* order, the *ni* marked NP can be either a high-goal (a NP), or a low goal (a PP). In order to disambiguate, they use floated quantifiers (Sadakane & Koizumi, 1995) to distinguish between the PP goal and the NP goal. By floating a quantifier from a *ni* marked goal, they ensure that the goal is in fact a high goal, i.e. a NP:

- (21) Bill ga gakusei ni futari syoohin o atae-ta.
 Bill NOM student DAT 2.persons prize ACC give-PAST
 “Bill gave the prizes to two students.”

In this configuration, a number of operations on the theme argument are impossible. Miyagawa & Tsujioka discuss passivization, but in §2.2 I will show that other operations are also blocked. On the basis of these data, they conclude that the (NP) high goal induces locality conditions for the theme below it. In §2.2 I will argue against this conclusion and against its implications.

KISHIMOTO (2008A) Based on data from ditransitive idioms, Kishimoto (2008a) argues that both orders can be base-generated: dative-accusative and accusative-dative. In his system, there are three possible positions for *ni* marked NPs, a high ApplP, a PP position in VP and a low ApplP:

- (22) [_V [_{ApplP} NP-*ni* [_{VP} PP-*ni* Theme [_{V'} [_{ApplP} NP-*ni*]]]]]

As (22) shows, the goal can be lower than the theme only when it occupies the low applicative head. However, that position is available *only* for dative-verb idioms. Ordinarily, for non-idiomatic expressions, the dative-accusative order is the only base order available, be it for high goals (realized as NPs in the high ApplP) or for low goals (PPs). Kishimoto’s arguments come from the behavior of nominalized ditransitives: the case marking of goals in these constructions shows that they cannot reside in the low ApplP (therefore they cannot be lower than the

theme).

Moreover, he argues that when nominalizing a VP with *-kata*, only the base order of the arguments is possible, i.e. no scrambling can take place. Using this test, he shows that in (non-idiomatic) ditransitives both high goals and low goals must be generated above the theme, contra Miyagawa & Tsujioka (2004).

1.3 V-V COMPOUNDS

Japanese has a set of predicates which consist of two verbs, such as *yomi-owaru* ('finish reading'), *tabe-kakeru* ('be about to eat'), etc. This is the main subject of chapter 3. For convenience's sake, let us refer to the first verb in such constructions as V₁ and to the second one as V₂.⁴ The first verb, V₁, can be almost any verb, but V₂s belong to a limited set. It is the properties of V₂s that determine the properties of the entire construction (e.g. the availability of passivization or the patterns of honorification). The V-V construction is illustrated in (23) (from Makino & Tsutsui, 1986):

- (23) Watasi wa kesa ne-sugi-te gakkoo ni okure-ta.
 I TOP this.morning sleep-do.in.excess-CONNECTIVE school DAT be.late-PAST
 "I overslept this morning and was late for school."

Below, I will review some of the previous work done on the subject of these V-V compounds. I will start up with the seminal work done by Kageyama (1993), on whose classification I will also base my discussion in chapter 3. I will also briefly review the analyses of Nishigauchi (1993) and Koizumi (1995). An analysis which plays a central role in the present work is that of Kishimoto (2007b). I also review the work of Fukuda (2007), who offers a perspective which, although different in details, is in spirit very much alike the analysis I propose in chapter 3.

KAGEYAMA (1993) Kageyama convincingly argues that within the category of V-V compound verbs, there are lexical compounds and syntactic, productive compounds. Furthermore, among the syntactic compounds he distinguishes three main subtypes, defined by the properties of the second verb. They can be:

- (i) unaccusative, e.g. *V-kakeru* ('be about to V')

⁴The notation 'V₂' has nothing to do with the so-called verb-second phenomenon in the Germanic languages.

(ii) transitive

- a) which take a VP complement, e.g. *V-akiru* (get fed up with V-ing)
- b) which take a V' complement, e.g. *V-oeru* (finish V-ing)

While detailed arguments for this trichotomy will be given in chapter 3, let us summarize here the properties of these three types of verbs. The first type corresponds to what is more commonly called in the literature a raising verb. It doesn't project an external argument and it takes a VP as its complement. The low subject raises to become the subject of the entire construction:

- (24) Ziko ga okori-kake-ta.
 Accident NOM happen-be.about.to-PAST
 ‘An accident almost happened.’

The second category — transitive verbs — corresponds to the so-called control verbs. Unlike raising verbs, they project an external argument and they also take a complement (a VP). The external argument controls a PRO located in the VP complement. However, Kageyama also considers the possibility of long passive of the form illustrated in (25), where the higher verb is passivized but the low DO becomes the derived subject:

- (25) [DO ... [t V₁] V₂-passive]
 ↑

It turns out that control verbs can be divided in two subclasses: one class disallows long passive (henceforth control-I), while the second one permits it (henceforth control-II). In order to explain this contrast, Kageyama proposes that the first class of verbs take a full VP as their complement while those in the second class only take a V' complement. Thus, the (im)possibility of passivization is explained in terms of a Relativized Minimality violation:

(26) **VP complement:**

- a. *[Subject_i [V_{1P} PRO [t_i [V₁]]] V₂-passive]

V' complement:

- b. [Subject_i [V_{1'} t_i [V₁]] V₂-passive]

In (26-a), the low DO cannot move under passivization due to the presence of PRO. The PRO, being closer to the target of movement, blocks the raising of the DO. On the other hand, in (26-b), there is no intervening PRO, so the DO is free to move.

1 Previous Studies

For convenience's sake, I will refer to these verbs as control-I and control-II, respectively. Let us illustrate these two classes of control verbs:

(27) Long passive impossible:

- a. *Nattoo ga tabe-aki-rare-ta.
Nattoo NOM eat-be.fed.up-PASS-PAST
(Lit.)“Nattoo (fermented soy) was fed up to eat.”

Long passive possible:

- b. Ronbun ga yomi-oe-rare-ta.
Essay NOM read-finish-PASS-PAST
(Lit.)“The essay finished to be read.”

From the point of view of X-bar theory, it is not clear if it is possible for a verb to take a V' complement. However, this can be done in the bare phrase structure approach of the Minimalist Program. Other researchers (Kato, 2003, Yumoto, 2005) have argued that the embedded predicate in these constructions is even smaller. Specifically, they argue that control verbs which permit long passive take a bare V as their complement. I will give theoretical and empirical evidence against this claim.

NISHIGAUCHI (1993) For Nishigauchi (1993), the long passive poses several locality problems: (i) the proper binding of the trace left by the raised object and (ii) the crossing of two VP boundaries on a single step. Regarding the proper government of the trace, he argues that the PRO is not a possible intervener, because it is not generated in a spec position but adjoined to the VP. Using Baker's Government Transparency Corollary, he argues that the trace is properly governed by the low verb, which raises, via head-to-head movement, to the passive head. Regarding the crossing of two VPs, he claims that the passive phrase is 'thematically defective', so the two VP boundaries do not count, but it is not entirely clear how this works. The analysis, while interesting and challenging, is heavily dependent on the GB-era theory and it doesn't translate easily into more modern, minimalist terms. The biggest issue is the claim that PRO doesn't count as an intervener because it is not in a specifier position.

KOIZUMI (1995) The problem of V-V compounds is also tackled by Koizumi (1995, 1998). Specifically, he is interested in the different scopal readings available for the object of the low verb. He argues that the available scope is directly related to the position into which an NP

moves in order to receive case. For a V-V compound structure (28), the possible scope relations, according to Koizumi, are shown in (29):

(28) Subj DO V₁-V₂

(29) **Raising:**

- a. (i) V₂ > DO
- (ii) DO > V₂

Some control verbs:

- b. (i) *V₂ > DO
- (ii) DO > V₂

Other control verbs:

- c. (i) V₂ > DO
- (ii) DO > V₂

Koizumi's work is done in the early minimalist framework, which posited Agr phrases which were responsible for agreement and case. Here I omit some technical details from Koizumi's analysis and present the gist of his proposal. In Koizumi's approach, accusative case checking must be licensed by the presence of T (Watanabe, 1993).

If the DO can take scope over the V₂, it means that case is assigned to the DO in the AgrOP of V₂ (high AgrOP).⁵ For case assignment, the DO must rise into that position and thus it is able to take wide scope. If the DO takes narrow scope with regard to V₂, it is assigned case in the AgrOP of V₁ (low AgrOP). Raising verbs do not have an accusative case feature. Therefore, the case feature of the V₁ is discharged in the lower shell (in the AgrOP of V₁), thus accounting for (29-a-i). However, the case feature of V₁ can rise as high as the AgrOP of V₂, so the case of the DO can be checked there, thus accounting for the pattern in (29-a-ii). This is triggered by a restructuring process in which V₁ moves into V₂.

For the control verbs (29-b), the DO cannot be assigned case in the lower AgrOP projection, because T is too far to license this process. Licensing by T is blocked by the presence of the accusative case feature present in the AgrOP of V₂. Since this is impossible, case of the DO must be checked in the higher AgrOP. Thus, the DO must always take scope over the V₂ (29-b). However, it is not clear what happens with the accusative case feature of V₁, which remains undischarged, and thus should cause a crash.

⁵See also Bobaljik & Wurmbrand (2005, 2007) for a related account.

Interestingly, these control verbs correspond to Kageyama's transitive verbs which take a V' complement (control-II). The last category, (29-c), corresponds to Kageyama's verbs which take a VP complement (control-I). In these constructions, according to Koizumi, scopal relations are ambiguous. The main difference from the previous category is that these verbs do not have an accusative feature. Thus, there is no intervening Acc in the high AgrOP to block case licensing by T, so accusative can be checked either high or low, as was the case for raising verbs.

Koizumi claims that in raising verbs, case can be assigned either upstairs or downstairs. However, in chapter 3, I argue, following Kishimoto (2007b), that case in raising predicates is assigned downstairs. Therefore, the wide scope of the DO over V₂ should be unavailable. Indeed, Yumoto (2005) argues that, in principle, this is not possible. For instance, in an example like (30), only the V₂>DO reading is possible:

- (30) Sensei ga Taroo dake o home-sugi-ru.
 Prof. NOM Taroo only ACC praise-exceed-PRES
 *(DO>V₂) "It's only Taroo that the teacher praises too much."
 (V₂>DO) "What the teacher does too much is to praise only Taroo."

If the scope facts do indeed reflect the locus of the case assignment, as Koizumi argues, the interpretation of (30) suggests that in raising constructions, case is assigned in the lower verbal shell.

KISHIMOTO (2007B) The case assignment in V-V complex verbs is discussed also by Kishimoto (2007b). He uses the potential construction to determine what head assigns case to the embedded object (the data will be discussed in detail in chapter 3). He argues that in raising V-V constructions, case is assigned by the lower verb. On the other hand, in some control predicates, case is assigned upstairs. Not surprisingly, this class corresponds to the control-II class. Based on this data, Kishimoto proposes that:

"[T]he case array of the clause is determined by the predicate that θ -marks the subject."

This can be seen as some sort of extended Burzio's generalization. Burzio's generalization only deals with simple predicates, but Kishimoto extends it over complex predicates as well.

Kishimoto's generalization works well for raising verbs: the locus of the case assignment is the same head that introduces the subject. It also works for control-I verbs: the subject is θ -marked

by V₂ and, indeed, that is also the head that assigns case to the DO. But in control-II predicates, as Kishimoto shows, case is assigned downstairs (by V₁). However, the subject is introduced by V₂. This is where the generalization breaks down. What about another complex predicate construction, namely the causative? The received opinion (Harley, 1995, Marantz, 1981, Mihara & Hiraiwa, 2006, to name only a few) is that case of the embedded object is assigned by the low verb. On the other hand, the subject (the causer) is introduced by a higher head, the causative itself. So does Kishimoto's generalization really work? Much of what I discuss in subsequent chapters is dedicated to proving that it does, in fact, work.

FUKUDA (2007) An interesting proposal is made by Fukuda (2007). He discusses a subset of V-V predicates and argues that they are functional projections, namely aspectual heads. In his proposal, verbs that are usually considered raising verbs are analyzed as *high* aspectual heads and control verbs are *low* aspectual heads. High heads are projected above *v*P and low heads below it. Thus, he explains the fact that raising verbs do not passivize but can take a passive complement, while 'control' verbs have the opposite pattern. This is because passive morphology is hosted by *v*, so only a head lower than it could passivize. The proposal is reminiscent of Cinque's analysis of Italian restructuring verbs (see §3.10 for a detailed discussion). Moreover, although different in the technical details, his analysis is very similar to what I propose in chapter 3: namely that 'raising' verbs are functional categories above *v*P and 'control' verbs are lower. I termed low control verbs 'semi-functional' categories, because they introduce an argument (so they have some lexical properties), but in Fukuda's analysis they are considered functional categories. He only discusses aspectual verbs and doesn't include in his analysis the other type of control verbs (dubbed here control-II), such as *sokoneru*, *akiru*. In his analysis, these aspectual constructions are mono-clausal, since the V₂s are functional heads. Again, this is in the same spirit with the present proposal, where I claim that raising and control-I verbs are restructuring verbs, therefore they appear in mono-clausal constructions.

2 CAUSATIVES AND DITRANSITIVES

The first half of this chapter deals with causative constructions. After reviewing the evidence that causatives have both bi- and mono-clausal properties, I discuss their syntactic structure. Then I give several arguments that both the causee and the direct object of the base verb receive case from the same head. I also discuss some theoretical implications of this analysis. The discussion revolves mostly around the coercive causative, because it is in that construction that the case assignment raises most questions.

This chapter was initially only about causatives. However, there appear to be some interesting similarities between causative constructions and ditransitives. Even though it might be argued that ditransitives are not really complex predicates, I decided to dedicate the second half of this chapter to a discussion on ditransitives, in order to highlight these similarities. It will become apparent that the case assigning mechanism is at work in both types of constructions.

2.1 CAUSATIVES

2.1.1 INTRODUCTION

In general, causativization can be defined as the augmentation of the thematic grid of the base verb with one argument, the *causer*, which becomes the new subject of the whole construction (see Comrie, 1976). The external argument of the causativized verb becomes the *causee*.

One can distinguish between lexical and syntactic (or productive) causatives. Lexical causatives are transitive verbs with a causative meaning, which usually have an intransitive (non-causative) pair (see Shibatani, 1976a,b). The meaning of these transitive verbs is sometimes unpredictable from the meaning of their intransitive counterparts. Also, their morphological realization is not systematic. The structure and meaning of the lexical causatives belong to the domain of inquiry into lexical-conceptual structure, so in what follows, I will only discuss the syntactic causatives. During the history of generative grammar, there were two main approaches to the

productive causatives: the lexicalist and the transformationalist. Among the first, Miyagawa (1989) and Manning et al. (1999) can be cited. The transformationalist camp includes Kuroda (1965b), Kuno (1973), Aissen (1979), and others¹. There are overwhelming arguments for a syntactic generation of causatives, therefore I will take the latter position and refer the reader to the plethora of arguments in the literature.

I have mentioned that there are two types of causatives: permissive and coercive. Semantically, however, there are more possible interpretations of causatives: as shown by Matsumoto (1996) and Shibatani (1976a), there are at least four possible readings: (i) inducing-persuasive (ii) inducing-coercive (iii) permissive-explicit and (iv) permissive-implicit. These readings can be forced by using certain adverbs ('forcibly', 'gently', etc.).

The inducing-persuasive reading implies that the causee does the action willingly. In this case, the causee is marked with *ni* (all examples here are from Shibatani, 1976a):

- (1) Boku wa yayasiku iikikasete John ni ik-ase-ta.
 I TOP gently persuading J DAT go-CAUS-PAST
 "I gently persuaded John to go."

In the inducing-coercive interpretation, however, the causee is forced to do the caused action, without his/her consent and appears with *o*:

- (2) Boku wa tikaaduku-de John o ik-ase-ta.
 I TOP forcibly John ACC go-CAUS-PAST
 "I forcibly caused John to go."

In the permissive-explicit causative, the causer explicitly gives permission to the causee to perform the action. The causee appears with *ni*:

- (3) Aa, iiyo to itte kodomo ni motto asob-ase-ta.
 oh, ok COMP saying children DAT more play-CAUS-PAST
 "I let the children play more by saying 'Oh, ok.'"

Finally, in the permissive-implicit reading, the causer doesn't interfere and lets the action of the main verb take place. The causee is marked with accusative in such constructions:

¹See also Kageyama (1999) for a quick review of transformationalism and lexicalism. Also, Kuroda (2003) offers a historical perspective of the two approaches, considering also the influence played by Chomsky's famous paper on nominalization.

- (4) Reizooko ni ire-zu ni hotte-oite, yasai o kusar-ase-ta.
 Fridge DAT put-NEG ADV.PRT neglect, vegetable ACC rot-CAUSE-PAST
 “I let the vegetable rot without putting it in the refrigerator.”

These four possibilities can be derived combinatorially by an interplay between the (non-) agentivity of the external argument of the causativized verb and the (non-) involvement of the causer argument. However, from a syntactic perspective, the coarse-grained two-way distinction between *ni* causatives and *o* causatives is sufficient for our present purposes.

2.1.2 BICLAUSAL PROPERTIES

Causatives are more complex than they would appear at first blush: they might look like simple monoclausal constructions, but there are several arguments, often discussed in the literature, that they involve in fact a biclausal structure. The arguments come from the behavior of the anaphoric *zibun*, that of pronouns, the *-nagara* construction, and from the scope of adverbials. In what follows I will briefly review some of these arguments, reflexivization, adverbial scope and honorification.

Reflexivization is one of the best known tests for subjecthood in Japanese. It is well known that the anaphor *zibun* can have only a subject as its antecedent (Tsujimura, 1996, Inoue, 1993, Kuno, 1973, Shibatani, 1976a). Coreference with a non-subject constituent is not possible, as illustrated in (5):

- (5) Taroo_i ga Hanako_j o zibun_{i/*j} no heya de mi-ta.
 Taroo NOM Hanako ACC self GEN room in see-PAST
 “Taro saw Hanako in his own room.”

It is interesting to note the behavior of *zibun* in the case of a multi-clausal sentence: one would expect its only possible antecedent to be the closest subject. However, this doesn’t happen, as can be seen in (6):

- (6) Taroo_i wa Hanako_j ga zibun_{i/j} no heya ni iru to omot-ta.
 Taroo TOP Hanako NOM own GEN room in be COMP think-PAST
 “Taro thought Hanako was in his / her room.”

In a causative construction, the possible antecedents of *zibun* are unexpected (Miyagawa, 1999, 237; Shibatani, 1976a, 20, and others):

2 Causatives and Ditransitives

- (7) a. Tanaka_i ga Suzuki_i ni zibun_{i/j} no hon o yom-ase-ta.
 Tanaka NOM Suzuki DAT self GEN book ACC read-CAUS-PAST
 “Tanaka made/let Suzuki read self’s book.”
- b. Taroo_i wa Hanako_j o zibun_{i/j} no kuruma kara ori-sase-ta.
 Taroo TOP Hanako ACC self GEN car from come.down-CAUS-PAST
 “Taroo made Hanako come out of his/her own car.”

As expected, *zibun* is coreferent with *Tanaka* in (7-a) and with *Taroo* in (7-b), since these NPs are subjects. A bit more surprising, however, is the fact that the dative NP *Suzuki* in (7-a) and the accusative NP *Hanako* in (7-b) can act as the antecedents of the reflexive. We have seen that *zibun* can take only a subject as its antecedent and, as shown in (5), it can be either the matrix subject or the embedded subject. The same kind of phenomenon seems to happen in (7), so we can conclude that the *causees* (*Suzuki* and *Hanako*) behave as subjects. The causative constructions are therefore biclausal — they have two subjects. In (7-a), *Tanaka* functions as the subject of the *-sase* predicate and *Suzuki* as the subject of the predicate *yom-*.

Interestingly, the causee has subject properties in causatives in other languages as well. Kayne (1975) notes the same thing for Romance causatives. In French, the adverbial expression *d’une seule main* (‘with one hand’) modifies the subject, as seen in (8):

- (8) a. Paul s’est hissé d’une seule main sur le cheval.
 Paul SE-is lifted with only one hand on the horse
 “Paul lifted himself with one hand onto the horse.”
- b. Elle a poussé Paul d’une seule main sur le cheval.
 She has pushed Paul with only one hand on the horse
 “She pushed Paul with one hand onto the horse.”

In (8-b), the hand belongs to *elle* (‘she’), not to Paul. In French causatives, the causee can be modified by *d’une seule main*, suggesting that the causee has (some) subject properties:

- (9) La peur a fait se hisser Paul d’une seule main sur le cheval.
 “Fear made Paul lift himself with one hand onto the horse.”

The behavior of French causatives closely mirrors Japanese ones in this respect.

The interpretation of adverbs gives further support for the biclausal analysis of syntactic causatives. Consider the following examples (Tsujimura, 1996, 262):

- (10) a. Taroo wa Hanako o *te o takaku age-te* tome-ta.
 Taroo TOP Hanako ACC hand ACC high raise-ing stop-PAST
 “Taroo stopped Hanako with a hand raised high.”
- b. Taroo wa Hanako o *te o takaku age-te* tomar-ase-ta.
 Taroo TOP Hanako ACC hand ACC high raise-ing stop-CAUS-PAST
 “Taroo made Hanako stop with a hand raised high.”

The verb *tomeru* (‘stop’) in (10-a) is a lexical causative. The adverbial *te o takaku agete* (‘raising a hand’) refers in this case only to *Taroo* and the sentence is unambiguous. On the other hand, in the example (10-b), which is a syntactic causative, there is an ambiguity with regard to who is the person who raised a hand: it could be either the *causer* (*Taroo*) or the *causee* (*Hanako*). In (10-a) there is only one predicate, *tomeru*, which the adverbial modifies, but in (10-b) there are two events: the causation event and the event denoted by the embedded predicate, *tomar-* (‘stop’). The adverbial can modify either of these two predicates.

Honorification data also suggests that causatives are biclausal (thanks to Y. Matsumoto for pointing out this argument). Japanese has a pattern of honorification which exalts the grammatical subject (Harada, 1976, see also the discussion in §3.3): the discontinuous morpheme *o...ni naru* appears on the verb whose subject is seen as worthy of honorification. As discussed by Kuno (1983), Matsumoto (1996), in causatives the causee can be the target of subject-honorification, and the honorific morpheme appears on the base verb, showing that the causative is a biclausal structure and that the causee has subject properties. The following example is from Matsumoto (2003):

- (11) Sensei ni wa manzoku ga iku made o-yasumi ni-nar-asete oku no
 teacher DAT TOP satisfaction NOM go till S.HON-rest S.HON-CAUS leave NOUN
 ga ii desyou.
 NOM good be.HORT
 “It would be good to leave the teacher to have a rest till she is satisfied.”

Here, *sensei* (the professor) is honorified in the lower clause, i.e. with the honorific appearing on the base verb, not on the causative verb, showing that *sensei* behaves as the subject of the base verb.

However, honorification of the causee is permitted only in the case of permissive causatives. Kuno and Matsumoto argue that this is not a syntactic restriction, but a matter of interpretation: it is pragmatically odd to have a honorified person forced to do something.

To conclude, there are good reasons to analyze causatives as biclausal structures (where the notion of biclausality still needs to be more precisely defined), but at the same time they exhibit properties of a single clause, as will be discussed in the next section.

2.1.3 DOUBLE O CONSTRAINT

Japanese disallows two NPs marked with accusative in the same clause. This is known in the literature as the Double *o* Constraint (DoC), for which Harada (1973) is usually credited (but Harada himself credits Shibatani for it). To illustrate this constraint, first note that Japanese has a large class of nominal verbs, formed by the incorporation of a noun to the verb *suru* ('do'). The incorporation is not obligatory, and the noun can appear as a separate expression. In that case, the noun is case marked. Consider the following examples (Tsujimura, 1996, 250–251):

- (12) a. Sensei ga kenkyuu-suru.
 teacher NOM research-do
 "The teacher does research."
 b. Sensei ga kenkyuu o suru.
 teacher NOM research ACC do

The complex verb in (12-a) is a transitive verb, so it can appear with a direct object as well:

- (13) Sensei ga gengogaku o kenkyuu suru.
 teacher NOM linguistics ACC research do
 "The teacher does research on linguistics."

However, if the noun does not incorporate, as in (12-b), a direct object cannot be introduced:

- (14) *Sensei ga gengogaku o kenkyuu o suru.
 teacher NOM linguistics ACC research ACC do

The above sentence is ruled out by the Double *o* Constraint, since the structure contains two NPs marked with accusative case. It is important to note that the constraint only applies in the case of *clause-mate* nominals. If the two accusative DPs are in different clauses, no problems arise:

- (15) [Taroo ga [Hanako o nagutta] otoko o seme-ta].
 Taroo NOM Hanako ACC hit man ACC blame-PAST

“Taro blamed the man who hit Hanako.”

(Tsujimura, 1996, p. 254)

For causative constructions, the same constraint can be observed, indicating that the *causee* and the direct object of the main predicate are clause mates. Consider the examples in (16):

- (16) a. Taroo ga hon o yon-da.
Taroo NOM book ACC read-PAST
“Taro read a book.”
- b. Hahaoya ga Taroo ni hon o yom-ase-ta.
mother NOM Taroo DAT book ACC read-CAUS-PAST
“His mother made/had Taro read a book.”
- c. *Hahaoya ga Taroo o hon o yom-ase-ta.
mother NOM Taroo ACC book ACC read-CAUS-PAST
“His mother made/had Taro read a book.”

If we derive a causative from the transitive construction in (16-a), there are, in principle, two possibilities: (16-b), where the causee is marked with *ni* and (16-c), where the causee is marked with *o*. However, the Double *o* Constraint rules out (16-c) (regardless of the intended meaning, coercive or permissive) because the sentence contains two NPs bearing accusative case: the causee (Taroo) and the direct object of the base verb, *hon* (‘book’). In order to avoid the violation of this constraint, when a transitive verb is causativized, both the coercive and the permissive constructions have the same form, i.e. the one in (16-b). Such sentences are therefore ambiguous between the two possible readings.

The constraint allows for a number of exceptions. There are certain cases where two *o*-marked nominals do not cause ungrammaticality. One instance is found with verbs that describe an action of passing, or crossing and take an argument which denotes the path which is crossed or the point of departure. This argument is marked with *o* (perlocative or ablative, also referred to as ‘traversal *o*’), but it doesn’t preclude the existence of another NP marked with accusative. I will assume, together with Poser (2002), that this type of *o* is an inherent / oblique case. This construction is illustrated in (17):

- (17) a. ?Taroo ga Hanako o hamabe o aruk-ase-ta.
Taroo NOM Hanako ACC shore ACC walk-CAUS-PAST
“Taro made Hanako walk along the shore.” (Kuroda, 1978)
- b. ?Syounen wa ame no naka o saka o nobori ...
boy TOP rain GEN middle ACC slope ACC climb

“The boy climbed the slope through the rain ...” (Shibatani, 1978)

However, not all speakers agree with regard to the acceptability of (17); for some, they have at least a question mark, but there are ways to make that question mark go away, as discussed immediately below.

It has been argued by Matsumoto (1996, 32-33) and Poser (2002) (see also Kuroda, 1978) that there are in fact two DoCs: one of them is syntactic in nature, while the second is phonological (Poser calls them Deep DoC and Surface DoC, respectively). In what follows I will present the gist of their findings.

The arguments for postulating two constraints are:

- (i) there are instances where only one *o* appears in the surface structure. In certain constructions (i.e. those corresponding to the surface DoC), this changes the grammaticality judgment, while in others (the Deep DoC) it makes no difference.
- (ii) there are cases where the linear distance between the two *o*-marked NPs makes a difference in the grammaticality judgment, while in other cases it does not.

Consider the sentence in (18-a). It shows a typical DoC violation: two clause-mate NPs bear accusative case. In the minimally contrasting (18-b), only one accusative case is present in the surface form:

- (18) a. Taroo wa Hanako *o/ni mesi o tak-ase-ta.
 Taroo TOP Hanako *ACC/DAT rice ACC cook-CAUS-PAST
 “Taroo made Hanako cook rice.”
- b. *Taroo wa Hanako o mesi mo tak-ase-ta.
 Taroo TOP Hanako ACC rice also cook-CAUS-PAST

When the emphatic particles *wa* and *mo* attach to a noun, the case particle of the noun is usually not overtly realized, although it may be. Thus, NP-*o* + *mo* becomes NP-*mo* or NP-*o-mo* and NP-*o* + *wa* becomes NP-*wa* or NP-*o-ba*. Of course, even if the case morpheme is not overtly realized, the NP still has to receive Case, as all NPs do. This is illustrated in (18), where the noun *mesi* (‘rice’) receives the particle *mo*. The surface form here is *mesi mo*². The accusative morphology is no longer present, but the sentence is nevertheless ungrammatical. This suggests that DoC is not sensitive to the actual phonetic / morphological realization of case, but to the

²The form *mesi o mo* is also possible.

underlying syntactic configuration, regardless of whether this configuration is obviated by other morphological factors.

Another instance in which the accusative morphology is rendered invisible but the DoC still holds can be seen in relative clauses:

- (19) *Taroo ga Hanako o *e* tak-ase-ta mesi
 Taroo NOM Hanako ACC *e* cook-CAUS-PAST rice
 “the rice that Taroo made Hanako cook”

In the above example there is only one (overt) NP marked with accusative, namely *Hanako*. However, the relative clause must also contain an empty category coindexed with the head of the relative clause. This empty category is in a position which is marked with accusative. This seems to be enough to trigger the DoC violation. Again, this suggests that DoC is only concerned with syntactic structures, not with their actual phonetic realization.

On the other hand, however, there are several situations in which it appears that DoC is sensitive to phonology. There are speakers for whom the traversal *o* discussed above (see (17-b) on the facing page) cannot co-occur with a structural accusative *o*. For those speakers, however, the degraded sentences drastically improve in acceptability if either: (i) one of the *o* is not pronounced (as a result of *mo* attachment or relativization, for instance) or, (ii) the two *o*-marked NPs are further away from each other. Relevant examples are given below.

- (20) Koko wa Taroo ga Hanako o aruk-ase-ta hamabe da.
 this TOP T. NOM H. ACC walk-CAUS-PAST beach be.
 “This is the beach along which Taro made Hanako walk.”

Here, there is only one overt accusative case, as a result of the relativization of *hamabe*. The structure is acceptable even for those speakers who do not like (17-b). The same result can be obtained by increasing the linear distance between the two *o* marked phrases, as shown in (21):

- (21) a. ?Isao wa Yooko o hamabe o aruk-ase-ta.
 Isao TOP Yooko ACC beach ACC walk-CAUS-PAST
 “Isao made Yooko walk along the beach.”
 b. Isao wa Yooko o isogiashide hamabe o aruk-ase-ta.
 Isao TOP Yooko ACC at-double-time beach ACC walk-CAUS-PAST
 “Isao made Yooko walk along the beach at double time.”

On the basis of these data, Matsumoto (1996) and Poser (2002) conclude that there are in fact two DoCs: a syntactic (deep) one and a phonological (surface) one. The syntactic constraint prohibits two structural accusatives in the same clause, while the phonological one, for whatever reason, disfavors two *o*-marked nominals too close to each other. The examples in (20) and (21) are instantiations of the phonological variety of DoC, since their acceptability can be altered by the overt presence of two *os* or by the distance between them. On the other hand, the sentences (18) and (19) are examples of violations of the syntactic DoC.

As examples (18) and (19) show, causative constructions are subject to the deep DoC, meaning that the causee and the lower DO cannot both appear with accusative case. Neither *mo* insertion nor relativization can save the causative constructions from a DoC violation. Here are some more examples which illustrate this phenomenon:

(22) (*mo* insertion)

- a. *Hiroko ga sono imooto o okasi mo tabe-sase-ta.
 H NOM her younger.sister ACC cake *mo* eat-CAUS-PAST
 “Hiroko made her younger sister eat cake too.”

(23) (relativization)

- a. *Kore wa Hiroko ga sono imooto o tabe-sase-ta okasi da.
 This TOP H NOM her younger.sister ACC eat-CAUS-PAST cake be
 “This is the cake that H made her younger sister eat.” (Poser, 2002)

For this reason, when a transitive verb is causativized, the causee will always appear in dative, regardless of the intended meaning: coercive or permissive, as noted above. It should be mentioned that for transitive verbs which lexically mark their internal argument with a case different than accusative (i.e. they assign inherent case), the problem does not arise. For instance, the verb *au* (‘meet’) takes a dative marked argument. Under causativization, the causee can appear in the accusative case (Santorini & Heycock, 1988):

- (24) Mitiko wa Taroo o Junko ni aw-ase-ta.
 Mitiko TOP Taroo ACC Junko DAT meet-CAUS-PAST
 “Mitiko made Taro meet Junko.”

The acceptability of (24) shows that in DoC violations the problem is clearly not related to the number of arguments, but with the number the structural Case features that can be assigned

within a single clause. The null hypothesis is that there are not enough case assigning heads to assign accusative to two nominals. It is natural to assume that ν can check case only once, so one nominal with structural accusative is permitted. If a second nominal needs case, there is no other head in the structure that could check it, and so the derivation crashes because of unchecked uninterpretable features at LF and / or PF. If correct, the fact that DoC does not apply to nominals which are not clause-mates follows naturally: two different clauses have two different ν heads, so there is one case assigner for each nominal.

It is interesting to note that in Turkish, causatives seem to exhibit a similar behavior: causees of intransitive verbs receive accusative, but when a transitive is causativized, the causee receives dative unless the base verb marks its object with inherent dative case. In the latter scenario, the causee appears with accusative. The following examples are from Aissen (1979):

- (25) a. Kasap et-i kes-ti.
butcher meat-ACC cut-PAST
“The butcher cut the meat.”
- b. Hasan kasab-a et-i kes-tir-di.
Hasan butcher-DAT meat-ACC cut-CAUS-PAST
“Hasan had the butcher cut the meat.”
- (26) a. Çocuk okul-a başla-dı.
child school-DAT begin-PAST
“The child began school.”
- b. Çocuğ-u okul-a başla-t-tı-k.
child-ACC school-DAT begin-CAUS-PAST-1PL
“We made the child begin school.”

When the transitive (25-a) is causativized, as in (25-b), the causee appears in dative, since there is already an accusative NP in the structure (the DO of the base verb). On the other hand, (26-a) is a transitive verb which inherently marks its object with dative case. When this structure is causativized, the causee appears in accusative (26-b), because there is no other NP to compete with for that case.

Japanese isn't then the only language which tends to avoid two accusatives in the same clause. On the other hand, Korean is reported to allow such an option. It seems that we are dealing with a parameter whose setting can vary from language to language.

Another property of causatives which is typical of a monoclausal structure is their behavior in the *sika...nai* construction. The negative polarity item *sika* ('only') has to be in the same clause with the negation *nai* (see chapter 3 for more details). In causatives, *sika* can appear attached to the lower DO while the negation appears above the causative:

- (27) Hahaoya wa musuko ni yasai shika tabe-sase-naka-tta.
 mother TOP son DAT vegetable only eat-CAUS-NEG-PAST
 "The mother didn't allow her son to eat anything but vegetables." (Yoshimura, 2006)

This shows that the lower verb (the lexical verb) and its internal argument are not in a clause separate from the causative head.

We are faced with a paradox: on one hand, causatives have properties typical of biclausal constructions, as discussed in §2.1.2, on the other hand they exhibit monoclausal properties with regard to the array of available case marking and the *sika...nai* construction.

There are many analyses that try to solve the mono / bi-clausal paradox posed by Japanese causatives. In the framework of early transformational grammar, an underlying biclausal structure was assumed, which undergoes a process of clause union / tree pruning, resulting in a surface structure which is monoclausal. Other analyses took different approaches: in the framework of LFG, Matsumoto (1996) proposed that (one subtype of) Japanese causatives are monoclausal at f(unctional)-structure but have a biclausal a(rgument)-structure. In the HPSG framework, Gunji (1999) uses two parallel structures, a tectogrammatical structure (biclausal) and a phenogrammatical one (monoclausal). In this light, the present analysis is yet another attempt to understand the paradox. Specifically, I am concerned with the case patterns associated with causatives: why do they behave as a single predicate with regard to case assignment if they have otherwise clear biclausal properties?

2.1.4 THE COMPLEMENT OF V_{caus}

In line with much recent work, I will take the causative *-sase* to be a species of v , a semi-functional head of the type proposed by Harley (1995), Kratzer (1996), Travis (2000), and others. This is justified by the fact that (i) *-sase* introduces an external argument (namely, the causer) and, at the same time, (ii) it has the capability to assign case. The first property — assigning a thematic role — is shared with lexical categories, while the second property, the ability

to assign case, is shared with functional elements. Thus, (different types of) *vs* are usually classified as semi-functional categories.³

The first property, namely the fact that *-sase* introduces an external argument, requires, I believe, no further qualification. Causativization is an operation that increases by one the number of arguments in a clause. The newly introduced argument is the *causer*, while the old Agent becomes the *causee*. Insofar as the causative can introduce an argument, it behaves like a lexical head.

The second property (ii) is that *-sase* has the ability to assign case and in this respect, it behaves as a functional head. Unergative (28-a) and unaccusative verbs (28-c) don't have a case feature to assign, and thus their sole argument (external for unergatives and internal for unaccusatives) normally surfaces with nominative case, assigned by T. Yet, when an unergative or an unaccusative verb is causativized, the only argument of the verb will not appear in the nominative. Instead, it will bear accusative (in the 'make' construction) or dative (in the 'let' construction). Since the main verb has no case to assign, the accusative / dative must come from the causative head, *-sase*:

(28) Unergative:

- a. John ga hasit-ta.
J. NOM run-PAST
"John ran."
- b. Mary ga John o hasir-ase-ta.
M NOM J ACC run-CAUS-PAST
"Mary made John run."
- c. Mary ga John ni hasir-ase-ta.
J DAT
"Mary let John run."

Unaccusative:

- d. John ga sin-da.
J. NOM die-PAST
"John died."
- e. Isya ga John o sin-ase-ta.
doctor NOM J. ACC die-CAUS-PAST
"The doctor let John die."

³See also van Riemsdijk (1998) for a detailed classification between lexical, functional and semi-functional categories.

In fact, empirical data that will be discussed later on in this chapter indicate that *all* the arguments of the causativized verb receive their case features from the causative head. It will be shown that even the internal argument of a transitive verb gets accusative from *-sase*, contrary to what might be expected.

We have seen that the behavior of *-sase* is that of a typical ν head: it can assign case and it introduces an external argument. For convenience's sake, I will refer to it as ν_{caus} .

What kind of complement does the ν_{caus} head take? Is it a full CP, a bare VP or something in between? In the old days, the causative was analyzed as taking a full S complement, which then would get deleted by a restructuring-like operation. In more recent works (e.g. Harley, 1995), the causative is assumed to take a ν P complement. The causative cannot select for anything bigger than a ν P; if it did, one would expect to see intervening elements between the main predicate and *-sase*, such as tense. However, forms like **tabe-ta-sase-ta* (eat-PAST-CAUS-PAST) are complete gibberish, indicating that there cannot be any intervening projection between ν and ν_{caus} .⁴ Usually, negation cannot break the V+*sase* string either, but there might be some exceptions which will be briefly discussed in §2.1.6.6.

To my knowledge, the only elements that can intervene between the causative morpheme and the main verb are emphatic particles: *mo*, *sae*, etc. It has been argued by Aoyagi (1998) that these particles have the status of clitics, i.e. heads that do not project. Moreover, he shows that they do not disrupt the selectional properties of the heads between which they appear. If a head α selects for β as its complement, the sequence α *mo/sae* β is well formed, too. However, it is a point of controversy if forms such as V-*mo-sase* are (i) the result of the intervention of the particle *mo* between the verb and the causative morpheme or if they are (ii) the result of the causativization of the form V-*mo-suru*. I will return to this issue in section 2.1.6.6. If option (i) is true, it means that only non-projecting clitic-like elements can intervene between the base verb and the causative, as argued by Aoyagi. If option (ii) is true, it means that nothing can intervene between the base verb and the causative morpheme.

I assume that the causative morpheme selects for a full ν P complement, not for a smaller projection such as VP. This is motivated by the fact that the embedded predicate projects full argument structure, including its external agent, which is projected as a Spec of ν P.

In the same vein, Saito (2009) argues that the lower predicate must include a specifier position of a ν P, since there must be a subject position in the embedded predicate. The reason is that, as already discussed in section 2.1.2, the causee can be the antecedent of the subject-oriented

⁴The same argument is made by Guasti (1997, 2006) for Romance causatives.

Inchoative	Causative	
<i>miti-ru</i>	<i>mitas-u</i>	‘become full / fill’
<i>koware-ru</i>	<i>kowas-u</i>	‘break’

Table 2.1: Inchoative / causative morphology

anaphor *zibun*. It follows that the causee must occupy the syntactic position of a subject. Subject positions are either the specifier of TP or that of ν P. T, however, is not present in the lower clause, so the only remaining candidate is Spec ν P. The issue is not without complications, since the argument of an unaccusative still has subject properties even though it is not generated in the specifier of ν P but lower, within the VP. Saito’s solution is to argue that what counts as a subject is an NP either *generated* or *raised* into the Spec ν P position (see Saito, 2009 for further discussion).

Moreover, the morphology of the lexical verb suggests that its ν projection is present. Causative / inchoative alternations in Japanese show morphological differences, as illustrated in table 2.1.⁵ Inchoative verbs are headed by a ν which does not project an external argument and doesn’t assign case, while the (lexical-)causative counterparts have a ‘full’ ν , i.e. a ν which assigns case and introduces an external argument. In English, for instance, this ν head doesn’t have any phonological realization.⁶ For Japanese, however, it seems reasonable to assume that these morphological differences are a reflex of the different ν s: thus, for a verb like *mitiru*, *mit-* is the verbal root and *-i* is the unaccusative ν , (*-ru* is the tense marker) while the transitive ν , *-as* gives rise to *mitasu*. The idea that ν in Japanese has some phonological reflex is also briefly discussed in Fukui & Takano (1998). Hasegawa (1999) too argues that ν hosts the various transitive and intransitive morphemes in Japanese.

If syntactic causatives selected VPs, one would expect the causative *sase* to attach directly to the verbal root. In fact, *sase* appears together with the unaccusative / transitive morphology of the main verb: *mita-saseru*, *miti-saseru*. This provides evidence that the causative morpheme *sase* selects indeed a complete ν P. In fact, in Japanese, V can never appear without the ν head.

We have seen that ν_{caus} cannot take a TP as its complement, since there is no inflection on

⁵There are several alternating transitive / intransitive morphemes in Japanese. The table here illustrates the *-i/-as* and *-re/-s* alternations. A thorough list of the various transitive / intransitive pairs is provided in the appendix of Jacobsen (1992).

⁶However, some ν s can have content. For instance, Pyllk nen (2008) argues that *-en* in *harden* is in fact the phonetic spell-out of ν .

the embedded verb, so a TP would be ‘too big’, nor a VP, since that would be ‘too small’. To conclude, it seems reasonable to assume that the causative *sase* takes as its complement exactly a full *v*P, nothing bigger and nothing smaller than that.

It is in this sense that causatives are biclausal: they involve two *v*P projections, one of the base verb and one of the causative itself. Thus, the causee, being projected in the Spec of a *v*P has subject-like properties (it can be coreferential with *zibun*, as discussed above). The two *v* projections introduce two events, so adverbs are ambiguous with regard to which event they modify.

2.1.5 POSITION OF ARGUMENTS

2.1.5.1 SCRAMBLING

The literature offers various data that show the surface position of arguments in causatives. To begin with, Miyagawa (1999) shows that a locative like *kooen-e* (‘to the park’) cannot be scrambled to the left of a causee in an *o*-causative but it can in a *ni*-causative:

- (29) a. Taroo ga kooen e kodomo o ik-ase-ta.
 T. NOM park to child ACC go-CAUS-PAST
 ‘Taroo made his child go to the park.’
 b. ???Taroo ga kooen e kodomo ni ik-ase-ta.
 T. NOM park to child ACC go-CAUS-PAST
 ‘Taroo let his child go to the park.’

Assuming that the scrambled locative is adjoined to *v*P (or VP, in Miyagawa’s analysis), the contrast above indicates that an accusative causee is within the projection of the lexical verb, namely within the *v*P. On the other hand, a dative causee (in a ‘let’-causative), like in (29-b) must be above the *v*P, since the scrambled phrase cannot appear to its left.⁷

It should be mentioned that Kitagawa & Yoshida (2008) analyze these structures not as ungrammatical but as “grammatical with lowered acceptability”. They performed a statistic study and measured the grammaticality / acceptability of constructions with an adverbial modifier to the left and to the right of both *ni* and *o* causatives. They found out that the lowest degree of

⁷This is an instance of short-distance scrambling, i.e. to the edge of *v*P/VP. If we were to use medium distance scrambling, so that the phrase *kooen-e* (‘to the park’) appears in the leftmost position of the sentence, the example would be grammatical (Y. Matsumoto, p.c.). This, however, doesn’t affect the argument: medium distance scrambling does not intervene between the causee and the lower verb.

acceptability can be seen in constructions in which the adverbial appears to the left of the *ni*-marked causee, especially when the adverbial modified the lower predicate, not the causative one — that is, the type illustrated in (29-b).

A similar argument to that of Miyagawa (1999) is made by Terada (1990), who notes that agent-oriented adverbs like *hitori-de* ('by oneself, alone') cannot refer to a causee in a permissive causative when they appear to its left, but they can refer to a causee in the same configuration in a coercive causative. The following examples illustrate the point:

- (30) a. ??Takasi wa hitori-de Akiko ni iki-tai paati e ik-ase-ta.
 T. TOP alone A. DAT go-DES party to go-CAUS-PAST
 'Takashi allowed Akiko to go to the party she wanted to go alone.'
 b. ?Takasi wa hitori-de suekko o tukai ni ik-ase-ta.
 T. TOP alone youngest.child ACC errand on go-CAUS-PAST
 'Takasi made the youngest child to go on an errand alone.'

The contrast between (30-a) and (30-b) suggests that NP-*ni* in (a) has a different structural position than NP-*o* in (b). While Terada's explanation of the phenomenon cannot be maintained here, since it involves an embedded full IP structure, a possible explanation could go along the same lines as in the case of locatives, discussed above. If the agent-oriented adverb must attach to the lower vP and the *ni*-marked causee is projected in $v_{caus}P$, the contrast between (30-a) and (30-b) follows naturally.

2.1.5.2 EMPHATIC PARTICLES

There is another test for determining the surface position of arguments, which is discussed briefly in Kishimoto (2007b). An emphatic particle such as *mo* ('also, even') can be attached directly to the verbal root (as mentioned in section 2.1.4. See also Kuroda, 1992b). By determining whether a certain nominal is within the scope of the particle or not, one can determine the surface position of that nominal. If it falls within the scope of the emphatic particle, the NP is located within the projection of the verbal root to which the particle is attached. If it falls outside the scope of the particle, it must be located higher.

- (31) XP ... [vP YP ... v -mo]

In (31), the YP constituent can be emphasized by the particle *mo*, while XP cannot. In other words, (31) can have the interpretation 'YP, *too*' but not 'XP, *too*'. The following example is from

2 Causatives and Ditransitives

Kishimoto (2007b) (where the constituent in bold face is the element emphasized by the particle *mo*):

- (32) a. John ga kyoositu de hon o yon-da. Sosite,
John NOM classroom in book ACC read-PAST. Then,
“John read a book in the classroom and...”
- b. (sono) kare ga **tosyokan de** hon o yomi-mo si-ta
that he NOM library in book ACC read-also do-PAST
“He also read a book **in the library**.”
- c. #Mary ga kyoositu de hon o yomi-mo si-ta
Mary NOM library in book ACC read-also do-PAST
“**Mary** also read a book in the classroom as well.”

In (32-b) the constituent emphasized by *mo* is *tosyokan de* (‘in the library’), which is within the ν P, and the sentence is acceptable. In contrast, if the subject, which is located outside the ν P, is emphasized by *mo*, the sentence becomes unacceptable with the intended reading.

Applying this test to a causative construction, one can determine that the causee is located within the lower ν P phrase in a coercive causative, but in a permissive causative it is positioned higher, within the phrase projected by *-sase*. Consider the following examples:

- (33) a. John ga Mary ni hasir-ase-ta. Sosite,
John NOM Mary DAT run-CAUS-PAST. Then,
“John let Mary run. Then,”
- b. #kare ga **Bill ni** hasiri-mo s-ase-ta.
he NOM Bill DAT run-also do-CAUS-PAST
“he let **Bill**, too, run.”
- (34) a. John ga Mary o hasir-ase-ta. Sosite,
John NOM Mary ACC run-CAUS-PAST. Then,
“John made Mary run. Then,”
- b. kare ga **Bill o** hasiri-mo s-ase-ta.
he NOM Bill ACC run-also do-CAUS-PAST
“he made **Bill**, too, run.”

The contrast between (34-b) and (33-b) shows that the position of the causee in a permissive causative is indeed higher than in a coercive causative. However, it should be noted that the sequence *V-mo-sase* can sound a bit awkward, so the judgments on these examples might be less than clear. For instance, Y. Matsumoto (p.c.) judges (34-b) and (33-b) as being equally

unacceptable.

With regard to the direct object, it can be shown that it stays within the projection of the main predicate.

- (35) a. John ga Mary ni hon o yom-ase-ta. Sosite,
 John NOM Mary DAT book ACC read-CAUS-PAST. Then,
 “John made Mary read a book. Then,”
 b. sono kare ga kanozyo ni **zassi** o yomi-mo s-ase-ta.
 that he NOM she DAT magazine ACC read-also do-CAUS-PAST
 “he made her read a magazine, too.”

Here, the direct object remains within the scope of the particle *mo*, indicating that its surface position is inside the projection of the verb *yomu* (‘read’).

2.1.5.3 IDIOMS

Idioms provide additional evidence that the position of the causee is different in a *ni*-causative than that in an *o*-causative. In the former case, idioms show that the structure is a control structure. It is standardly assumed that idiomatic expressions cannot appear in control structures, for reasons of theta-marking. For instance, as discussed in Carnie (2007), an expression like *The cat is out of the bag* retains its idiomatic meaning in raising constructions:⁸

- (36) The cat seems to be out of the bag.

but it can have only the literal interpretation in control constructions:

- (37) The cat is eager to be out of the bag.
 (*literal meaning*=✓)
 (*idiomatic*=*)

In a similar way, *ni*-causatives do not allow idiomatic readings for subject-verb idioms. In contrast, these idioms are possible with *o*-causatives. Consider the following contrast:

- (38) a. Kankodori ga naite-iru.
 cuckoo NOM cry-PRES
 “Business is slow.”

⁸See also e.g. Kishimoto (2007b), Nishigauchi (1993).

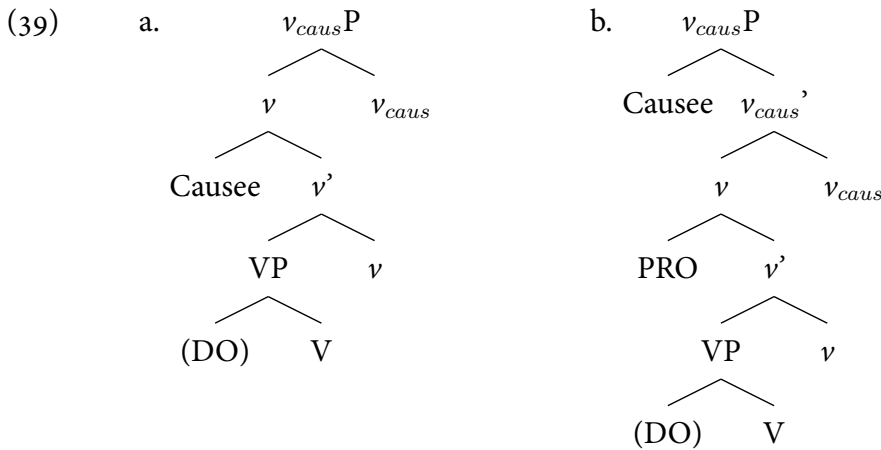
2 Causatives and Ditransitives

- b. #Kankodori ni nak-ase-ru.
 cuckoo DAT cry-CAUS-PRES
 “Let business go slow.”
- c. Kankodori o nak-ase-ru.
 cuckoo ACC cry-CAUS-PRES
 “Cause business to go slow.”

As these examples show, the *ni*-causative in (38-b) is ungrammatical (in the intended idiomatic reading), strongly suggesting that the construction is a control structure. As such, the noun *kankodori* (‘cuckoo’) receives a thematic role from the causative morpheme *sase*, and it controls a PRO projected as the external argument of the base verb. On the other hand, in (38-c), which is an *o*-causative, *kankodori* is base generated in the lower predicate, allowing the idiomatic reading.

*

We have seen in section 2.1.4 that there are good reasons to take *-sase* to be a v -type head which selects a full v P complement. Corroborated with the data in this section, we can conclude that coercive causatives have the structure in (39-a). Permissive causatives, on the other hand, are represented in (39-b):



In the above trees the causer is not represented. The causer is introduced by the v_{caus} head, in a similar fashion with any external argument.

2.1.6 CASE ASSIGNMENT

In this section I discuss the case pattern of causatives. I will provide evidence that all the arguments of the lexical predicate receive their case from the causative v_{caus} . In section 2.1.6.8 I will try to give an account for the observed behavior.

2.1.6.1 THE DATIVE ON CAUSEE

The dative case on the causee in *ni*-causatives has been analyzed by some researchers (e.g. Aoyagi, 1998, Kuroda, 1965b⁹) as being inherent Case (where inherent case is considered idiosyncratic and lexically determined). This section tries to show that, in fact, causees are marked with structural Case in these constructions. In *ni*-causatives, there is indeed evidence that the causee is either marked with inherent Case or is embedded into a PP, but this cannot be true for *o*-causatives.

The notion of structural Case refers to case that is assigned in a certain configuration, sensitive to the syntactic *structure* (hence its name). The Case on a causee is without doubt sensitive to the syntactic environment: it is dative if the main predicate is transitive, but accusative if the predicate is intransitive.

Moreover, there is a standard and time-honored test for distinguishing between structural and inherent case, namely passivization. If under passivization a noun phrase loses its case, it can be safely concluded that it has structural case. The causee in *o*-causatives does lose its case, be it in an intransitive structure or a transitive one, as the following examples show ((40-a) from Harley, 1995 and (40-b) from Terada, 1990):

- (40) a. Hobbes ga piza o tabe-sase-rare-ta.
 H NOM pizza ACC eat-CAUS-PASS-PAST
 ‘‘Hobbes was made to eat pizza.’’
- b. Hanko ga Taroo ni aruk-ase-rare-ta.
 H NOM T by walk-CAUS-PASS-PAST
 ‘‘Hanako was made to walk by Taroo.’’

(Note that neither of the two examples above can be interpreted as a permissive causative, since that construction does not allow passivization of the causee.)

⁹In Aoyagi’s proposal, all intransitive verbs must be represented as unaccusatives in Japanese. This is a rather strange analysis, given that there are clear syntactic differences between unergatives and unaccusatives, as discussed by Kageyama (1993), Kishimoto (2005), Miyagawa (1989), Takezawa (1993).

There are indeed instances in Japanese where the *ni* is arguably either inherent case or perhaps a postposition, as discussed for instance in Sadakane & Koizumi (1995).¹⁰ However, it is clear from the passivization facts that in make causatives, the *ni* particle of the causee is structural case, and that structural case comes from the causative morpheme.

2.1.6.2 WHERE IT COMES FROM

Since the beginning of the generative enterprise in Japanese (Kuroda, 1965a), the mechanism of case assignment in causative constructions has been a rather thorny problem and the analyses postulated ad hoc solutions, making use of the linear position of arguments (the first unmarked NP receives nominative, the second accusative and so on).

Many years later, the problem of case in causatives still has no satisfactory solution. Harley (1995) proposes a *Mechanical Case Parameter*,¹¹ which states (simplifying) that if three case features are checked in one clause, the first is realized as nominative, the second as dative and the third as accusative (see also Folli & Harley, 2007). To my mind, this is simply a restatement of the data, with no real explanatory value.

The question that has to be answered is why the case of the causee (which many people assume is assigned by the causative head itself) is dependent on the case of the embedded direct object (which many researchers assume is assigned by the lexical verb). My solution is to say that we've been asking the wrong question. Case is not assigned in two different clauses but by the same head. When I embarked on the research reported here, I assumed that case is assigned only by phase heads and that only the causative head becomes a phase. At that time, this proposal was stipulative and I had no evidence for it. To my delight, I soon discovered that there are, in fact, empirical arguments that case in causatives is assigned by the causative head. Meanwhile, Chomsky (2005) articulated the idea that syntactic operations (among them case assignment) are triggered by phase heads (see also Branigan, 2005). This theoretic framework permits an implementation in terms of phases of the ideas advocated here.

With regard to the lower agent (i.e. the causee), as already discussed in section 2.1.4, it is clear

¹⁰A related question is whether the distinction is a dichotomy or a trichotomy, that is if Japanese has structural and inherent dative or if it has structural, inherent and postpositional *ni*. Also, note that Japanese has yet another type of *ni*, copular *ni* as in *isya ni naru* ('become a doctor'). See e.g. Takezawa (1993), Sadakane & Koizumi (1995).

¹¹Harley's approach is modeled along the proposal of Marantz (2000). But Marantz's analysis is not problem free either: for instance, it breaks down for unergatives which assign ergative case (unless extra stipulations are made, see also Butt, 2006).

that it cannot receive its case from the lexical verb. The reason for this is that when unaccusative or unergative verbs — which don't have a case feature to discharge — are causativized, their unique argument receives accusative or dative case. That case must come from the causative head. Thus, there is no need to further test from where causees receive their case. In this regard, the present approach is in agreement with previous analyses such as Harley (1995), Miyagawa (1999), which assume (i) *o*-causatives to be similar to ECM constructions, in that the causee receives case from the upper *v* (namely, v_{caus}) and (ii) *ni*-causatives to be control structures, in which the causee is generated higher and controls an empty category (PRO) located within the projection of the main verb.

However, the previous analyses assume without further inquiry that the direct object of a causativized transitive receives its case from the transitive verb (Harley, 1995, Mihara & Hiraiwa, 2006, Miyagawa, 1999, Santorini & Heycock, 1988, and others). This is indeed the null hypothesis: in a regular construction, the DO gets its case from the transitive *v*, so one should expect that if the structure is causativized, the relation between the DO and the verb does not change. However, empirical data show otherwise. As I will discuss later, this departure from the null hypothesis has a welcome consequence, namely a more natural account of the Double *o* Constraint.

There are several tests which can be employed to show what verbal projection assigns case to a certain nominal. By attaching various case-altering morphemes such as passive or potential, it can be determined which verbal projection in a complex predicate assigns accusative case. These constructions are discussed in the following sections.

2.1.6.3 PASSIVE

In 'make' causatives, the causee can be freely passivized. However, it is generally agreed that it is impossible to passivize the lower direct object (Kageyama, 2006, Miyagawa, 1987, 1989, Santorini & Heycock, 1988, to name a few):

- (41) a. Causee t DO V-*v*-SASE-PASS
 ↑
 b. *DO Causee t V-*v*-SASE-PASS
 ↑

For instance, the following is ungrammatical:

2 Causatives and Ditransitives

- (42) *Sono hon wa Taroo ni Hanako ni kaw-ase-rare-ta.
 that book TOP T by H DAT buy-CAUS-PASS-PAST
 “That book was made to be bought by Hanako by Taroo.”

Kageyama (2006) argues that there are instances when the DO in a causative is passivized; but in those cases we are not dealing with ordinary passives, but with ‘peculiar passives’. This type of passive is illustrated in (43):

- (43) This pub hasn’t been smoked hash in before.

According to Kageyama, the peculiar passive is an individual level predicate, in contrast with the ordinary passive which is a stage level predicate (i.e. property description vs. event description). Their syntax is different from ordinary passives in that they do not involve movement. Instead, the subject is base generated in its surface position and the gap is filled by a pro (which undergoes VP adjunction). Another aspect in which peculiar passives differ from the ordinary ones is that in the first, but not in the latter, the verb retains its ability to assign accusative case to its object (*hash* in the above example).

Kageyama argues that in Japanese, while causative-passive constructions of the type (41-a) are freely allowed, the type (41-b) is possible only with peculiar passive. This is illustrated in the following pair of examples:

- (44) a. *Nattoo ga kinoo sensei ni (yotte) kodomo-tati ni tabe-sase-rare-ta.
 Nattoo NOM yesterday teacher DAT (by) child-PL DAT eat-CAUS-PASS-PAST
 “(Lit) Nattoo was forced the children to eat by the teacher.”
 b. Nattoo wa/ga kono tihoo de-wa mai-asa kodomo-tati ni
 Nattoo TOP/NOM this district LOC-TOP every-morning child-PL DAT
 tabe-sase-rare-te iru.
 eat-CAUS-PASS-ASP is
 “In this district, children are strongly advised to eat nattoo every morning.”

The grammatical (44-b) does not describe a particular event, but rather a property of *nattoo* (fermented soy beans). Kageyama gives further arguments that (44-b) is indeed a property description: it can be the complement of a perception verb (a property of individual-level predicates) and it is compatible with *toyuu mono ... mono-da* (‘it is such that ...’). In Kageyama’s proposal, the subject is not derived, but base generated in its surface position and there is a predication relation between it and the verbal phrase. In this sense, as H. Kishimoto (p.c.) points out, the

peculiar passives resemble Major Subject Constructions (e.g. Tateishi, 1994).

Passivization is one of the most straightforward tests for determining what head assigns case to a certain argument. If, by passivizing α , the argument βP is promoted to the subject position, it can be concluded that ordinarily α assigns case to βP . By this logic, since the DO *cannot* be passivized in a causative construction — except for the peculiar passives discussed by Kageyama (2006), which involve a completely different structure — many researchers assume (explicitly or implicitly) that the accusative case of the DO comes from the base verb. In what follows, I will argue that this is not the case and that the accusative of the DO is instead assigned by the causative morpheme. The impossibility of passivization is due to locality conditions on movement.¹² Nevertheless, passivization is just one test which fails. There are other tools which indicate that the case of the DO comes from v_{caus} .

At this point it should be mentioned that although in a causative the low DO cannot passivize, it is free to undergo scrambling. By using *otagai* (Saito, 1992), this movement can be shown to be A-movement:

¹²Nevertheless, it should be noted that passivization of the DO — while severely restricted — is not completely excluded. Several instances can be found in the literature. Matsumoto (1996) offers the following:

- (i) Sono gohan wa mada dare ni mo tabe-sase-rarete i-nai.
 that food TOP yet anyone DAT too eat-CAUS-PASS ASP-NEG
 “That food has not yet been made to be eaten by anyone.”

Another example can be found in Zushi (1996):

- (ii) Hisyo ga seizika-niyotte kisyu ni hihans-ase-rare-ta.
 secretary NOM politician-by journalist by criticize-CAUS-PASS-PAST
 “(Lit.) The secretary was made by the politician to criticize by the journalist.”

Yet another oft-quoted example is given in Manning et al. (1999):

- (iii) Fukei o yorokob-aseru tame toku-ni muzukasii zi ga kodomo-tati ni
 parents ACC be.glad-CAUS in.order.to particularly difficult characters NOM children DAT
 kak-ase-rare-ta.
 write-CAUS-PASS-PAST
 “In order to impress the parents, particularly difficult characters were caused (by the teachers) to be written by the children.”

However, this example is not fully acceptable by all speakers. Manning et al. (1999) consider it ungrammatical while Matsumoto (1996) assigns it a question mark. H. Kishimoto (p.c.) considers these examples uninterpretable.

It is unclear why some speakers seem to accept such structures.

2 Causatives and Ditransitives

- (45) ??[John to Bill]_i o otagai_i no hahaoya ga Mary ni home-sase-ta.
J. and B. ACC each.other GEN mother NOM M DAT praise-CAUS-PAST
“Each other’s mother made Mary praise John and Bill.”

While (45) is not perfect, there is a sharp contrast between it and instances of passivized DOs, which are completely barred. This appears to imply an unexpected fact: that A-scrambling is not subject to the same locality conditions as other types of A-movement (such as passivization). This is a puzzling fact which I will leave for future research.

2.1.6.4 DESIDERATIVE

Evidence that the causative assigns case to the lower DO comes from the behavior of the desiderative construction. In Japanese, the *-tai* desiderative suffix can alter the case array of the verb it attaches to: the accusative of the direct object can be optionally absorbed and instead the object is assigned nominative:

- (46) a. Biiru o nom-u.
beer ACC drink-PRES
“(I) drink beer.”
b. Biiru o / ga nomi-tai.
beer ACC / NOM drink-DES
“I want to drink beer.”

If the desiderative suffix is attached to a causative construction, the direct object of the lower verb may surface with nominative case, as if it were a direct object of the higher ν , i.e. ν_{CAUS} . The following example from Matsumoto (1996) illustrates this point:

- (47) a. Boku wa kodomo ni konna hon ga / o yom-ase-takat-ta.
I TOP child DAT such book NOM / ACC read-CAUS-DES-PAST
“I wanted to make my child read this kind of book.”

So what does this show? The desiderative morpheme attaches to a verb and inhibits its capability to assign accusative. Since the desiderative *-tai* attaches to the causative, *-sase*, it deletes its accusative feature. But it does not delete the accusative feature of the lower ν which heads the main verb:

- (48) V ...*v* ... *v_{caus}* ...*tai*
 [ACC] [~~ACC~~]

Since in (47) the DO may appear in the nominative, it means that normally its case comes from the higher verbal head, i.e. from the causative itself.

There is one crucial assumption here, namely that a desiderative cannot affect the case features of a verb to which it does not attach directly, or to put it another way, that it doesn't perform "(spooky) action at a distance" (to borrow an expression from physics). However, this assumption is in line with the current linguistic thinking which assumes that syntactic operations obey strict locality.

2.1.6.5 POTENTIAL

Yet another test which can be used to determine where the accusative of the DO comes from is the potential construction.

It is well known (e.g. Kuno, 1973) that the potential suffix in Japanese changes the case array of the verb to which it is suffixed from an accusative pattern to an ergative pattern:

- (49) a. John ga biiru o nom-u.
 John NOM beer ACC drink-PRES
 "John drinks beer."
 b. John ni biiru ga nom-e-ru.
 John DAT beer NOM drink-POT-PRES
 "John can drink beer."

The potential construction test is discussed in Kishimoto (2007b), where it is applied to complex predicates of the form V₁-V₂. The logic is the same as with the desiderative *tai*: the potential can absorb the case of the verb it immediately dominates, but not that of a lower verb. In a biclausal structure, if the potential suffix *rare* attaches to the matrix verb, it will not affect the case array of the verb in the embedded clause:

- (50) a. Boku ga Taroo ni [terebi o miru ka] kik-e-ru.
 I NOM Taroo DAT [TV ACC watch Q] ask-POT-PRES
 "I can ask Taro if he is going to watch TV."
 b. *Boku ga Taroo ni [terebi ga miru ka] kik-e-ru.
 I NOM Taroo DAT [TV NOM watch Q] ask-POT-PRES

(Miyagawa, 1987)

If we apply this test to causatives, it can be determined that the case of the DO comes indeed from the upstairs verb. In a causative construction, the potential suffix can only be attached to the higher verbal projection (*-sase*), but not to the main verb:

- (51) a. John ni Mary ni hon ga yom-ase-rare-ta.
 J DAT M DAT book NOM read-CAUS-POT-PAST
 ‘John could make Mary read a book.’
 b. *John ni Mary ni hon ga yom-e-sase-ta.
 J DAT M DAT book NOM read-POT-CAUS-PAST
 ‘John made Mary to be able to read a book.’

The contrast between (51-a) and (51-b) shows that the case array of the clause is determined indeed by the upper verb, not by the main verb. Note, incidentally, that the ill-formedness of (51-b) cannot be attributed to semantic factors. The intended meaning can very well be paraphrased by a bi-clausal construction like *John-ga Mary-ni hon-ga yomeru yoo-ni saseta*. (‘John made it so that Mary can read a book’).

Again, as with desideratives, the potential morpheme alters the case array of the verb to which it attaches, but it cannot affect that of the lower v , across the causative morpheme. Moreover, the ungrammaticality of (51-b) suggests that the main verb does not have accusative case to assign.

2.1.6.6 INDETERMINATE PRONOUN BINDING

There is further confirmation that both the arguments of the main verb (the causee and the DO, if present) must check their case-features against the upper v_{caus} , not in the lower vP . Kishimoto (2001a) argues that indeterminate pronouns like *dare* (‘who’) and *nani* (‘what’) can be used to determine the LF position of arguments in a clause. These pronouns may appear with the particle *mo* and in that case they behave as a negative polarity item. However, the particle *mo* doesn’t have to appear immediately adjacent to the pronouns. It can instead appear to the right of the verb stem, as shown below in (53).

The idea is that if an emphatic particle like *mo* (‘also’) is attached to the verbal stem instead of to the indeterminate pronoun, that pronoun must be within its scope at LF in order to be bound by it:

- (52) ...[indeterminate pronoun ...V-*mo*] ...Neg

For instance, an indeterminate pronoun can appear in object position but not in subject position, since it would not be within the scope of *mo*. Consider the following:

- (53) a. Taroo wa [nani o kai-mo] si-nakat-ta.
 Taroo TOP anything ACC buy-even do-NEG-PAST
 “Taroo didn’t buy anything.”
- b. *Dare ga [warai-mo] si-nakat-ta.
 anybody NOM laugh-even do-NEG-PAST
 “Nobody laughed.”

Since the subject in (53-b) is located outside the verbal projection over which *mo* has scope, the sentence is ill-formed. On the other hand, in (53-a), the direct object falls within the scope of the emphatic particle *mo*, and the sentence is grammatical.

Incidentally, this also shows that the verb doesn’t raise to T in Japanese. If it did, the particle *mo* would end up in T as well, a position from where it could c-command the subject, so (53-b) would have been well formed.

Note that this is a different test than that presented in section 2.1.5, despite its apparent similarity. The test in section 2.1.5 involved regular nominals bound by *mo*, while the one presented here involves indeterminate pronouns, and its results are different. Thus, the previous test indicated the surface position of the nominals, while this one, Kishimoto argues, indicates the LF position of the indeterminate pronouns. Kishimoto (2001a) shows that the scope of the particle is checked at LF, so the construction is a test of the LF position of arguments, not of their surface position.

By using indeterminate pronouns, Kishimoto (2001a) argues that the position of arguments in causatives at LF can be determined. First consider the permissive causative in (54):

- (54) a. Taroo wa [dare ni suwar-ase-mo] si-nakat-ta.
 Taroo TOP anyone DAT sit.down-CAUS-even do-NEG-PAST
 “Taro did not let anyone sit down.”
- b. *Taroo wa dare ni [suwari-mo] s-ase-nakat-ta.
 Taroo TOP anyone DAT sit.down-even do-CAUS-NEG-PAST

If the emphatic *mo* is attached to the main predicate, the sentence is ruled out. This indicates that the *ni*-marked causee must be located in LF in the projection of the causative morpheme, not within the projection of the main verb. This is not surprising, given that we have already seen that causees are generated higher in the tree in a permissive causative than in a coercive

2 Causatives and Ditransitives

one.

Perhaps a bit more unexpected is the LF position of causees:

- (55) a. Taroo wa [dare o suwar-ase-mo] si-nakat-ta.
Taroo TOP anyone ACC sit.down-CAUS-even do-NEG-PAST
‘Taro did not make anyone sit down.’
b. *Taroo wa dare o [suwari-mo] s-ase-nakat-ta.
Taroo TOP anyone ACC sit.down-even do-CAUS-NEG-PAST

The unacceptability of (55-b) shows that *dare-o*, the causee, must be located above the ν P in LF, but within the ν_{caus} P. If the causee were located in the lower verbal shell, the sentence in (55-b) should have been grammatical.

So far, this is in agreement with the structure proposed by Harley (1995), who claims that Japanese causatives behave as ECM constructions, in that the causee raises at LF to receive case from the causative projection. However, what is unexpected in her approach is the data in (56):

- (56) a. Taroo wa Hanako ni nani o sawar-ase-mo si-nakat-ta.
Taroo TOP Hanako DAT anything ACC touch-CAUS-even do-NEG-PAST
‘Taro did not let Hanako touch anything.’
b. *Taroo wa Hanako ni nani o sawari-mo s-ase-nakat-ta.
Taroo TOP Hanako DAT anything ACC touch-even do-CAUS-NEG-PAST

These examples show that in LF even the object of the main predicate must raise to a spec of the *-sase* projection. The (b) example shows that the DO cannot remain within the lower ν P.

While the data discussed in this section do not directly pertain to the assignment of case, it could be argued that case relations must be read at LF and a nominal phrase must be at that level within the projection of the head which assigns case to it. If so, the indeterminate pronoun data prove further that the arguments of the main predicate receive their case from the upstairs verbal head.

A possible objection (Miyagawa, 1989; Yō Matsumoto, p.c.) is that these structures are causativised forms of *V + mo + suru*. That is to say, *sase-ru* here is not the causative alone but the verb *su* (‘do’) plus the causative morpheme, i.e. *s-ase-ru*. This would mean that the emphatic particles do not split the sequence *V-causative*.

In fact, this may be not true. Kuroda (1981) claims that the causative *sase* can appear by itself, as a free morpheme. Consider:

- (57) Watasi wa Taroo ni tabako o suw-anaku sase-ru.
 I TOP Taroo DAT tobacco ACC smoke-not CAUS-PRES
 “I cause Taro not to smoke cigarettes.”

(It should be noted, however, that Kuroda himself admits that the example might sound less than perfect.)

If the *sase-ru* in the above sentence is in fact *su* (‘do’) plus the bound morpheme (s)*ase*, one would expect the non-causative form of (57) to be grammatical:

- (58) *Taroo ga tabako o suwanaku suru.

However, the example is bad. Therefore (57) cannot be derived from (58). Instead, *saseru* must be the free form of the causative morpheme and (57) must be the causative form of *Taroo ga tabako o suwanai* (‘Taroo doesn’t smoke’).

Even if one doesn’t agree with Kuroda’s analysis, the main thrust of the argument remains valid. *Su* is only a dummy verb, a crutch inserted to satisfy the morphological requirements of the stem it attaches to. Evidence for this comes from the fact that in such contexts, *su* cannot assign case.

As already discussed, the desiderative morpheme *tai* is capable of optionally absorbing the accusative case feature of the verb it attaches to.

If the base verb and the desiderative are separated by an emphatic particle, the desiderative must appear together with the dummy verb *su*. In this construction, nominative case on the object is no longer possible:

- (59) Mizu o / *ga nomi-wa-si-tai.
 water ACC / NOM drink-TOP-do-DES
 “I want to drink water.”

This shows that the accusative on the direct object *mizu* (water) in (59) must be assigned by the base verb, *nomu* (‘drink’). If *su* had been the case assigner, the desiderative *tai* should have been able to delete that case feature, due to the fact that it is directly adjacent to *su* and the DO would have surfaced in the nominative, but this is impossible. In other words, *su* cannot lose its case feature, because it doesn’t have one.

The dummy verb *su* doesn’t assign case — which certainly suggests that it is not a ‘full’ verb. Now, suppose that in causatives, when the base verb and the causative head are separated by an

emphatic particle, the surface form *sase* is indeed the causativized version of *su*, as claimed by Miyagawa (1989). This doesn't change the fact that the case of the DO comes from the causative itself:

- (60) ?Hon ga yomi mo s-ase-rare-ta.
 book NOM read also do-CAUS-POT-PAST
 "(I) could also make (someone) read the book."

The potential morpheme absorbs the case of its complement, here the complex *s-ase*. But *su* doesn't have a case feature of its own, so it follows that what the potential *rare* absorbs is in fact the case feature of the causative.

I side with Aoyagi (1998), Kishimoto (2007a) who take the verb *su* in such contexts to be a dummy verb, inserted for morphological purposes. Its presence is the equivalent of *do*-support in English. Assume, contra Kuroda, that causative (*s*)*ase* is always a bound morpheme. Then, when the string V-causative is broken by an emphatic particle, becoming V *mo* causative, the causative needs a verbal stem to attach to. A morphological process inserts the empty *su* to satisfy this condition.

The presence of the verb *su* is therefore not a real issue. The details of the analysis remain basically unchanged.

Now, returning to the indeterminate pronoun binding, it should be noted that the analysis proposed by Kishimoto involves covert raising at LF for case reasons. In the newer versions of the Minimalist Program, covert movement is disfavored, and for good reasons.

Early minimalism (Chomsky, 1993) stated that NPs enter the syntactic derivation fully inflected. As such, even if the case features were checked as late as LF, the NPs would reach PF with case morphology. In that system, case was not 'assigned', but indeed 'checked'. NPs would come from the Lexicon with full case morphology and syntax would only verify if that case was the 'correct' one. This immediately raises one question: how can the lexical selection know in advance what case would go on what NP? How does the language machine know that a certain NP will need structural case, say accusative, prior to the syntactic derivation? Part of the role of syntax is precisely this, to assign values to various syntactic features. Structural case is assigned depending on various syntactic configurations — i.e. it is a syntactic phenomenon. It is not desirable to stipulate that NPs come magically into syntax with the correct case. The alternative is to opt for random selection. Then, the (very) few configurations which are correct will converge, while the (vast majority of) wrong choices will cause a crash. However, this

cannot be a realistic option, because there are very few chances that a convergent numeration can be constructed by random selection¹³ (see also Emonds, 2004). Current minimalist theories (Chomsky, 2001) do not run into this problem, as the overt / covert distinction is obviated. Covert movement doesn't exist any longer, only action at a distance (Agree).

The problem at hand is the checking of case features on nominal phrases. If we assume that an NP is inserted in the derivation with unspecified case features (-uC), as it is standardly assumed in recent theories, then the NP must be assigned case before it is Spelled-Out. The NP is assigned case in the overt syntax and it reaches PF with case morphology, as it should. In contrast, an NP which has its case features checked at LF will surface without case in PF.

Working under the assumption that there is no LF movement, Hiraiwa (2005) criticizes Kishimoto (2001a) and claims that in indeterminate pronoun structures of the type illustrated in this section, the pronoun moves in fact overtly to the edge of the ν P phase, a position that is not c-commanded by the *mo* particle, which is merged in ν .

While I agree with Hiraiwa (2005) that LF movement should be dispensed with (at least movement for case checking), his approach doesn't hold water either. Consider the following example:

- (61) *Taroo ni *nani* ga uta-e-**mo** si-na-i.
 Taroo DAT anything NOM sing-POT-even do-NEG-PRES
 "Taroo cannot sing anything."

For Kishimoto (2001a), the nominative object *nani* in (61) is in-situ but moves at LF out of the domain of *mo*. For Hiraiwa (2005), the same object is raised overtly to the edge of the ν P. But (62) is grammatical, which means that the indirect object *dare* must be within the domain of the particle *mo*, hence inside the ν P:

- (62) Taroo wa *dare* ni monku ga i-e-**mo** si-nakat-ta.
 Taroo TOP anyone DAT complaint NOM say-POT-even do-NEG-PAST
 "Taroo could not tell anyone a complaint."

Since *dare* is inside the ν P, the nominative object *monku* ('complaint') must also be within the verbal projection, not on its outside edge. In Hiraiwa's system, this results in a contradiction:

¹³The reader has probably noted that a parallel can be drawn here with natural selection. It is random mutations that gave rise to the wonderful forms of life around us, so maybe randomness can result eventually in coherent forms, but it certainly is an expensive / wasteful mechanism.

(61) shows that the nominative object is outside the ν P, while (62) shows that it is inside it. Therefore, the overt movement approach is questionable.

Whether LF movement is possible or not is a theory-internal question. An alternative view could be that there is no covert movement, but the presence of *mo* on the verbal stem blocks for some reason operations from outside the ν P, such as Agree.

2.1.6.7 SCOPE AMBIGUITIES

An additional argument that the accusative case of the DO is assigned by the causative morpheme comes from scopal ambiguities. It is sometimes discussed in the literature that the causee can take scope over the causative in the coercive construction:

- (63) Calvin ga Hobbes dake ni piza o tabe-sase-ta.
 Calvin NOM Hobbes only DAT pizza ACC eat-CAUS-PAST
 “Calvin made Hobbes only eat pizza.”
 only > CAUS
 CAUS > only

In the first interpretation (only>CAUS), Hobbes is the only one Calvin forced to eat pizza (perhaps other people ate of their own accord), while in the second one, (CAUS > only), Calvin brought about a situation such that only Hobbes ate pizza, and nobody else.

These data have been used for instance by Harley (1995) to argue that the causee raises into the matrix clause like in ECM constructions.

However, the same ambiguity seems to occur as well between the low DO and the causative. The following example is given by Terada (1990):

- (64) Watasi wa neko ni nama no azi (o) dake tabe-sase-ru.
 I TOP cat DAT raw GEN h.mackerel ACC only eat-CAUS-PRES
 “I let/make my cats eat only fresh horse mackerels.”
 only > CAUS
 CAUS > only

The interpretations here are: (i) it is only fresh mackerels that I make my cats eat (maybe they eat something else when they hunt at night) and (ii) I bring about a situation such that my cats eat only fresh mackerels (and nothing else).

The same judgments are reported by Cipollone (2001), Gunji (1999), Kubota (2005), Manning et al. (1999). Another example, this time with a different quantifier, is seen in (65) (from Cipollone, 2001):

- (65) Sensei ga gakusei ni san-satu no hon o yom-ase-ta.
 teacher NOM students DAT three-volumes GEN book ACC read-CAUS-PAST
 3 > CAUS: “There were three books that the teacher made the students read.”
 CAUS > 3 : “The teacher caused there to be three books that the students read.”

H. Kishimoto (p.c.) points out that for the example in (65), the wide scope over the causative could be due to the fact that existentials have a tendency to take wide scope, regardless of their syntactic position. This view weakens the argument presented here, but the ambiguity of (64) remains.

For some strange reason, the scope of the DO is more often discussed in non-transformational approaches (HPSG, LFG), where it is problematic, since in these theories causatives are lexical (therefore, also monoclausal). Those working in a transformational framework usually ignore this phenomenon.

Judgments are delicate and subject to idiolectal variation. Nevertheless, it is clear that, at least for a number of speakers, the lower DO can take scope over the causative.

There is a direct connection between the scope of an argument and the head that assigns case to that argument. The following pair of examples is quite famous (Tada, 1992):

- (66) a. Kiyomi ga migime dake o tumur-e-ru.
 Kiyomi NOM right.eye only ACC close-POT-PRES
 “Kiyomi can close only her right eye.”
 can > only
 b. Kiyomi ga migime dake ga tumur-e-ru.
 Kiyomi NOM right.eye only NOM close-POT-PRES
 “It’s only the right eye that Kiyomi can close.”
 only > can

The nominative object can take wide scope over the potential morpheme (66-b), but this option is absent for the accusative object (66-a). The accusative in (66-a) comes from the lexical verb, *tumuru*. In contrast, the nominative in (66-b) comes from T.¹⁴ In a complex predicate, when an

¹⁴There is no universal agreement as to where the nominative in these cases comes from (see Koizumi, 2008, for review). However, it is agreed that it doesn’t come from the lexical verb.

object receives case not from the verb whose argument it is but from a higher head, the object can take wide scope.

Thus, there seems to be a correlation between the scope of an argument and the head that assigns case to that argument: if the argument gets case from a high head, it can take wide scope. If it receives case from a lower head, it takes narrow scope. A possible analysis is developed by Bobaljik & Wurmbrand (2005, 2007) who argue that in such structures, the object must raise into the domain of the case assigner, and thus is able to take wider scope. (For causatives, this raising cannot be overt, since on the surface, the DO stays within the lower verb shell, as discussed in §2.1.5.2.)

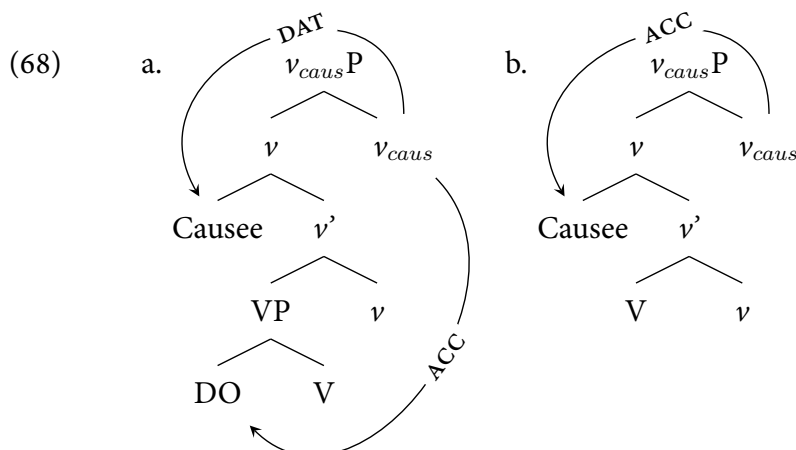
- (67) a. [V₁ [Argument V₂]] : narrow scope (V₁ > Arg)
 b. [Argument V₁ [t V₂]] : wide scope possible (Arg > V₁, V₁ > Arg)

If the argument in (67) moves (overtly or covertly) into the domain of V₁ to receive case, it reaches a position from where it can c-command V₁, so it is able to take scope over it. In the theory proposed by Bobaljik & Wurmbrand, the scope ambiguity is a by-product of the fact that the argument raises in order to receive case.

Returning now to the causative constructions, we can see the similarity between (66-b) on one hand and (64) and (65) on the other: in both causative and potential constructions, the low object can take wide scope over the higher predicate. If the accusative case of the DO in (64) and (65) were assigned by the lower verb, the wide scope interpretation should not have been possible. On the other hand, if Bobaljik & Wurmbrand are on the right track, the wide scope of the DO over the causative suggests that the case of the object does not come from the low verb, but from the causative head. This is in line with the claims of the previous sections.

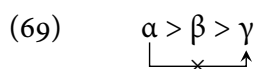
2.1.6.8 THE CASE-ASSIGNMENT MECHANISM

The impossibility of passivizing the lower DO has been taken as an argument that the DO receives case within its own verbal shell, but data from the desiderative construction, the potential, indeterminate pronouns and the scope ambiguities have shown that the case of both the causee and the embedded object is assigned by the v_{caus} head. This means that the lower v does not or cannot assign accusative case to the DO. For a transitive coercive causative, the case assignment is represented in (68-a) and for an intransitive in (68-b):

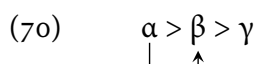


It follows that a v_{caus} selecting a transitive verb must have two case features, namely accusative and dative, and a v_{caus} which selects an intransitive verb has one accusative to assign.

There is, however, one potential problem involving locality. If case is first assigned to the causee (the dative argument), one would expect that the lower DO could not get case, due to intervention effects. In the relation $\alpha > \beta > \gamma$ (where ' $>$ ' stands for c-command), if β has its case features checked, it becomes inert and gives rise to intervention effects. That is to say, the Probe α cannot 'see' past β in order to Agree with γ .



On the other hand, it also seems impossible for the DO to receive case before the causee. The Probe v_{caus} searches for its closest matching Goal, which is the causee, where 'closest' is defined in terms of c-command:¹⁵



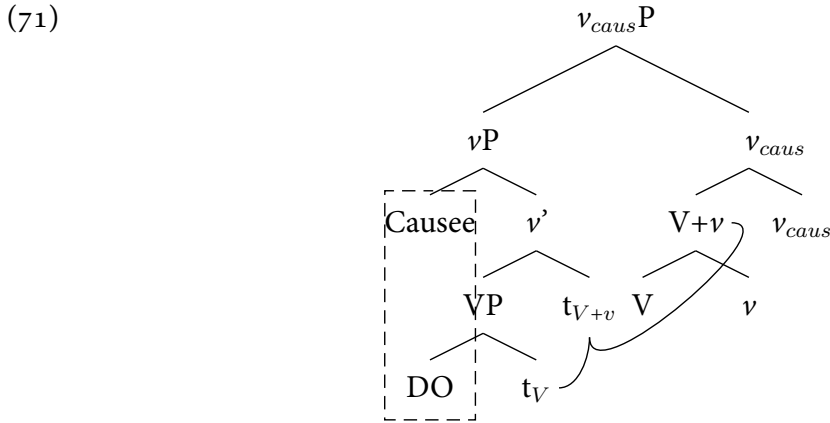
In other words, one would expect that the v_{caus} cannot skip over the causee in order to check the case of the DO first.

This situation is paradoxical: ACC cannot be assigned first, but on the other hand DAT cannot either, so in both scenarios intervention effects are expected.

One possible solution is to use the idea of extended Minimal Domain, as introduced in Chomsky (1993), which is in fact a re-statement of Baker's Government Transparency Corollary. The idea is that head-to-head movement extends the minimal domain of a head with

¹⁵"locality reduces to 'closest c-command'" (Chomsky, 1998, p. 38)

the result that the XPs in its minimal domain become *equidistant*. If, after V to v movement the complex $V+v$ incorporates into the higher v_{caus} , the causee and the DO (within the dotted frame) become equidistant from v_{caus} :



Thus, the locality problem should disappear. Both Goals (the Causee and the DO) are equally accessible by the Probe v_{caus} . However, it is debatable whether verbs move in Japanese at all. Even if they did, there are cases where the (putative) head-to-head movement of the $V+v$ complex is blocked. This happens whenever an emphatic particle like *mo* or *sae* intervenes between the main predicate and the causative:

(72) $V+v$ -sae/*mo* saseta

These particles show that head-to-head movement cannot take place. In fact, for this reason Aoyagi (1998) claims that Japanese does not have head-to-head movement and that instead the sequence $V...v...T$ undergoes a post-syntactic merger operation, in the fashion proposed by Distributed Morphology (Halle & Marantz, 1993) approaches.

How then can the locality problem be circumvented? The solution comes from the theory of Multiple Agree, as proposed by Hiraiwa (2005). The idea is that a Probe which has more than one feature of the same type (in this specific instance, case) can agree with more than one Goal. By its very nature, Multiple Agree is not subject to intervention effects, so the following configuration can be established:

(73)

The causative head has two case features, a dative and an accusative. The head enters into a Multiple Agree relation with the Causee and the DO, which are both within its search domain and have unvalued case. After the Agree operation, the Causee will have dative and the DO accusative. For an intransitive verb, the causative has only one case, accusative, which it assigns to the unique argument of the intransitive verb.

At this point, it is interesting to note that the case pattern in transitive causatives resembles that of the so-called ergative predicates. It has been argued in the literature (e.g. Kishimoto, 2001a, Ura, 1999) that both the dative and the nominative in the examples below are assigned by the T head:

- (74) a. John ga hasir-e-ru.
 John NOM run-POT-PRES
 “John can run.”
 b. John ni eigo ga hanas-e-ru.
 John DAT English NOM speak-POT-PRES
 “John can speak English.”

The parallelism between causatives and ergatives is clear: in the case of an intransitive, the case assigner head (T for ergatives and v_{caus} for causatives) assigns the ‘default’ case, namely T assigns nominative and v , accusative. For a transitive verb, that ‘default’ case goes to the farthest argument, i.e. the low DO. The higher argument receives dative.

For this reason, I propose that in instances of Multiple Agree like these, the first feature is discharged to the farthest argument and then the remaining feature to the closer one. I depart in this respect from Hiraiwa’s theory, who argues that Multiple Agree takes place in parallel computing, i.e. happens simultaneously. Such an amendment is necessary, otherwise there is nothing to prevent the Caus-ACC DO-DAT sequence in causatives or Experiencer-ACC DO-DAT in ergative predicates.

An additional stipulation is necessary in order to explain the data. Hiraiwa assumes that the Probe can check multiple instances of *the same* feature (say, nominative, or feminine singular agreement). But in the examples discussed here, the Probe has multiple instances of the same *type* of feature (case), but with different realizations: v_{caus} has ACC and DAT, both of which are case features, but with different values.

As I will discuss in §2.2, the same mechanism appears to be at work in ditransitive constructions: both internal arguments receive case from the same head; the lowest one appears

in accusative and the higher one in dative. I will argue that this, too, is an instance of Multiple Agree.

2.1.7 CONSEQUENCES

In this section I will discuss two theoretical consequences of the present account for causatives. First, in 2.1.7.1, I discuss the so-called Double *o* Constraint and next, in 2.1.7.2, I will discuss what the present proposal implies for a phase based theory.

2.1.7.1 DOUBLE *o* CONSTRAINT AGAIN

The immediate consequence of the structure proposed here is a principled explanation of the so-called *Double o Constraint*. Several recent analyses (e.g Harley, 1995, Miyagawa, 1999) assume that the direct object of the lexical verb stays in the lower VP shell and is case licensed there, while the causee receives its case from the upper verbal projection, namely the causative *sase*:

$$(75) \quad [_{v\text{-}caus} [_{VP} \text{ causee DO V }] v\text{-}caus]$$

Under these proposals, the Double *o* Constraint is no more than an *ad hoc* stipulation. There is no reason why two accusative cases could not be licensed in this structure, since they are assigned by different verbal projections. In general, the case array of an embedded clause is not dependent on the case array of the matrix clause. Similarly, here there should not be any interference between the case assigning capabilities of the lower verb and those of the upper one. This fact forces Miyagawa (1999) to claim that the DoC is in fact a phonological constraint, not a syntactic one. However, it is known that there are in fact two types of Double *o* Constraint, as discussed at length in Matsumoto (1996), Poser (2002). One of them is indeed a phonological constraint which strongly disfavors the co-occurrence of two *o* case particles within the same clause, but there is another type of DoC, namely a syntactic one, which prohibits two structural accusative Cases in the same clause, regardless of their overt realization. In §2.1.3 I reviewed the evidence that what is at work in causative constructions is the syntactic variety of DoC. Thus, if the prohibition on two accusatives in causative constructions were indeed a phonological one, as Miyagawa claims, one would expect that operations like clefting or topicalization or increasing the linear distance between the two accusatives would improve or even render double accusative constructions grammatical. The data, however, clearly indicate otherwise. Generative grammar

makes a distinction between Case and case, one being the abstract case assigned in the syntax while the other being its morphological realization. It is sometimes suggested in the literature (e.g. Kuroda, 1988 or Sigurðsson, 2001 for Icelandic) that the two are not necessarily linked, so a noun phrase can bear either one, or even that case and Case do not match. Such seems to be the approach taken by Miyagawa (1999), as he claims that even though the causee takes objective case, it is morphologically realized as dative, in order to avoid a violation of DoC. However, divorcing case from Case is, I believe, not a sound approach to the investigation of natural languages. *In extremis*, it could be generalized to there being almost no link between syntax and its morphological expression. Such a move provides the opportunity to formulate theories that have no connection with the empirical data; one could simply argue that whatever contradicts one's favorite syntactic theory is just a morphological aspect, which does not reflect the underlying syntax.

There is empirical evidence that the DoC violation in causatives cannot be a PF phenomenon. For the sake of the argument, let us assume together with Miyagawa (1999) that both the causee and the DO receive objective case and that objective case is realized morphologically (post Spell-Out) as *ni* on the causee and *o* on the DO in order to avoid a phonological constraint. In this scenario, we cannot account for the case pattern observed in potential-causative constructions. In overt syntax, the potential morpheme cancels the accusative feature of the v_{caus} head, and the DO receives NOM from T. At PF, since now there is only one objective case, i.e. that of the causee, one expects it to surface as accusative, because there is no double *o* violation. In (76), there is a simple causative construction in (a) and a causative-potential construction in (b). The alleged abstract case features of the NPs are shown in square brackets below the NP, and the actual morphological realization in italics, following the NP:

- (76) a. Causer-*ga* causee-*ni* DO-*o* V-CAUS
 [objective] [objective]
 b. Causer-*ga* causee-*ni* DO-*ga* V-CAUS-POT
 [objective] [nominative]
 c. *Causer-*ni* causee-*o* DO-*ga* V-CAUS-POT
 [objective] [nominative]

If Miyagawa's proposal concerning the DoC were correct, one would expect the morphological case-realization in (76-c) to be possible, which is in fact the wrong one. What actually occurs is (76-b), which is unexplained in his theory.

These considerations, together with Poser's (2002) detailed discussion of double accusatives in Japanese, indicate that the DoC in causatives must be a syntactic phenomenon, not a phonological / morphological one. In fact, the structure proposed in the present paper explains the DoC in a simple manner: all arguments receive case from the highest verbal projection, ν_{caus} . As such, the DoC vanishes: there is no need for a stipulation to prohibit [+ACC;+ACC] in the same clause, instead the phenomena are explained straightforwardly if one case assigner (in this case, the causative ν) can only assign accusative once. The accusative feature is assigned (checked / valued) to the DO, and subsequently unavailable (deleted / erased) for assignment to a second nominal.

The (in)ability to assign the same case twice might be a parameter which can vary from language to language, but also from different types of heads within the same language. For instance, it is well known that Japanese can have multiple nominative NPs in the same clause. This implies that, unlike ν , T is capable of assigning case more than once (Ura, 2000).

2.1.7.2 IMPLICATIONS FOR A PHASE BASED THEORY

The theory advocated by Chomsky in a recent number of papers (Chomsky, 2001, 2004) proposes that certain syntactic objects are Spelled-Out to the interfaces as soon as they are built. These objects are called phases and are assumed to be CPs and ν Ps (and perhaps DPs and PPs as well). Moreover, it is assumed that operations are triggered by phase heads (C and ν) and they happen as soon as the phase heads are merged into the derivation.

In light of the data discussed so far, I would like to make some comments on the nature of phases. More specifically, I will claim that being a phase head cannot be an inherent property of a syntactic head, but must be determined dynamically, on a case-by-case basis.

Let us consider a causative construction of a transitive predicate. The main predicate has the structure:

$$(77) \quad [\text{Su} [\text{DO V}] \nu]$$

which is selected by the causative morpheme. In Chomsky's theory, the structure above should be a phase, as it is headed by a transitive ν . Then, before the structure is expanded any further by merging *sase*, ν should Agree with the DO and assign case to it. If not, the phase domain (the VP) will be Spelled-Out without the object being assigned case, which should result in a crash.

However, the data on causatives presented here show evidence that the DO is not assigned case by ν but by the higher ν_{caus} , which is *sase*. This implies that assigning case to the DO and Spelling-Out the phase must be delayed at least until the causative is merged. But syntax cannot foresee future operations. Look-ahead is not possible and operations must apply immediately. They cannot be postponed in order to save a future step in the derivation.

In fact, delaying of the Spell-Out should be expected if phases are constructed from small arrays of lexical items. In the early minimalism, derivations were constructed from a Numeration, a list of lexical items (some with multiple tokens, hence a *numeration*, not a *set*) selected from the Lexicon. When phases were introduced, it was assumed that there was a sub-numeration for each phase. Chomsky (2001) assumes that a subarray (i.e. the elements forming a phase) contain exactly one C or one ν . Given this, we should expect a phase to be finished only when the sub-numeration is emptied.

Assume the following sub-numeration:

(78) {John, hon, \sqrt{yom} , ν , Mary, *sase*}

When the ν head is merged, the resulting structure cannot be a phase only because ν s are phase heads. The sub-numeration is not empty yet. Only after *Mary* and *sase* are merged can the phase be complete and Agree operations apply.

To borrow an image from biology, DNA sequences code for different amino-acids and are then followed by stop codes — essentially sequences that say ‘this is the end of the protein, stop the process now’. I assume that in a similar fashion there is an ‘end’ feature which goes onto the last merged head of a sub-numeration, a phase feature which triggers the Spell-Out operation, possibly with the proviso that only certain heads are capable of hosting this feature (in order to prevent for instance a V or T to become a phase).

It follows that a phase is not determined by an inherent property of certain heads, but contextually. A somewhat similar proposal has been made by Aoshima (2001). She proposes that incorporation cancels phasehood. An incorporated phase head (specifically a ν) no longer counts as a phase head. The major problem with this account is that it involves some sort of look-ahead: the phase is canceled because in a later step the phasal head will raise and incorporate into another head. Moreover, the account crucially rests on incorporation. If there is no head-to-head movement, presumably the phase is not canceled. But we have seen examples where the head does not incorporate into a higher head and still the phase is ‘cancelled’. Therefore, an account

root (79-a). That is to say, only a verb which projects an external argument can passivize¹⁷. This can also explain the ban on double-passives (Carnie, 2007) or on passivization of a raising verb (see Baker et al. 1989 for discussion).

This is problematic in a theory which regards phases as rigid and claims that certain heads are inherently and obligatorily phase heads. In such an approach, if v_{passive} attaches to the transitive v_{tr} , it is impossible for the DO to move to T and receive nominative, because when v_{tr} merges, case is assigned to the DO and the phase is spelled-out. The merger of the passive v_{passive} happens too late, so to say. This theory-internal problem, to the best of my understanding, comes from the assumption that v_{tr} is absent in passives (i.e. that passive merges to (79-a)).

This problem disappears if we consider phases from a more flexible perspective: only some heads are phase heads, but they do not always induce a phase. In this chapter we have seen that there is strong evidence for this view: the transitive v_{tr} does not head a phase if a causative head is still present in the lexical array. In a similar fashion, a v phase is inhibited if there is a passive present.

These are the two approaches:

- (i) Passive attaches to (79-a): this solves a theory-internal problem, at the expense of not being able to explain why unaccusatives cannot passivize.
- (ii) Passive attaches to (79-c): this explains the empirical facts regarding unaccusatives but it must slightly redefine the notion of phase.

It is clear which is the better choice between (i) and (ii): the second one covers more empirical facts.

-
- (i) a. kow**as**-are
break **v_{tr}** - v_{pass}
break-PASS
 - b. *kow-are-as
break-PASS- v_{tr}

This could be explained by the ban on the merger of v_{passive} directly to the root, as discussed in the main text. An alternative explanation is that the merger of v_{tr} happens at the word level, while the v_{passive} is merged in the narrow syntax, along the lines proposed originally by Hale & Keyser (1993), who distinguish between l-syntax (syntax at the word level) and s-syntax (i.e. the syntax proper). As the l-syntax necessarily precedes s-syntax, the impossibility of (i-b) is predicted.

¹⁷See also the Vacuous Affixation Principle of Marantz (1981).

2.1.8 CONCLUSION

At first sight, the case patterns observed in causative constructions seem difficult to capture by the minimalist theory. Hopefully, the account offered here makes them seem less puzzling: we now understand the connection between the case of the causee and that of the DO. There are also parallels with ditransitives and ergative predicates, which suggest a uniform case assignment mechanism.

Moreover, we can begin to understand the nature of the Double *o* Constraint, which I have argued is reduced to a parameter setting: a head may or may not be able to assign the same case twice.

The view proposed here also has implications in how the notion of phase should be defined. I argued here that phases are relative, not absolute, as it is usually assumed.

2.2 DITRANSITIVES

In this section I discuss some of the properties of ditransitive constructions in Japanese. I argue that, in spite of some recent proposals, Japanese is a true symmetric language and that the case of both internal arguments is assigned by the same head, namely the head that introduces the external argument, *v*. The section is organized as follows: in section 2.2.1 I present some general data regarding ditransitives and the so-called dative shift. Next, in §2.2.2, I present a recent analysis of ditransitives in Japanese, as proposed by Miyagawa & Tsujioka (2004). On the basis of this analysis, I discuss the alleged implications drawn from the behavior of floated quantifiers in section 2.2.3. In §2.2.4, two lexical classes of ditransitives are introduced. Finally, using one of these verbal classes, I claim in section 2.2.5 that the alleged properties discussed in § 2.2.3 are false and that Japanese is a symmetric language. A few concluding remarks (§2.2.6) end this section.

2.2.1 PRELIMINARIES

Verbs which take more than one internal argument (usually two) have spurred a lot of interesting syntactic research. However, their structure is not yet fully agreed on. At least since the seminal work of Larson (1988), ditransitive constructions are regarded as complex predicates, which include more than one verbal shell. There are well known asymmetries between the two objects of a ditransitive verb, strongly suggesting that one asymmetrically c-commands the other. This fact, plus a restrictive theory which permits only binary branching, makes the

multi-shell analysis virtually a necessity. I need to stress here that I view ditransitives as complex predicates only from a syntactic perspective. These verbs have morphological integrity, so from the perspective of morphology, they are simple predicates. In much recent work, semantic complexity of lexical items is reflected by syntactic complexity; arguments are introduced into the argument structure by syntactic heads, resulting in multi-layered structures (see e.g. Pylkkänen, 2008 for discussion). It is in this sense that I regard ditransitives as complex, not from a morphological perspective.

A well known phenomenon in English is the so-called dative shift. A ditransitive verb may appear in either *the double object construction* (80-a) or in *the to-dative construction* (80-b):

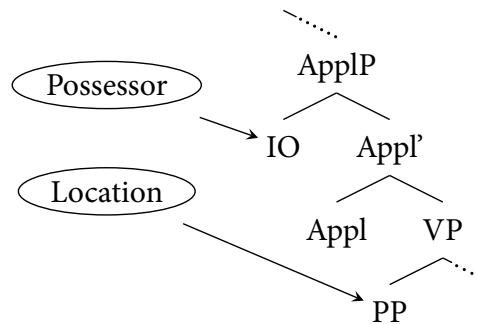
- (80) a. John gave **Mary** the book.
 b. John gave the book to **Mary**.

The difference between these two constructions is seen by the marking and the position of the bolded NP (*Mary*): in (80-a), it appears as an object of the verb, preceding the goal, while in (80-b) it appears within a prepositional phrase, following the goal NP.

Further refinement of the analysis came from Marantz (1993), who, on the basis of data from Bantu languages, proposed that in the double object construction, the higher object appears in the specifier position of an applicative head. The applicative morpheme itself may have phonological content, as in Bantu languages, or it may be phonologically null, as in English.

It has been observed in the literature that the two constructions are not synonymous. There is a semantic difference between double object constructions and *to*-datives. A fine-grained analysis is proposed by Pylkkänen (2008), who claims that there are in fact two types of applicative heads, with different semantics. However, for the present purposes, it suffices to say that they are interpreted differently and, at least for the relevant cases considered here, (i) the argument projected in the applicative phrase is interpreted as a possessor, namely in the double object construction, the indirect object is the possessor, but (ii) in the prepositional construction, the *to*-marked phrase is interpreted as a locative phrase. In other analyses, the high (nominal) goal is regarded as an affected entity, while the low (prepositional) goal is not affected by the event (Koizumi, 2009, Sadakane & Koizumi, 1995), but, terminology aside, the gist of it is the same (on the semantic differences between nominal and prepositional goals, see Marantz, 1993, Miyagawa & Tsujioka, 2004, Pylkkänen, 2008, Sadakane & Koizumi, 1995 and also Pesetsky, 1995). In the tree fragment below, the Spec of ApplP is interpreted as a possessor, and the lower PP as a location:

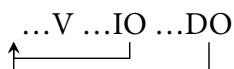
(81)



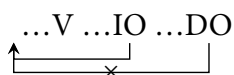
The interpretation of the indirect object as the possessor or as an affected entity is correlated with the animacy constraint observed in the double object constructions, which will play an important role in this section (see §2.2.4).

In the double object construction, both arguments of the verb appear as NPs with case, raising the question if they are both equal in ‘objecthood’, i.e. if they are both true objects of the verb. In this respect, there are differences from language to language. In some cases, both noun phrases (the indirect object and the direct object) function as true objects of the verb, as demonstrated by the fact that either of them can become subject under passivization. The languages which exhibit this pattern are said to be symmetric. In other cases, it is only the higher object (i.e. the IO) that can undergo passivization. The languages with this type of construction are asymmetric (see also Dryer (1986) for passivization patterns in ditransitive constructions). Languages that belong to the first category (symmetric) include British English, Norwegian, Swedish, Kinyarwanda. Among asymmetric languages, one finds American English and Chicheŵa (see Anagnostopoulou, 2003). The different passivization patterns are shown in (82) and concrete examples are given in (83):

(82) Symmetric languages:



Asymmetric languages:



(83) a. Symmetric language (Kinyarwanda):

DO passivization

- (i) Igitabo cy-a-haa-w-e umugore (n'umugabo).
 Book SP-PAST-give-PASS-ASP woman (by-man)
 "The book was given to the woman by the man."

IO passivization

- (ii) Umugore y-a-haa-w-e igitabo (n'umugabo).
 Woman SP-PAST-give-PASS-ASP book (by-man)
 "The woman was given the book by the man."

- b. Asymmetric language (Chimwiini):

DO passivization

- (i) Ja:ma Ø-pel-a: kuja na: mi.
 Jama SP-gave-PASS food by me
 "Jama was given food by me."

IO passivization

- (ii) *Kuja i-pel-a Ja:ma na: mi.
 food SP-gave-PASS Jama by me
 "Food was given Jama by me."

As seen in the data in (83-a), in symmetric languages, either of the two objects can become a subject under passivization, thus indicating that they are both 'true' objects of the verb. On the other hand, as shown in (83-b), in the asymmetric languages only the indirect object can be promoted to the subject position when the verb is passivized.

For Japanese, the received knowledge is that either the goal phrase or the theme phrase can be passivized (e.g. Kuno, 1973). Thus, Japanese should be classified as a symmetric language:

- (84) a. John ga Mary ni kunsyoo o atae-ta.
 J NOM M DAT medal ACC give-PAST
 "John gave Mary a medal."

Passivized goal:

- b. Mary_i ga John ni t_i kunsyoo o atae-rare-ta.
 Mary_i NOM John DAT t_i medal ACC give-PASS-PAST
 "Mary was given a medal by John."

Passivized Theme:

- c. Kunsyoo_i ga John ni-yotte Mary ni t_i atae-rare-ta.
 Medal_i NOM John by Mary DAT t_i give-PASS-PAST
 "A medal was given to Mary by John."

(Kuno, 1973, p. 348)

However, things are more complicated in Japanese since the double object construction (i.e.

the equivalent of (80-a) on page 71) and the postpositional construction (i.e. the equivalent of (80-b)) have the same surface form. Some recent research has uncovered data that seem to suggest that Japanese is not a true symmetric language. Instead, it is claimed that in the instances when the DO can be passivized, we are dealing in fact with a *to*-dative, not with a double object construction (see Doggett, 2004, McGinnis, 1998, Miyagawa, 1997, Miyagawa & Tsujioka, 2004). In what follows, I will defend the position that Japanese is in fact a symmetric language and that both objects receive case from the highest verbal head, namely *v*. This proposal also has influences on the locality of movement, such as scrambling and passivization.

2.2.2 DITRANSITIVES IN JAPANESE

A typical ditransitive construction in Japanese is shown in (85):

- (85) Taroo ga Hanako ni hon o atae-ta.
 Taroo NOM Hanako DAT book ACC give-PAST
 ‘Taro gave a book to Hanako.’

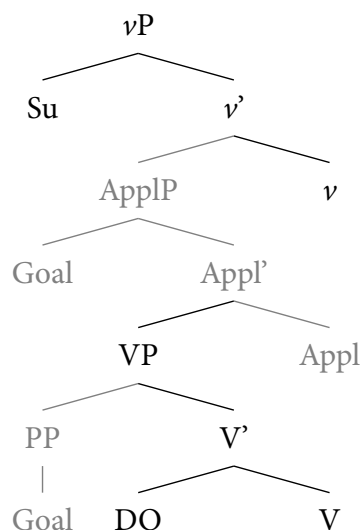
The theme argument (‘book’) is marked with accusative case, which surfaces as the particle *o*. The goal phrase (the ‘to’ phrase, ‘Hanako’) is marked with the particle *ni*, which can be either a case marker (dative) or a postposition¹⁸. In fact, it is not unusual for the dative to be ambiguous between case marking and a pre/post position. Other languages exhibit this phenomenon as well (see e.g. Cuervo (2003)).

The structure of Japanese ditransitives is subject to much debate in the literature (for a review of some recent work on the subject, see Koizumi, 2009). I will adopt here the analysis proposed by Miyagawa & Tsujioka (2004).

They argue that Japanese has both a double object construction (as the English ‘give Mary a book’) and the equivalent of the *to*-dative construction (as the English ‘give a book to Mary’). On the surface, these two constructions cannot be easily distinguished since in Japanese the particle *ni* functions both as a postposition (‘to’) and as a dative case marker. However, they argue that there are semantic and syntactic distinctions between the two. The structure they propose is shown in (86):

¹⁸Here, *ni* is glossed as DAT, but this is just a notation. Nothing is implied by this in the glosses.

(86)



(where one of the grayed out projections may be missing)

The applicative head, if present, introduces the ‘high’ goal which is dative marked. Otherwise, the ‘low’ goal may appear as a PP, either to the left or to the right of the direct object. Semantically, the high goal is associated with the notion of *possessor*, while the low PP denotes *location*. For this reason a high goal must be animate (see also Pylkkänen, 2008). However, a low goal may be either inanimate or animate.

When the goal is a PP, the construction may have either the *goal* > *theme* order or the *theme* > *goal* order, but when the goal is an NP, only the IO > DO variant is possible. Thus, the NP-*o* NP-*ni* version is unambiguously a ‘*to*-dative’ construction, but NP-*ni* NP-*o* can be either a double object construction or a ‘*to*-dative’. Recall from 1.2 in chapter 1 that Kishimoto (2008a) argues that Goals can never be generated lower than the Theme in non-idiomatic constructions. However, the problem tackled here will concern the *ni* > *o* order, which can be ambiguous between a high Goal / low Goal structure in both approaches.

If Miyagawa & Tsujioka (2004) are on the right track, whenever the Goal argument follows the accusative marked argument, one is dealing with the ‘*to*-dative’ construction, that is, with a goal marked with a postpositional *ni*. However, things become more difficult in the other order: a *ni*...*o* sequence could in principle be either a double object construction or a ‘*to*-dative’ one. Since the order NP-*ni* NP-*o* is ambiguous between the double object construction and the postpositional one, an operative test to distinguish between the two is necessary. The test that Miyagawa & Tsujioka employ is that of floated quantifiers.

2.2.3 FLOATED QUANTIFIERS

In Japanese, quantifiers can be sometimes floated from the noun they determine. However, it is not the case that any quantifier can be floated: there are some conditions that must be satisfied. For instance, it is generally assumed that NPs can launch quantifiers,¹⁹ but that nouns inside a PP cannot (Miyagawa, 1989, Sadakane & Koizumi, 1995). This property can be used to determine the grammatical category of a certain phrase which is ambiguous between a PP and an NP. The test is useful mostly with *ni* marked phrases, as *ni* can be either dative case or a postposition. The possible configurations are shown below:

- (87) a. Postposition: *NP-*ni* QF
 b. Dative: NP-*ni* QF
 (QF = floated quantifier)

For instance, in (88-a), the accusative marked object can launch a quantifier. In (88-b), however, the NP embedded in the postposition *kara* ('from') cannot be associated with a floated quantifier:

- (88) a. John *ga* piza *o* 2-*kire* tabeta.
 John NOM pizza ACC 2-CL ate
 "John ate two slices of pizza."
 b. *John *ga* gakusei *kara* 3-*nin* purezento *o* moratta.
 John NOM student from 3-CL presents ACC received
 "John received presents from three students." (Sadakane & Koizumi, 1995, p. 8)

However, the test of floating quantifiers is not bullet-proof. There are instances where a quantifier can float from inside a PP, as shown in (89), from Takami (1995):²⁰

- (89) (?)Gakusei-*kara* go-*nin* okane *o* atume-masyoo.
 students-from 5-persons money ACC gather-POL.HORT
 "Let's gather money from 5 students."

(Takami (1995) gives the sentence as fully grammatical, but some speakers may find it slightly degraded.)

¹⁹Not any NP can launch a quantifier, however. For example, it has been noted that a direct object can have a floated quantifier, but a subject cannot.

²⁰See also Haig (1980) for a discussion on the possibility / impossibility of QF.

Here, the quantifier *go-nin* ('5 persons') is floated from the postpositional phrase *gakusei-kara* ('from students'), providing evidence against the claim that QF is possible only from NPs. While the QF test is employed by Miyagawa & Tsujioka, I will not make use of it and will, in fact, argue that it is a flawed test for determining the status of a *ni* marked phrase in a ditransitive construction.

The floating quantifier test is used by Miyagawa & Tsujioka (2004) in ditransitive constructions to distinguish when the *ni*-marked goal is a noun phrase and when it is a PP. The assumption is that if a quantifier can be floated from the *ni*-marked phrase, the phrase is an NP, therefore a 'high' goal, projected in the spec of ApplP, and marked with dative case. On the other hand, if a quantifier cannot be floated from the *ni* phrase, it means that the phrase is a PP:

- (90) a. * $[t_i \text{ Goal-PP}] \text{ QF}_i \text{ Theme-NP V}$
 b. $[t_i \text{ Goal-NP}] \text{ QF}_i \text{ Theme-NP V}$

In the next example, the quantifier *futari* ('two people') has been floated from the goal phrase *gakusei* ('students'). Accordingly, the structure must be a double object construction:

- (91) Bill_i ga gakusei_i ni futari syoohin o atae-ta.
 Bill NOM student DAT 2.persons prize ACC give-PAST
 "Bill gave the prizes to two students."

When a quantifier is floated from the goal, the direct object cannot be passivized, i.e. the passive version of (91) is ungrammatical:

- (92) *Syoohin_i ga gakusei_i ni futari t_i atae-rare-ta.
 prize NOM students DAT 2.persons give-PASS-PAST
 *"The prize was given two students."

Contrast (92) with (93), where the quantifier is not floated:

- (93) Syoohin_i ga [futari no gakusei_i ni] t_i atae-rare-ta.
 "The prize was given to two students."

In (92), by virtue of the floated quantifier, we force the construction to be a double object construction. But in this scenario, the DO cannot be passivized. In contrast, in (93) the DO can be promoted to the subject position under passivization. The contrast is minimal: the pres-

ence versus the absence of a quantifier floated from the goal argument. One could conclude from this pair of sentences that in the latter, but not in the former, the goal is a postpositional phrase, which does not block passivization of the DO. This suggests that Japanese is not a true symmetric language. The difference between (92) and (93) is that the former must be a double object construction, but the latter may be a postpositional object construction. Thus, just as in (American) English, the DO may passivize when the goal is a PP, but it cannot when the goal is a case marked NP.

In fact, this is the conclusion drawn by Miyagawa (1997), Miyagawa & Tsujioka (2004) and, following them, by Doggett (2004), McGinnis (1998). I disagree with this and proceed to show that the QF tests discussed above are not relevant to the structure of ditransitives.

The floated quantifier not only blocks passivization, but also seems to block nominative case on the theme. Usually, the direct object can be marked with nominative in a potential construction:

- (94) Bill ni gakusei ni syoohin ga atae-rare-ru.
 Bill DAT student DAT prize NOM give-POT-PRES
 “Bill can give the prize to the student.”

As shown in (95), the theme cannot be marked by *ga* in the potential construction if a floated quantifier is present:

- (95) Watasi wa gakusei ni futari syoohin *ga / (?)o atae-rare-ru.
 I TOP students DAT 2.persons prize NOM / ACC give-POT-PRES
 “I can give the prize to two students.”

However, the variant with accusative on the theme is much better, although not perfect.

What is different here, compared to the previous examples of passives, is that the potential construction does not involve (overt) movement of the goal to a higher position. Instead, the nominative is assigned *in situ* to the direct object. However, the quantifier floated from the goal seems to block the case assignment on the theme.

The same phenomenon can be illustrated with the desiderative *-tai*, which, just as the potential form, involves absorption of the accusative case followed by nominative case assignment to the DO:

- (96) *Watasi wa gakusei ni futari syoohin ga atae-tai.
 I TOP students DAT 2.persons prize NOM give-DES

“I want to give the prize to two students.”

The data above show that the presence of a quantifier floated from a goal argument blocks syntactic operations on the theme argument, such as passivization and the formation of desiderative or potential constructions. Surprisingly enough, the same quantifier seems to also block the scrambling of the theme argument to the left of the goal:

- (97) a. Gakusei_i o [otagai no adobaizaa ga] [sensei ni] t_i syookaisita.
 Student ACC [each.other GEN advisor NOM] [teacher DAT] t_i introduced
 “Each other’s advisors introduced the students to the teacher.”
- b. *Gakusei_i o [otagai no adobaizaa ga] [sensei ni] futari t_i syookaisita.
 Student ACC [e.o GEN advisor NOM] [teacher DAT] two t_i introduced
 “The students, each other’s advisors introduced to two teachers.”

On the basis of the data in (97), McGinnis (1998) concludes that A-scrambling is subject to locality conditions: the accusative phrase cannot be scrambled over the dative phrase, as seen in (97-b). In contrast, if the goal argument is a PP, allegedly in (97-a), that PP does not count as an intervener and the accusative NP is free to scramble to the left periphery of the clause.

Here, the reciprocal *otagai* (‘each other’) embedded within the subject NP has the role to control for A-scrambling, by forcing *gakusei* to bind the reciprocal (see e.g. Nemoto, 1999, Saito, 1992).

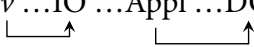
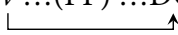
Without the reciprocal *otagai*, the scrambling of the accusative object may as well be an instance of \bar{A} -movement. Nevertheless, even so, the floated quantifier blocks the movement. This is unexpected because \bar{A} -movement has different locality conditions than A-movement. An intervening A-position (the goal argument) should not be able to block the \bar{A} -movement of the lower theme:

- (98) *Okasi o gakusei ni futari atae-ta.
 Cake ACC students DAT 2.persons give-PAST
 “I gave two students the cake.”

At this point, two alternatives arise:

(i) When the goal is an NP in the spec of ApplP (double object construction), it induces *strong locality effects*. It blocks movement of the theme, and also blocks case assignment to the theme by v — remember that the desiderative construction can be used as a test for determining where

the case of an object comes from. In this light, the example (95) suggests that the accusative case of the DO does not come from ν , and the only alternative case assigner seems to be Appl. This implies that the two possible constructions are: (a) double object constructions, with dative assigned to the goal by ν and accusative on the theme assigned by Appl, as suggested for instance by McGinnis (1998), Anagnostopoulou (2001), and (b) postpositional object constructions, where accusative is assigned by ν , and the goal is a PP. The two possibilities are schematized in (99).

- (99) (c-command order)
- a. $\nu \dots \text{IO} \dots \text{Appl} \dots \text{DO} \dots$

 - b. $\nu \dots (\text{PP}) \dots \text{DO} (\text{PP})$


The structures in (99) appear to be rather arbitrary and also involve additional ad-hoc assumptions. Nevertheless, they have been defended in the literature. I hope to show, by the end of this section, that they are not founded and that, at least in Japanese, ditransitives do not involve such structures.

(ii) The second possibility is that the examples (92) — (96) are ungrammatical not because the goal is an NP in the specifier of ApplP, but because the floated quantifier induces a blocking effect, for reasons which remain yet unknown. In other words, it is not the high goal that blocks case and / or movement of the theme, but some other property of floated quantifiers. This is in general the problem with negative data: a structure can be ungrammatical for any number of reasons, not only the ones we can readily identify. In the case at hand are the examples ungrammatical because (a) the goal is an NP or because (b) floated quantifiers induce locality effects? According to Miyagawa (1997), Miyagawa & Tsujioka (2004) and others following them, they are ungrammatical because of (a). I believe (b), even if I don't know why quantifiers should behave so. Also, remember that quantifier floating might not be a reliable test for distinguishing between PPs and NPs.

To test which of these two alternatives is the correct one, we need to find a way to control for double object constructions but without the aid of floated quantifiers.

In fact there is a way to check if a *ni* marked phrase is an NP or a PP. As discussed by Bruening (2001), the double object constructions exhibit scope freezing: the IO obligatorily takes scope over the DO, and the inverse relation, i.e. narrow scope of the IO is not possible. In contrast, in the prepositional construction, the DO may take scope over the PP, but it may also be interpreted

as having narrow scope.

- (100) a. I gave a child each doll.
 $\exists > \forall; * \forall > \exists$
 b. I gave a doll to each child.
 $\exists > \forall; \forall > \exists$

It has been argued by Miyagawa & Tsujioka (2004) that the same phenomenon can be observed in Japanese, too. If a *ni* marked phrase is animate, it tends to be an NP (i.e. we are dealing with a double object construction), but if it is inanimate, it is more likely that it is a PP (i.e. we are dealing with a ‘to-dative construction’). In the first case, scope is frozen. In (101-a), *every* cannot take scope over *some*. In the second case (101-b), however, the sentence is claimed to be ambiguous: either scopal relation is possible. Nevertheless, note that some speakers do not find any contrast between (101-a) and (101-b) and they only accept the narrow interpretation of the universal quantifier.

- (101) a. Taroo ga dareka ni dono-nimotu-mo okut-ta.
 Taroo NOM someone DAT every-package send-PAST
 “Taro sent someone every package.”
 $\exists > \forall; * \forall > \exists$
 b. Taroo ga dokoka ni dono-nimotu-mo okut-ta.
 somewhere
 “Taro sent every package to some place.”
 $\exists > \forall; \forall > \exists$

In (101-a) scope is frozen, so there is only one person who receives all the packages. According to Miyagawa & Tsujioka (2004), this means that the sentence is a double object construction. The interesting question is what the scope relations are in a ditransitive potential construction in which the theme argument is marked with nominative. If the construction is postpositional, we expect wide scope of the theme over the goal to be available. If it is a double object construction, the theme must take narrow scope with regard to the goal.

- (102) Taroo ni-wa aru hito ni dono-ronbun-mo okur-e-ru.
 Taroo DAT-TOP certain person DAT any-article send-POT-PRES
 “Taro can send any article to a certain person.”

Note that the nominative case in (102) is not visible, because of the presence of the particle *mo* (Kuroda, 1979). When this particle attaches to a noun, the overt case marking of the respective noun disappears. However, it is well known that in Japanese there must be a nominative phrase in any tensed clause (Kuroda, 1978) and the only candidate is the theme, *dono-ronbun* (any article).

In (102), the goal takes scope over the theme, so the sentence can only mean that there is only one person to whom Taroo can send any article; but the distributive reading is not available. This means that, according to Miyagawa & Tsujioka (2004), (102) is a double object construction, so the goal argument is a dative marked NP, not a postposition. Still, the theme argument is assigned nominative by T, with no blocking effects due to the presence of the goal NP. This shows that in the double object construction, the higher argument does not induce a relativized minimality effect for the lower argument, against the claims of Miyagawa & Tsujioka.

Judgments regarding scope ambiguities are delicate and people might disagree, so any additional arguments would be desired. In what follows, I will try to show that the alleged intervention effects do not hold.

2.2.4 TWO TYPES OF VERBS

From the beginning, it should be noted that Japanese speakers do not always agree on the (un)grammaticality of various data on ditransitives. For instance, Miyagawa & Tsujioka (2004) report that floating a quantifier from the goal of *okuru* ('send') is sometimes possible, but in fact not all speakers accept this (see also Miyagawa & Tsujioka, 2004, fn. 6). This might be explained not only by slight differences in the grammar of different speakers but also by some ambiguity of the lexical meaning of the verb. For example, Kishimoto (2001b) notes that *okuru* may also mean 'give'.²¹ Therefore, the data presented here might have different degrees of acceptability for different speakers.

²¹Surprisingly, in light of the data discussed in this section, Terada (1990, p. 14) reports (i-b) as ungrammatical, but the structure without a floated quantifier (i-a) is accepted:

- (i) a. Takasi-wa san-biki-no kobuta-ni okasi-o age-ta.
Takasi-TOP 3-CL-GEN piglet-DAT sweet-ACC give-PAST
- b. *Takasi-wa kobuta-ni san-biki okasi-o age-ta.
Takasi-TOP piglet-DAT 3-CL sweet-ACC give-PAST
"Takasi gave sweets to three piglets."

Consider the examples in (103) and (104):

- (103) a. Futari no gakusei ni syoohin o atae-ta.
 2.persons GEN students DAT prize ACC present-PAST
 “I gave the prizes to two students.”
 b. Sannin no kodomo ni okasi o age-ta.
 3.persons GEN child DAT sweet ACC give-PAST
 “I gave sweets to three children.”
- (104) a. Futari no gakusei ni hon o todoketa.
 2.persons GEN students DAT book ACC delivered
 “I delivered the books to two students.”
 b. Kare ga nikasyo no gakkoo ni gansyo o okut-ta.
 he NOM 2.places GEN school DAT application ACC send-PAST
 “He sent applications to two schools.”

If one looks at the meaning of these verbs, it becomes apparent that those in (103) can appear more naturally with animate goals (which denote possessors), but the verbs in (104) select goals which denote location. It is natural to assume that the lexical meaning of the verb can dictate what kind of construction the verb may appear in and what kind of arguments it takes.

Now consider what happens when one tries to float a quantifier from the goal in these constructions:

- (105) a. Gakusei ni futari syoohin o atae-ta.
 students DAT 2.persons prize ACC present-PAST
 “I gave the prizes to two students.”
 b. Kodomo ni sannin okasi o age-ta.
 child DAT 3.persons sweet ACC give-PAST
 “I gave sweets to three children.”
- (106) a. ?*Gakusei ni futari hon o todoketa.
 students DAT 2.persons book ACC delivered
 “I delivered the books to two students.”
 b. *Kare ga gakkoo ni nikasyo gansyo o okut-ta.
 he NOM school DAT 2.places application ACC send-PAST
 “He sent applications to two schools.”

The verbs in (105) permit a quantifier floated from the goal, but those in (106) do not, indicating that in (105) the goals are NPs and that in (106) they are PPs.

In this light, one can conjecture that the verbs in (105) (*ageru*, ‘give’; *ataeru*, ‘present’ and also *osieru*, ‘teach’) select an animate possessor and, for this reason, occur in double object constructions, with the possessor introduced by the applicative head. In contrast, the verbs in (106) (*okuru*, ‘send’; *todokeru*, ‘deliver’) select a locative goal and appear in *to*-dative constructions, with the goal realized as a PP. These syntactic frames are dictated purely by the semantics of these verbs.

We have already seen that they behave differently with regard to floating quantifiers, but there are, in fact, more arguments that the verbs in (105) select an indirect object and those in (106) select a PP argument. It is shown in Kishimoto (2001b) that there are several aspects in which the two classes of verbs differ. In what follows, I will summarize some of his arguments.

First of all, verbs in the first class allow the passivization of the *ni*-marked phrase, but those in the second class do not. This is shown below:

- (107) a. Mary_i wa John ni t_i zyooohoo o atae-rare-ta.
M TOP J by information ACC present-PASS-PAST
“Mary was given information by John.”
b. *Mary_i wa John ni t_i hon o okur-are-ta.
M TOP J by book ACC send-PASS-PAST
“Mary was sent a book by John.”

With a verb like *ataeru* (‘present, give’), which we surmised to take the IO-DO frame, the goal is passivizable, suggesting that the goal is indeed, an NP. On the other hand, in (107-b) the goal phrase cannot be promoted to the subject position under passivization. This suggests that the goal in this case is realized as a PP.

Furthermore, instead of the *ni*-marked phrase, a locative PP headed by *made* (‘up to’) may appear with the second but not the first type of verbs. Kishimoto argues that such a PP is compatible with verbs of change of location (i.e. the second class) but not with verbs of change of possession (i.e. the first class).

- (108) a. *John wa Mary no uti-made nimotu o teikyoosi-ta.
J TOP M GEN home-to luggage ACC offer-PAST
“John offered the luggage to Mary’s home.”
b. John wa Mary no uti-made nimotu o okut-ta.
J TOP M GEN home-to luggage ACC send-PAST
“John sent the luggage to Mary’s home.”

In (108-a), *teikyoosuru* ('offer') is a verb of change of possession, and for this reason the PP-*made* is not allowed. In (108-b), *okuru* ('send') denotes change of location, therefore the PP is permitted.

Yet another argument —and to my mind, the strongest— in favor of distinguishing two verbal classes comes from the behavior of these verbs with regard to the animacy constraint.

A very well known contrast between the double object construction and the *to*-dative construction is that the former, but not the latter, imposes an animacy constraint on the goal (see e.g. Levin & Rappaport Hovav, 2005).

(109) *John sent London the goods.

Thus, (109) is not acceptable, because a high goal needs to be animate.²² On the other hand, in the prepositional construction, an inanimate locative is possible:

(110) John sent the goods to London.

The double object construction is well formed if the indirect object is animate:

(111) John sent his partners the goods.

In Japanese, the same constraint applies, as discussed in Kishimoto (2001b), Miyagawa & Tsujioaka (2004). For instance, Kishimoto gives the following example:

(112) John wa { Mary ni / *zitaku ni } zyooohoo o atae-ta.
 John TOP { Mary DAT / home DAT } information ACC give-PAST
 "John gave { Mary / *his home } information."

We have already seen that *ataeru* ('present, give') semantically selects a possessor. The ungrammaticality of the inanimate IO in (112) proves again that this verb (as do others in its class) occurs only in the double object construction. Indeed, if *ataeru* could also appear in the PP-DO frame, one would expect inanimate goals to be possible with it, given that the PP-DO frame is not subject to any animacy constraint.

To summarize the preceding discussion, it seems that certain verbs consistently take an NP as the goal, and that other verbs unambiguously select for a PP as the goal, due to their semantics.

²²It is noted by Levin & Rappaport Hovav (2005) that the example is acceptable if *London* is interpreted metonymically, as referring to some animate entities located in London (e.g. the business partners).

They behave differently with regard to quantifier floating, passivization, co-occurrence with *made* phrases and the animacy restriction on the goal. The syntactic frame in which these verbs appear is given below:

- (113) ataeru, ageru:
 IO ...DO ...V
- (114) okuru:
 (PP) ...DO ...(PP) ...V

2.2.5 DOUBLE OBJECT VERBS

It has been argued in the previous section that two classes of ditransitives can be distinguished in Japanese: first, verbs which appear only in the double object construction and secondly, verbs which take a postpositional phrase as the goal. Verbs from the first class, by virtue of their lexical meanings do not select a PP as the goal. Instead, the goal is always realized as a dative marked NP, as witnessed by the animacy constraint effects. As such, verbs from this category allow us to test the object properties of their direct object without the added complication of the floated quantifiers.

Miyagawa & Tsujioka (2004), among other researchers, used the QF test in order to ensure that both objects are NPs. However, as discussed in §2.2.3, it is not clear if the data obtained in this way truly reflect the properties of direct objects (locality conditions, case assigner) or if they are tainted by some bizarre property of floated quantifiers. Consider again a floated quantifier construction, such as the one repeated in (115):

- (115) Bill ga gakusei ni futari syoohin o atae-ta.
 Bill NOM student DAT 2.persons prize ACC give-PAST
 “Bill gave the prizes to two students.”


The direct object cannot passivize or scramble. Also, if the construction is changed to the potential or desiderative form, the direct object cannot appear with nominative case. The question was if these phenomena derive from the fact that in these structures the goal is expressed as a noun phrase or if, for some reason, the floated quantifier blocks the above mentioned operations.

We are now in the position to test between these two alternatives, by using verbs which appear only in the IO–DO construction (namely the first class discussed in the previous section), without floating quantifiers from the *ni*-marked phrase. While Miyagawa & Tsujioka control for the double object construction by floating quantifiers from the goal argument, we can control for the same condition by the lexical meaning of the verb.

First, consider passivization:

- (116) Sono okasi ga kodomo ni atae-rare-ta.
 That cake NOM children DAT give-PASS-PAST
 “That cake was given to the children.”

The example above is acceptable, even though the verb *ataeru* (‘present, give’) selects for an NP goal, as discussed above. Compare this example with (92) on page 77. There does not seem to be any blocking effect induced by the intervening goal; the direct object is free to skip over it and raise to the subject position:

- (117) Su ...IO ...t ...V


With regard to scrambling, the same thing happens: the DO is free to move over the IO and scramble to a sentence initial position:

- (118) Okasi o futari no gakusei ni atae-ta.
 Cake ACC 2.persons GEN students DAT give-PAST
 “I gave two students the cake.”

The data above indicate that the intervening indirect object, although it is an NP, does not induce any blocking effect with regard to movement of the lower direct object. Compare this with the scrambling data in (97-b) on page 79.

If there is no floated quantifier from the IO, in the potential construction the direct object can appear with nominative case, as shown in (119). Contrast this with the QF example (95) on page 78:

- (119) a. John ni kodomo ni okasi ga atae-rare-ta.
 John DAT children DAT cake NOM give-POT-PAST
 “John could give the cake to the children.”
 b. Sensei ni wa ano hito ni eigo ga osie-rare-ru.
 Professor DAT TOP that person DAT English NOM teach-POT-PRES

“The professor can teach him English.”

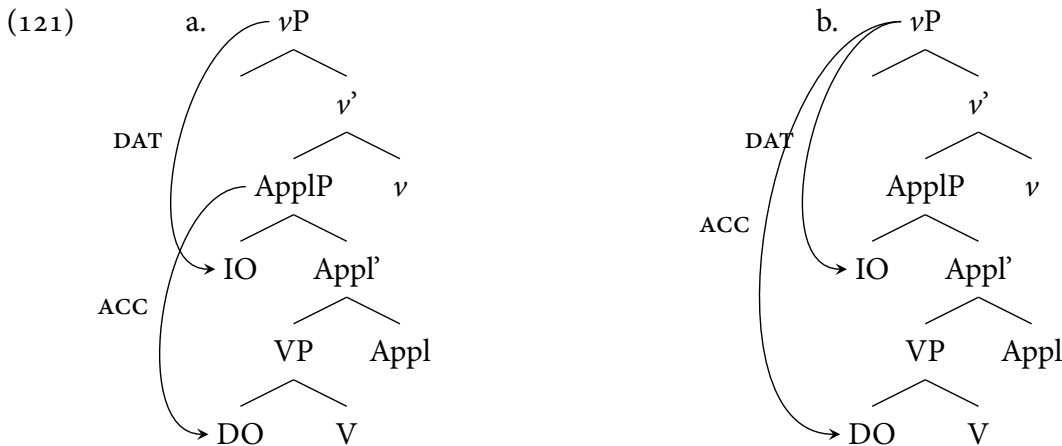
The potential construction can be used to determine what verbal head assigns case to an accusative NP, as already discussed in §2.1.6.5. The potential *-rare* absorbs the accusative case of the verb it attaches to, so the direct object of the verb receives nominative from the higher T. This is similar to the passive constructions, with the difference that in the former there is no need for the object to move.

In a structure like:

(120) NP-ACC ...V₁ ...V₂

if the potential morpheme *rare* can attach to V₂ and the NP appears with nominative, it means that V₂ is the accusative case assigner, under the assumption that an affix can only affect the properties of the head to which it attaches, in other words, that there is a structural adjacency condition on operations like passivization, desiderativization, etc.

Now consider the data in (119) again. If the applicative head is responsible for the accusative case of the DO, as suggested by McGinnis (1998), Anagnostopoulou (2001), one would expect the example in (119) to be ungrammatical: the potential morpheme attaches to the higher *v* head, not to the applicative head. In fact, it cannot attach to the applicative head, since the V-AppI-*v* string is morphologically unbreakable. The acceptability of (119) shows that the accusative case of the DO is assigned by the highest verbal head, *v*. The mechanism proposed by McGinnis is represented in (121-a). In contrast, the data discussed in this section suggest that the correct representation should be that of (121-b):



Just as in the case of causative constructions, the case assignment to the internal arguments happens at the level of the highest verbal projection, the highest ν . The head that introduces the external argument is responsible for the case array of the internal arguments (in this respect, see also Kishimoto, 2007b). This could be correlated with the notion of phase, as proposed by Chomsky (2001). In more recent incarnations of this approach (Chomsky, 2005), it is assumed that phase heads trigger all syntactic operations, such as case assignment. Since ν is regarded as a phase head, it is expected that all case assignment for that phase takes place at the ν level. This is in line with the empirical data from Japanese presented here.

An alternative view regarding the dative case on the indirect object is to claim that it is inherent case, assigned *in situ* by the applicative head. For instance, Anagnostopoulou (2003) argues that in Greek the case of the indirect object, genitive,²³ is inherent case. For this reason, the IO cannot passivize, as seen in (122):

- (122) a. O Gianis estile tis Marias to grama.
 The Gianis-NOM sent-3sg the Maria-GEN the letter-ACC
 ‘John sent Mary the letter.’
 b. *I Maria stalthike to grama.
 The Maria-NOM sent-PASS-3sg the letter-ACC
 ‘Mary was sent the letter.’

In Japanese, however, it can be shown that the dative case of the goal is structural case: the NP in question can raise to the subject position and bear nominative case under passivization, as shown in (84-c) on page 73. Thus, it can be argued that it is a language-specific option whether the IO bears inherent or structural case.

A few words regarding locality are in order. I take the notion of closeness to be defined in terms of c-command (but see Fitzpatrick, 2002 for a side by side comparison of different metrics for ‘closeness’). Under this view, in the configuration $\alpha > \beta > \gamma$, where ‘>’ stands for c-command, β is closer to α than γ . The operation Agree is subject to locality requirements, in that a probe can only agree with the closest potential goal. Agree to a more distant goal, past a closer one is prohibited in principle (see for instance the discussion in Boeckx, 2000 regarding Icelandic data.) Under these assumptions, the Japanese double object construction poses a problem:

- (123) $\nu > \text{IO} > \text{DO}$

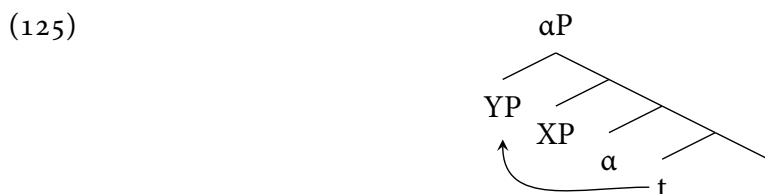
²³In Greek, the dative and genitive case have fused into one single morphological case.

In the structure above, the indirect object is closer to v than the direct object is. Therefore, Agree between the verbal head and the direct object should be impossible. In fact, this prediction is employed by Boeckx & Niinuma (2004) in dealing with object honorification phenomena. However, there are good reasons to believe that the direct object is assigned case by v , in spite of the intervening IO. Remember that the DO can be passivized, across the IO. The possibility of passivization shows that (i) the accusative case of the DO is structural case and (ii) it must come from the v head. It follows that the IO does not block the Agree relation between v and DO, contrary to the expectations.

There are at least two strategies to circumvent the locality problem. One is to assume an intermediate step in movement. Consider the configuration in (124):



If YP has to move to a higher head, the intervening effect of XP can be effaced by an intermediate movement of YP to a specifier of αP :



Now XP and YP are equidistant from any higher head, so any of them can in principle be attracted. This device has been used for instance by Anagnostopoulou (2003), Doggett (2004), McGinnis (1998, 2002) to explain long passives in double object constructions for the languages which allow this possibility as well as other apparent locality violations.²⁴

A second option is to employ again the notion of Multiple Agree, as proposed by Hiraiwa (2005). By necessity, in a Multiple-Agree relation, locality conditions do not apply. Thus, the v head can assign accusative case to the theme, even though there is a potential intervener, namely the goal phrase. After accusative case is discharged, v assigns dative to the goal phrase.

²⁴This intermediate step necessary to circumvent locality is reminiscent of the adjunction to VP introduced in the *Barriers* framework.

No intervention / Relativized Minimality effect occurs.

There does not seem to be any independent motivation for the extra-movement approach, while the Multiple-Agree operation is arguably necessary in syntax. I will, therefore, take the second option.

Because of the Multiple-Agree relation, the theme and the goal phrases are effectively rendered equidistant to the head ν . What remains to be discussed is the fact that they also seem to be equidistant to heads outside the ν P phase: the lower phrase can be passivized and again there is no intervention effect. When attracted by T, the theme argument is free to move past the c-commanding goal phrase. One line of attack would be to say that when two nodes α and β enter into a Multiple-Agree relation with a head γ , they are also rendered equidistant to any other higher head, δ . However, this reasoning fails to account for the behavior of causatives, where the lower DO cannot move past the Causee phrase, even though both arguments receive case from the same head. I will come back to this problem in section 2.3.

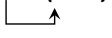
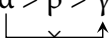
It should be noted that Agree is exempted from locality conditions only if the Probe has two or more features (of the same type) to check. If the Probe has one feature, it will agree with the closest matching Goal. One example of this comes from the possibility of honorification in ditransitives.

It has been known for a long time (Harada, 1976, Kuno, 1983) that non-subject honorification obeys locality conditions. In a ditransitive, only the indirect object can be honorified, not the direct object:

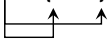
- (126) a. *Ootoo ni Yamada-sensei o go-syookai-si-ta.
 younger.brother DAT Prof.-Yamada ACC NS.HON-introduce-NS.HON-PAST
 “I introduced Prof. Yamada to my younger brother.”
 b. Yamada-sensei ni ootoo o go-syookai-si-ta.
 “I introduced my younger brother to Prof. Yamada.” (Harada, 1976)

On the other hand, as discussed in this chapter, both the IO and the DO receive case from the same head (ν), without intervention effects. This is because honorification is a simple Agree operation, while case assignment is a Multiple-Agree operation. They apply differently:

(127) Simple Agree:

- a. $\alpha > \beta > \gamma$

 b. $\alpha > \beta > \gamma$


Multiple-Agree:

- c. $\alpha > \beta > \gamma$


Simple Agree (i.e. one feature to check) and Multiple Agree (more features to check) obey different locality conditions (see also Boeckx & Niinuma, 2004).

2.2.6 CONCLUDING REMARKS

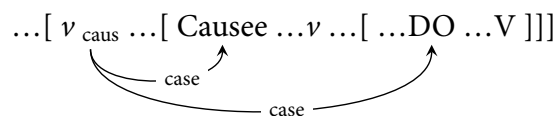
On the basis of data from verbs which unambiguously select two NP objects, we have seen that some of the claims made in recent literature with regard to the status of the double object construction in Japanese are unfounded. Thus,

- (i) the claim of McGinnis (1998) that A-scrambling is subject to Relativized Minimality effects is untenable. The DO may scramble over the IO.
- (ii) the claim of Doggett (2004), Miyagawa & Tsujioka (2004) that in double object constructions the DO may not passivize has been shown to be false. Instead, it turned out that it is the properties of floated quantifiers that create the observed blocking effects. Why this happens is unclear at the moment, but it has to do with the properties of QF, not of the ditransitive constructions.
- (iii) the proposal made by McGinnis (1998), Anagnostopoulou (2001) that ν assigns dative in double object constructions and that the accusative case of the theme is assigned by the applicative head (R in McGinnis's terminology) is falsified — at least for Japanese — by the potential construction. Additionally, if the two objects receive case from different case assigners, there is no principled account why they do not both receive accusative case. On the other hand, if we assume that in Japanese a verbal head can assign accusative only once, the DAT-ACC pattern in ditransitive constructions is in fact predicted by the present analysis: the ν head assigns accusative to the DO and then, since it cannot assign accusative twice, it assigns dative to the IO, in a manner similar with the causative constructions.

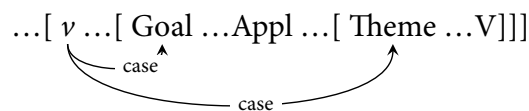
2.3 LOCALITY IN MOVEMENT

We have seen that there is a clear parallel between causatives and ditransitives: in both constructions, the case array of the arguments is assigned by the highest verbal head. I have argued that Multiple Agree is at work here, so there is no intervention effect. This parallelism is schematically shown in (128):

(128) a. Causatives:

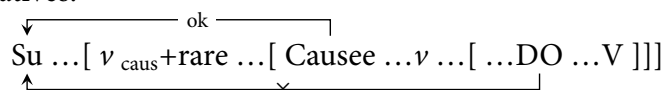


b. Ditransitives:

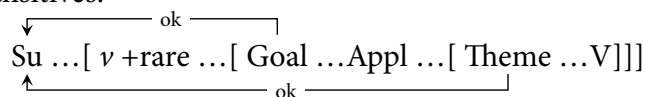


Case in (128-a-b) can be assigned over the causee and the goal, respectively. However, there is one important difference between the two structures: in ditransitives, any of the two objects can passivize, while in causatives it is only the causee that can be passivized (excluding the peculiar passives, which have a different structure altogether, see §2.1.6.3). The DO of the lower verb cannot undergo passivization, which suggests that some sort of locality condition applies. The possibilities of passivization are shown in (129):

(129) a. Causatives:



b. Ditransitives:



In (129-a) long movement of the object over the causee is prohibited. In contrast, in (129-b) the Theme is free to raise over the Goal. As shown in (128-a) and (128-b), in both these constructions the case comes from the higher head. Furthermore, as discussed, no locality effects arise. The most natural prediction is that in both causatives and ditransitives, *any* of the two arguments could passivize. The prediction, however, only holds for ditransitives. For causatives it is only the causee that can be passivized. In ditransitives and causatives, both arguments are visible for case assignment purposes; they appear to be equidistant. However, this is not due to a structural configuration, but to the properties of Multiple Agree. The question is, what is the difference between (129-a) and (129-b)? To answer this question, a little detour is necessary.

2.3.1 HEAD-TO-HEAD MOVEMENT

In general, it is difficult to determine the surface position of various elements in Japanese. This is due to the fact that Japanese has a strict complement-head order. In a VO language such as English it is easy to see if, say, a direct object has moved past the verb in a passive construction, since the linear ordering between the two is reversed. In contrast, in Japanese this operation would, in most cases, be string-vacuous. Since the NP movement is to the left, the linear ordering between the verb and the nominal phrase is not affected. Furthermore, things are complicated even more by the fact that Japanese allows scrambling rather freely.

The same problem arises not only in regard to movement of phrasal constituents, but also for head-to-head movement. It is not trivial to decide whether verbs raise to T in Japanese or not. It is well known that in English tensed verbs do not raise, but they do so in French (Pollock, 1989). This is readily observable by comparing the position of certain adverbs in the two languages. On the other hand, in Japanese such movement would be string-vacuous, thus more difficult to observe:

- (130) a. Adv t_i [V_i T] (Japanese)
 b. [V_i -T Adv [t_i]] (French)

While in a language like French (130-b), V movement is immediately visible, in Japanese (130-a) it is not. More complex tests are needed in order to decide whether Vs raise overtly in Japanese or not. Indeed, the issue is not settled in the literature. For instance, Koizumi (2000), Otani & Whitman (1991) argue for verb raising, while Aoyagi (1998), Fukui & Takano (1998), Fukui & Sakai (2003) go for the opposite view (the arguments of both camps are reviewed in Kishimoto, 2008b).

Yet another position is articulated by Kishimoto (2007a). He argues that there is head-to-head movement in Japanese, but its scope is rather limited: verbs don't raise, but functional elements above ν P (e.g. negation) raise to T.

The main argument comes from the effect of intervening particles like *mo*, *wa*. Like Aoyagi (1998), Kishimoto (2007a) argues that whenever such a particle intervenes between two heads, they cannot form a complex head (his Infixing Constraint), therefore head-to-head movement cannot take place. Emphatic particles can appear after a verb stem, as already illustrated before. On the other hand, Kishimoto notes that they cannot intervene between the sentential negation and the tense:

- (131) *John wa konna hon o yoma-naku-sae { ar-u / Ø-ru }.
 John TOP such book ACC read-NEG-even { be-PRES / Ø-PRES }
 “John does not even read such books.”

This suggests that negation must obligatorily undergo incorporation into T, but in (131) this process is blocked by the intervening particle. This observation is corroborated with the fact that in Japanese, negation can have scope over the Spec TP, again indicating that it has moved into T.

On the other hand, a verb can be freely separated from T by an intervening particle, albeit the dummy *su* has to be inserted to satisfy the morphological needs of T. This can be taken as evidence that verbs in Japanese do not raise at all. Moreover, as discussed in §2.1.6.6, the scope of an emphatic particle attached to a verb does not extend over the ν P itself, so there isn't any movement even at LF.

Inside the verbal shell itself, I assume that incorporation of V into ν is always obligatory, as the string $V+\nu$ cannot ever be broken. Thus, in a simple clause in Japanese, the following head movements take place:

- (132) $[[[[V] \nu] \text{Neg}] T]$


We can now return to the puzzle of passivization discussed at the beginning of this section: why is long passive possible for ditransitives but ruled out for causatives? In light of the discussion above, I would like to propose that the determining factor is the absence / presence of head-to-head movement.

The question is whether incorporation takes place in causatives and ditransitives. For ditransitives, the answer is clear. The heads forming the ditransitive can never be separated, they form a complex head $[_\nu V+\text{Appl}+\nu]$ spelled-out as a single word. In ditransitives, incorporation always takes place.

Causatives do not seem to require incorporation: the string $V+sase$ can be broken by *mo*, *sae*, *wa*. It can be conjectured that in causatives there is no incorporation of $[V+\nu]$ into ν_{caus} . Instead, the heads $[V+\nu]+\nu_{caus}$ undergo a merger at PF (if no particle intervenes) in the fashion proposed by Distributed Morphology (Halle & Marantz, 1993).

Then, the contrast between (129-a) and (129-b) on page 93 can be explained as follows:

- (i) In ditransitive constructions, the minimal domain of the V head is extended by its incorporation into the higher Appl (cf. Chomsky, 1993 on extended minimal domains). Thus,

both the Spec of Appl, i.e. the Goal and the complement of V, i.e. the Theme belong to the same domain. Therefore, they are equidistant from any higher head. A Probe in search of a Goal can Agree with either of them. In effect, they are both equidistant from T, so either one of them can be passivized.

(ii) On the other hand, I have argued that incorporation doesn't take place in causatives. The causee and the DO are therefore in distinct domains — so they are not equidistant. They are both visible for the purpose of case assignment, but this is due to the nature of the operation Multiple-Agree. Only the higher argument, namely the causee, can raise to T under passivization. The DO cannot move, due to the intervention of the causee. We have now a principled explanation of the puzzling contrast between (129-a) and (129-b).

2.4 SUMMARY

In this chapter I have argued that in causative constructions, as well as in ditransitives, the case array of the arguments is determined by the highest head of the complex predicate. I have treated ditransitives as complex predicates, which might seem strange at first, but given their multiple VP shell structure, I believe such treatment is not completely unwarranted.

The analysis proposed for causatives has some implications regarding the notion of phase. I have argued that phases should not be 'hard-coded' for a certain head, but that they are dependent on the derivation.

When discussing ditransitive constructions, I have argued against some recent proposals in the literature which claim that double object constructions are severely limited by locality constraints and that Japanese is not a true double-object construction language.

Causative constructions and ditransitives share some structural similarities with each other. Thus, it is not surprising that they also share the same case-assignment mechanism. However, there is a difference between the two with regard to movement, a difference which emerges in the passive. Passivization is much more limited in causatives than in ditransitive constructions. I have argued that this difference should be explained by the absence or presence of incorporation.

3 V-V COMPOUNDS

3.1 INTRODUCTION

In many languages it is possible for the main verb of a clause to combine with another one, more specialized and restricted in meaning. These can be motion verbs, light verbs, aspectual verbs, serial verbs, perception verbs, modals, causatives, etc. Sometimes, they must be adjacent to the main verb, while in other cases they are separated by infinitival markers or may be separated by intervening adverbials. Some of them may introduce arguments, and some may be raising predicates. These verbs have been analyzed in many ways: as restructuring verbs (Rizzi, 1978), as functional elements (Cinque, 2004), as lexical elements merged in functional positions (Cardinaletti & Giusti, 2001), as ordinary lexical predicates, and so on. But there are two things which they appear to have in common:

(i) In most of these cases, the entire structure is behaving as a single clause: clitics climb, objects undergo long-passivization and the case frame of the V-V sequence is that of a single predicate. The main V is usually in the infinitive or, if it carries tense / agreement, it must be the same as that of the ‘restructuring’ verb.

(ii) There seems to be a limited universal pool from which these verbs can be drawn. While virtually any verb can appear as the main verb, the ‘restructuring’ verbs belong to a restricted set. This set is language-specific, but there are clear overlaps of these sets across languages. (The restriction on possible ‘restructuring’ verbs seems to suggest that they do not belong in the ordinary Lexicon, but are part of a more abstract, more ‘grammatical’ repository — the Syntacticon, as proposed by Emonds, 2000.)

Sooner or later, the student of Japanese, too, will stumble upon sentences whose predicate is composed of more than one verb. Japanese has a large variety of such predicates (example from Makino & Tsutsui, 1986):

3 V-V Compounds

- (1) Gohan o tabe-kake-ta tokini, zisin ga oki-ta.
Meal ACC eat-begin-PAST when earthquake NOM occur-PAST
“When I was about to eat my meal, the earthquake occurred.”

Here, *tabe-kake* is formed from the verb *taberu* (‘eat’) and *kakeru* (‘be about to’). All the verbal morphology (tense, negation, any other suffixes) is carried by V2, while V1 appears in the so-called continuative form (*renyōkei*, in Japanese traditional terminology), which I take to be basically a verb root.

3.2 LEXICAL AND SYNTACTIC COMPOUNDS

The Japanese V-V compounds fall into two major categories. Kageyama (1993, 1999) gives the following list:¹

- (2) a. **Type A:** *-agaru* [motion directed upward]; *-akasu* (pass, spend the night); *-arasu* (damage); *-aruku* (walk); *-hanasu* (set free); *-harau* (pay); *-hiraku* (open); *-kaeru* (be extremely); *-kaesu* (do again); *-kakeru* [directed motion]; *-komu* [action takes place deep into]; *-mawaru* (move around); *-sakebu* (yell); *-saru* (leave); *-tataeru* (extol, praise); *-tatu* [~ up]; *-tugu* (to continue without a break); *-tuku* (stick to, adhere).
- b. **Type B:** *-au* (join, do reciprocally); *-dasu* (begin); *-hazimeru* (begin); *-kakeru* (set; be about to); *-kiru* (do completely); *-makuru* [~ away, do volubly, with reckless abandon]; *-nareru* (get used to); *-nuku* (to do something to the end); *-oeru* (finish); *-owaru* (finish); *-sokonau* (fail to); *-sokoneru* (miss); *-sugiru* (pass, overdo); *-tukeru* (to be accustomed to); *-tukusu* (exhaust); *-tuzukeru* (continue); *-wasureru* (forget);

Type A verbs — Kageyama (1989, 1993) convincingly argues — are lexical compounds and thus syntactic processes do not affect them. According to Di Sciullo & Williams (1987), syntax operates with atomic words and cannot ‘see’ within their morphologically complex structure. For syntactic purposes, words are monolithic. In this line, Kageyama shows that type A compounds are impenetrable to certain syntactic processes, but type B compounds are not. Most notably, in type A compounds, V1 cannot be replaced by the proform *soo suru* (‘do so’), but this is possible in type B compounds. Moreover, type A compounding can feed type B, but not vice versa. Kageyama concludes that items in the first class (2-a) are listed in the Lexicon and

¹For the translation, I took some hints from Makino & Tsutsui (1995, Appendix 2).

those in the second class (2-b) are dynamically generated by syntax. From the point of view of syntax, type A compounds are atomic — they occupy a single node — while type B involve syntactic complementation. Less formal arguments for this claim are semantic transparency and productivity: according to Kageyama, the first class is more often than not unproductive and semantically opaque, unlike verbs in the second class, which are both semantically transparent and productive. Kageyama provides some more arguments involving passivization and honorification, but I will not review them here, as the verbs in category B do not behave uniformly with regard to these transformations. This will become apparent in the subsequent sections.

In what follows, I will say nothing more about the type A compounds, but leave them dwell in peace in the Lexicon. The main focus of this chapter is the structure of the second type of compounds, the syntactic ones. However, it should be noted (as Nishiyama, 2008 shows), that not all researchers agree on the lexical status of the type A compounds. For instance, Nishiyama (1998) proposes that type A verbs, too, are syntactic compounds.

3.3 FURTHER CLASSIFICATION

Type B compounds are not all created equal. Some of the verbs display restrictions regarding the type of complement they may take. For instance, according to Makino & Tsutsui (1986), *hazimeru* cannot attach to punctual verbs:

- (3) a. Sensei wa hon o kaki-hazime-ta.
 Teacher TOP book ACC write-begin-PAST
 “The teacher began to write a book.”
- b. *Hanako ga kaizyoo ni tuki-hazime-masi-ta.
 Hanako NOM meeting.room at arrive-begin-POL-PAST
 “Hanako began to arrive at the meeting room.”

Thus, even if they are used productively, the syntactic V-V compounds cannot be created with just any verb, as there are semantic restrictions.

But more importantly, there is a demarcation line which divides the verbs in this class into two subtypes; according to some researchers (Kageyama, 1993, 1999, Shibatani, 1978) they are separated into *transitives* and *intransitives*, or, using a different terminology, into *control* and *raising* verbs (Kishimoto, 2007b, Koizumi, 1998). Verbs in one of these subtypes have the same behavior as the English *seem* in (4-a), while the second subtype behaves like the control verb

3 V-V Compounds

want in (4-b) (with the obvious difference that in the English examples below, the verbs select for a larger complement — IP or CP — while in Japanese compound verbs, they take a bare *v*/VP):

- (4) a. John_i seems [t_i to be sad].
b. John_i wants [PRO_i to go there].

The so-called intransitives correspond to the class of raising verbs. The distinguishing feature of these verbs is that they do not project an external argument. Instead, one argument of the lower verb (V₁)² receives nominative case from T and possibly raises to Spec TP, just as in the standard analysis of (4-a).

The transitive class of V2s corresponds to what is better known as control verbs. These verbs project an external argument which controls a PRO in the lower VP projection. Again, the analysis is identical with that of (4-b), the only difference being the size of the lower ‘clause’.

There are several differences between raising and control structures, which help differentiate between the two. The following are often discussed in the literature (see e.g. Davies & Dubinsky, 2004, Kishimoto, 2009, Zubizarreta, 1982):

- (i) Thematic role assignment. This is in fact the defining characteristic of the raising / control dichotomy. Raising predicates do not assign an external θ -role, so the highest argument of the lower predicate raises to become the subject of the main clause. In contrast, control verbs select their own external argument, which then controls a PRO functioning as the subject of the lower predicate.
- (ii) Behavior with regard to idioms. Raising structures allow an embedded idiomatic construction, with the idiomatic subject raising into the main clause. In contrast, control structures do not permit this option.
- (iii) Expletive subjects. In direct relation with property (i) above, expletive subjects (*it*, *there*) cannot appear in control constructions — as the control verb assigns a thematic role to its subject. With raising verbs, expletives appear freely.

- (5) a. *It tried to rain.

²Namely, the external argument if the verb is transitive / unergative and the internal argument if the verb is unaccusative.

b. It seemed to rain.

- (iv) Selectional restrictions on the subject. Again as a direct consequence of (i), control verbs impose their own semantic restrictions on the subjects. Since raising verbs do not assign an external thematic role, they do not impose any restriction on the subject. As a result, the control construction in (6-a) is out, while the raising in (6-b) is grammatical. Since *try* selects for a volitional agent, *rock* cannot appear as its subject, in contrast with the raising construction.

- (6) a. *The rock tried to be granite.
b. The rock seemed to be granite.

The first property involves a judgment on the semantics of the construction. This is not always as easy as it might seem: does the verb *kakeru* ('be about to') in (1) on page 98 assign an external θ -role or not? These kinds of judgments are difficult to make and prone to errors. We therefore need *syntactic* tests to differentiate between raising and control predicates. Since Japanese does not have expletive subjects, property (iii) cannot be used as a test. We are then left with two operational tests for Japanese: idioms and selectional restrictions on the subject.

SELECTIONAL RESTRICTIONS. Raising verbs do not impose any selectional restrictions on their subject, therefore inanimate nouns can appear in that position. Consider, for instance:

- (7) Kyuuni ame ga furi-dasi-ta.
suddenly rain NOM fall-begin-PAST
"Suddenly it began to rain."

Here, the verb *dasu* ('begin') has an inanimate subject, *ame* ('rain').

For this reason, it has been assumed that this type of verbs takes only one propositional argument — hence their classification as 'intransitive':

- (8) Raising (a.k.a. intransitive):
[_{V2P} *ec* [_{V1P} Su (DO) V₁] V₂]

Raising verbs do not select for an external argument. Instead, the lower subject raises to become the subject of the entire construction.

3 V-V Compounds

Verbs in this category include (Kageyama, 1993, Kishimoto, 2009, Koizumi, 1998, Nishigauchi, 1993, a.o.):

(9) Raising:

kakeru ('be about to'); *dasu* ('begin'); *sugiru* ('do in excess')

On the other hand, the second class of verbs, namely control verbs (or 'transitive') do impose semantic restrictions on their subjects. The subject of a control verb must be agentive and animate, so it can be concluded that these verbs have an external θ -role to assign. Thus, they take two arguments: the subject and the propositional argument. Consider the difference between (10-a) and (10-b) (from Kageyama, 1993):

- (10) a. Koboozu ga zyoya no kane o tuki-oe-ta.
young.priest NOM New.Year's.Eve GEN bell ACC toll-finish-PAST
"The young priest finished tolling the bell for the New Year's Eve."
b. *Zyoya no kane ga nari-oe-ta.
New.Year's.Eve GEN bell NOM ring-finish-PAST
"The New Year's Eve bell finished ringing."

Here, the verb *oeru* ('finish') cannot appear with an inanimate subject, as seen in (10-b). Note that the sentence is perfectly grammatical if a raising verb (*owaru*) is used instead:

- (11) Zyoya no kane-ga nari-**owat**-ta

In these constructions, the subject of the lower predicate is a PRO controlled by the upper subject. Schematically, the structure looks like this:

(12) Control (a.k.a. transitive):

[_{V2P} Su_i [_{V1P} PRO_i (DO) V₁] V₂]

Control verbs in Japanese include:

(13) Control:

oeru ('finish'); *tukusu* ('exhaust'); *sokonau* ('fail to'); *sobireru* ('fail to'); *kaneru* ('be unable to'); *wasureru* ('forget'); *nokosu* ('leave'); *nareru* ('get used to'); *akiru* ('get fed up with')

IDIOMS. The behavior of idiom chunks brings additional evidence for the raising / control classification. An idiom, by virtue of the fact that its meaning cannot be derived compositionally, must be stored in the Lexicon, so when it is inserted into a derivation, its parts must form a constituent. In a raising structure as shown in (8), the lexical subject and the downstairs verb form a constituent initially, even though later the subject raises into the matrix clause. Therefore, we expect subject-verb idioms to be possible in such constructions. On the other hand, in a control structure like (12), the lexical subject and the lower verb never form a constituent. Instead, the subject position of the lower verb is filled by an empty category. It follows that subject-verb idioms cannot be embedded in a control structure. As discussed by e.g. Kishimoto (2007b, 2009), Nishigauchi (1993), V-V compounds confirm these predictions. For instance, consider the idiom in (14-a). If it is embedded under a raising verb, as in (14-b), it retains its idiomatic reading, along with the literal one. However, only the literal interpretation is available if it appears with a control verb (14-c):

- (14) a. Kooboo ga fude o erab-u.
 Kobo NOM brush ACC choose-PRES
 Literal: “Kobo, the master calligrapher, chooses his brushes.”
 Idiomatic: “An expert being picky about his tools.”
- b. Kooboo ga fude o erabi-hazime-ta.
 Kobo NOM brush ACC choose-begin-PAST
 “Kobo began choosing his brushes.”
 “An expert began to be picky about his tools.”
- c. #Kooboo ga fude o erabi-oe-ta.
 Kobo NOM brush ACC choose-finish-PAST
 “Kobo finished choosing his brushes.” (Literal meaning only) (Nishigauchi, 1993)

HONORIFICATION Another property that distinguishes raising from control verbs is their behavior under honorification. This property is absent from English, simply because English doesn’t have the intricate honorification system present in Japanese. Excluding discourse honorification, which is hearer oriented and does not make reference to the syntactic arguments, there are two types of honorifics in Japanese: subject oriented and non-subject oriented (Harada, 1976). These honorifics appear on the verb as a discontinuous morpheme: for instance, subject honorification is of the form *o-V-ni naru*. Assuming that honorification is a species of verb-subject and verb-object agreement (Boeckx & Niinuma, 2004, Hasegawa, 2006, Ura, 2000), the

3 V-V Compounds

honorific features must be located in *v*. These agreement features must be checked by a subject for subject-oriented honorification; or by the highest object for non-subject honorification.

The interaction between honorification and V-V compounds has been studied by Kuno (1983, 1987). Raising verbs do not project an external argument, so there is nothing to check off the agreement feature of the verb. On the other hand, control verbs have a subject which can agree with the verb. This means that raising verbs should not be able to appear with honorific morphology, but control verbs are expected to allow this possibility. Indeed, this is the case, as illustrated in (15):

(15) Honorifics on V2:

Raising

- a. *Suzuki-sensei wa sake o o-nomi-sugi ni-nat-ta.
Suzuki-professor TOP alcohol ACC S.HON-drink-do.in.excess S.HON-PAST
“Prof. Suzuki has drunk too much.” (Harada, 1976)

Control

- b. Tanaka-sensei ga tegami o o-kaki-oe ni-nat-ta.
Tanaka-professor NOM letter ACC S.HON-write-finish S.HON-PAST
“Prof. Tanaka finished writing the letter.” (Kuno, 1983)

(The *o-* prefix must be attached to the entire compound, not to V2 only, see Kuno (1983, 1987) for discussion.)

On the other hand, honorifics should be able to appear on V1 in raising verbs, since V1 has an external argument. For control verbs, this option is not possible. The PRO in the embedded subject position has no features of its own, its interpretation is entirely dependent on the lexical NP that controls it. If it checks the honorific feature of V1, it means that it itself has a [+honorable] feature. But this feature must be shared with the controlling NP, which fails to agree (see also Kishimoto (2007b) for discussion):

(16) Honorifics on V1:

Raising

- a. Suzuki-sensei wa sake o o-nomi ni-nari sugi-ta.

Control

- b. *Tanaka-sensei-ga tegami-o o-kaki-ni-nari oe-ta.

To summarize, the patterns of honorification are:

(17) Raising:

- a. o- V₁ -ni nari V₂
- b. *o- V₁ V₂ -ni naru

Control:

- c. *o- V₁ -ni nari V₂
- d. o- V₁ V₂ -ni naru

These provide further evidence that raising and control verbs have distinct syntactic structures. The patterns of honorification are in fact predicted by the structure of these complex predicates.

*

As we have seen, there are strong empirical reasons for dividing the productive V-V compounds into two major classes: control and raising. However, it has been noted in the literature that there is another class of V₂ verbs which behave ambiguously as either raising or control (Kuno, 1983, 1987, Shibatani, 1973, 1978, and others). This class includes verbs like *hazimeru* ('begin') and *tuzukeru* ('continue'). Fortunately, this ambiguity does not mean that these verbs have properties of *both* raising and control at the same time; it only means that they behave coherently as either raising or control.

For instance, *hazimeru* can appear with inanimate subjects, such as in (18) (examples from Shibatani, 1973):

- (18) Buranko wa yure-hazime-ta.
 Swing TOP swing-begin-PAST
 "The swing began to swing."

This indicates that in this usage it is a raising verb. But the same verb can appear in structures such as (19):

- (19) Taroo wa hon o yomi-hazime-ta.
 T TOP book ACC read-begin-PAST
 "Taro began reading the book."

Here, the same verb has an animate subject and the interpretation is that the subject has volition. In such structures, the V₂ behaves as a control verb, as shown by Shibatani (1973) with a batch

3 V-V Compounds

of tests. For instance, it can appear in the potential form, in contrast with raising verbs, for which this option is out:

(20) Control:

- a. Watasi wa itudemo hon o yomi-hazime-rare-ru.
 I TOP anytime book ACC read-begin-POT-PRES
 ‘I can begin reading the book anytime.’

Raising:

- b. *Taroo wa ne-sugi-rare-ru.
 T. TOP sleep-do.in.excess-POT-PRES
 ‘Taroo can sleep too much.’

It is in fact expected that an agent may have the ability to perform a certain action, but a non-agent does not have this property.

It is then natural to assume two different lexical entries for each of these verbs, one projecting an external argument (the control verb) and one which takes only a propositional argument:

- (21) a. $\text{hazimeru}_1: V, \langle _, VP \rangle$
 b. $\text{hazimeru}_2: V, \langle NP, _, VP \rangle$

In fact, the same phenomenon has been noted for English, too, where a verb like *begin* can be either a raising verb or a control verb (See Davies & Dubinsky, 2004, for discussion).

In the conclusion of this section, I would like to add a few remarks regarding the morphological integrity of the V-V compounds. It is sometimes claimed in the literature (e.g. Yumoto, 2001) that V-V compounds cannot be separated by intervening emphatic particles. Indeed, the forms in (22) are unacceptable:

- (22) *tabe mo owaru, *yomi sae hazimeru, *nomi mo sugiru, *naguri sae au

However, it is not impossible to break the V-V string. Consider the following, which are given by Hasegawa (1999):

- (23) a. Control: *dasi sae si-wasureru* (‘forget to take out’); *hanasi sae si-oeru* (‘finish talking’);
 b. Raising: *tukai mo si-sugiru* (‘over-use’); *sirabe mo si-kakeru* (‘be about to check’);
 c. Ambiguous: *kuzure sae si-hazimeru* (‘begin to crumble’).

The difference between (22) and (23) is that in the latter, the V₂ appears together with the dummy verb *su* ('do'). Note that not any verb can become a V₂; their class is limited. On the other hand, such restriction does not exist for V₁s. This suggests that V₂s are on their way to grammaticalization, to becoming functional heads (perhaps functional restructuring heads, such as in the analysis of Cinque, 2004). If this is true, it is not at all surprising that they would have different properties from their lexical counterparts. That is to say, *owaru* as a V₂ verb, hence (partly) grammaticalized, has different properties than the verb *owaru* used as a main verb. For instance, they have different addicity, as has been noted in the literature (Shibatani, 1973, 1978). One could expect that a lexical verb can appear independently, but as a V₂, it is a bound morpheme. Considering the contrast in (23) and (22), this difference becomes clear: V₂ verbs are bound morphemes, in contrast to their lexical counterparts. They need a morphological crutch, whose role is fulfilled by the verb *su*. It helps here to think of the *do*-support in English: the *-ed* past morpheme is bound, so it needs a verb with which to merge. If the main verb is not accessible — because of an intervening negation, for example — the dummy verb *do* is inserted in order to satisfy the morphological requirements of T. In the same manner, if V₂ in V-V predicates cannot attach to another verb because of an intervening emphatic particle, the verb *su* ('do') is inserted in Morphology to avoid a deviant expression. For this reason, in (22) where *su* does not appear, the strings are ill-formed, just as **I ed not walk home* is bad in English.

The acceptability of the examples in (23) is subject to speaker variation, but it is greatly improved if the sentence is followed by a contrastive element (H. Kishimoto, p.c). Moreover, it appears that raising constructions allow more readily such emphatic particles, whereas the control constructions might sound unnatural to some speakers.

The possibility to break the V-V string with emphatic particles suggests that incorporation of V₁ into V₂ is not obligatory. What seems to be obligatory is that V₂s must be attached to a verbal head. However, as I will argue shortly, when emphatic particles intervene, the complex predicates behave differently.

3.4 TWO TYPES OF CONTROL

Within the class of the so-called control verbs, there are in fact two subclasses, with quite different properties (see Kageyama, 1993, Kishimoto, 2007b, Koizumi, 1995, 1998, Matsumoto, 1996, Yumoto, 2005). For ease of reference, I will label them as control-I and control-II, respectively.

The contrasting properties of these two types of verbs are discussed below.

3.4.1 CONTROL-I

Some verbs which belong to the first category are listed in (24):

- (24) Control-I:
sokoneru (miss); *sobireru* (fail to); *okureru* (be late); *akiru* (become weary, get fed up with); *tukeru* (get accustomed); *kaneru* (be unable to); *nareru* (get used to)

The most salient property of the verbs in this group is that they cannot passivize, as illustrated in (25):

- (25) **Daizina koto ga ii-sobire-rare-ta.*
 Important thing NOM say-fail-PASS-PAST
 (Lit.) “Important things were failed to say.”

It can also be shown that in control-I constructions, the case of the direct object is assigned by the lower verb. I will return to this in §3.6.

Another specific property of control-I verbs concerns scope interactions between the control verb and the direct object. It has been argued by Koizumi (1995) that either scopal relation is possible. Consider (26):

- (26) *Yoko wa furansu-ryuugaku-chuu ni pan dake o tabe-nare-ta.*
 Y. TOP France-study.abroad-during at bread only ACC eat-get.used.to-PAST
 “Yoko got used to eating only bread while studying in France.”
 only > get used to;
 get used to > only

In the first interpretation, where *only* has wide scope over the verb *nareru*, it is only bread that Yoko got used to eating while studying in France, but she ate other things beside bread. In the other interpretation (narrow scope of *only*), Yoko got used to eating bread without having anything else with it, bread was the only thing she ate. However, it could be the case that these are not true scope ambiguities, but that the two possible interpretations are due to pragmatic inference (H. Kishimoto, p.c.).

Other researchers prefer only the reading in which the DO has low scope, see e.g. Yumoto (2005). However, there is a clear contrast with the second type of control verbs, as discussed immediately below.

3.4.2 CONTROL-II

Let us turn now to the second category of control verbs.

This type of control verbs includes:

- (27) Control-II:
naosu (do again); *oeru* (finish); *tukusu* (exhaust, do thoroughly)

In contrast with control-I verbs, these verbs can be passivized. This can be seen in (28):

- (28) Ryoori ga tabe-nokos-are-ta.
 Food NOM eat-leave-PASS-PAST
 “Food was left over.”

Since they passivize, it can be argued that the accusative case of the direct object is assigned by the control verb itself, not by the main verb, unlike in the control-I type of constructions. Indeed, there is evidence that this is the case (see §3.6).

Finally, unlike the control-I constructions, with these verbs the scope relations are frozen. The direct object takes scope over the control predicate, as argued by Koizumi (1995), Yumoto (2005). The following example illustrates this point:

- (29) Mary wa gengogaku no ronbun dake o kaki-oe-ta.
 Mary TOP linguistics GEN article only ACC write-finish-PAST
 “Mary finished writing only a linguistics paper.”
 only > finish;
 *finish > only

The only possible interpretation is that Mary was supposed to write many papers, but she finished writing only one on linguistics. The other interpretation, that “it was writing only a paper on linguistics that she finished”, is not possible here, according to Koizumi (1995).

There is a reasonable objection to the scope analysis proposed by Koizumi, namely that, as H. Kishimoto (p.c.) points out, it is not immediately clear whether these aspectual verbs are

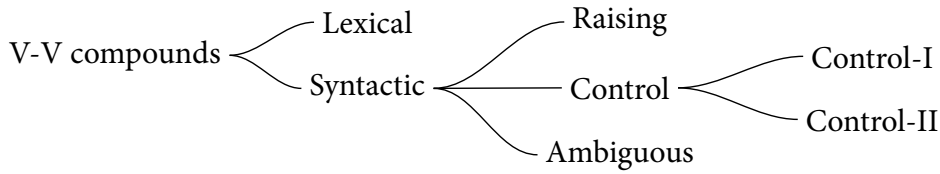


Figure 3.1: Types of V-V compounds

truly scope taking elements. Certainly they do not correspond to scope bearing elements of first order logic. Moreover, as Y. Yumoto (p.c.) points out, the scope facts fail to obtain with different verbs from the same category, so it is unclear if any meaningful generalization between case and scope can be drawn, as Koizumi tries to do (see also the discussion in 1.3).

Koizumi explains the difference in scope between control-I and control-II constructions in terms of different types of case assignment to the lower object (see also the theories of Bobaljik & Wurmbrand (2005, 2007) mentioned in §2.1.6.7). Later in this chapter I will argue, too, that control-I and control-II constructions have different structures and different case-assigning mechanisms, but I will leave open the question if the ambiguities noted by Koizumi are truly related with the case assignment or if they could be explained by pragmatic inference or by \bar{A} -movement at LF, unrelated to the case position.

To summarize the preceding discussion, the various V-V constructions in Japanese can be classified as in Figure 3.1.

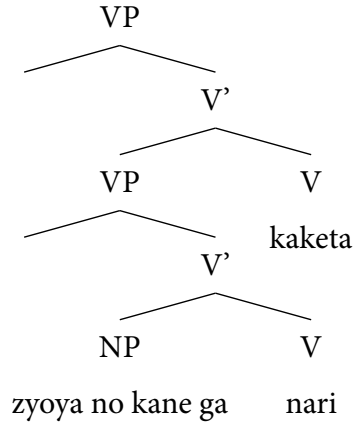
3.5 THE SIZE OF THE COMPLEMENT

In the standard P&P analysis, it is assumed that raising verbs in English take as complement an IP/TP, while control verbs take a full CP complement. When one considers the Japanese V-V complexes, it becomes apparent that, although V2s behave like control or raising predicates, their complement must be smaller than their English counterpart. Just as in the case of causative constructions discussed in chapter 2, the lower verb does not bear any morphology (tense, negation, etc.) In effect, this indicates that the propositional complement embedded under V2 is not bigger than a ν P.

Consequently, the structure of raising predicates (30), as proposed by Kageyama (1993) is shown in (31):

- (30) Zyoya no kane ga nari-kake-ta.
 New.Year's.Eve GEN bell NOM ring-begin-PAST
 "The New Year's Eve bell was about to ring."

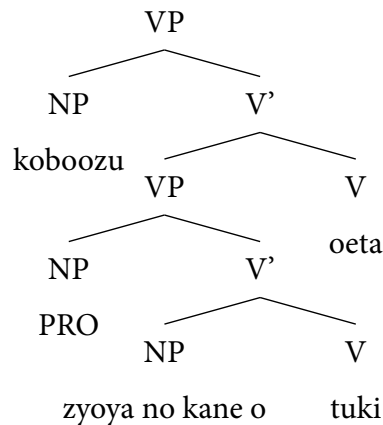
(31) Raising:



On the other hand, control-I verbs project an external argument in addition to taking a VP complement:

- (32) Koboozu ga zyoya no kane o tuki-oe-ta.
 young.priest NOM New.Year's.Eve GEN bell ACC toll-finish-PAST
 "The young priest finished tolling the bell for the New Year's Eve."

(33) Control-I:



The external argument of *oeru* controls the PRO in the subject position of the lower predicate. Thus, the agent θ -role of the V2 *oeru* is discharged by *koboozu*, and the agent θ -role of the V1 *tuku* by the downstairs PRO.

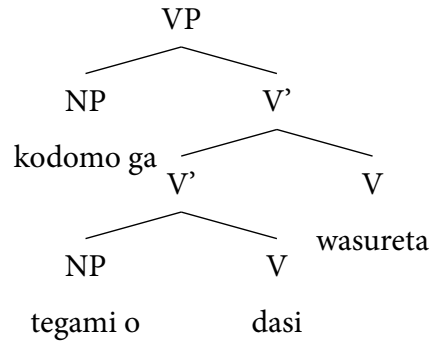
Recall that control-II verbs can be passivized and, as a result, the direct object of the lower verb is promoted to the subject position. To account for this phenomenon, Kageyama (1993)

3 V-V Compounds

assigns to control-II verbs the structure shown in (35).

- (34) Kodomo ga tegami o dasi-wasure-ta.
 Child NOM letter ACC send-forget-PAST
 “The child forgot to send the letter.”

(35) Control-II:



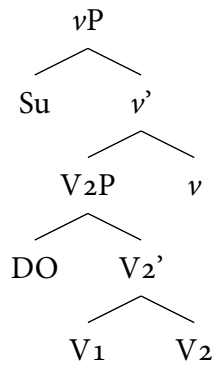
In his analysis, the lower verb does not project an external argument. Restating this in minimalist terms, it could be said that control-II verbs take a VP complement — therefore, there is no external argument in the embedded predicate, while control-I verbs take a full ν P complement. This approach is reminiscent of that taken by Wurmbrand (2001) in her analysis of German restructuring predicates: she argues that there are basically two types of restructuring predicates: (i) lexical, which take a ‘bare’ VP complement (i.e. without an external argument) and (ii) functional, which take a full ν P phrase as their complements. Here, control-II verbs would correspond to the lexical restructuring verbs.

In Kageyama’s analysis, it is the absence of PRO in (35) that permits the DO to raise under passivization. In contrast, in control-I constructions, the PRO in the Spec of ν P induces a Relativized Minimality effect (see e.g. Rizzi, 1990, 2001), blocking the passivization of the DO.

Kato (2003) and Yumoto (2001, 2005) go even further and propose that V2 takes an even smaller complement, namely a bare V. The structure advanced by Kato is shown in (36), but Yumoto’s is virtually identical.

In their approach, V1 does not have any argument at all. The arguments are realized entirely within the shell of the higher verb. In this structure, it is not exactly clear how the thematic roles of the downstairs verb can be discharged outside its projection:

(36)



There are several arguments that the structure in (36) cannot be correct. First, object-verb idioms are possible in such constructions, and second, the object-verb string can be replaced by a pro-form. Let us discuss these arguments in more detail.

By using idioms, it can be shown that control-II verbs must take a larger complement than just a V. Object-verb idioms can be embedded under control-II verbs. The next example is from Kato (2003):

- (37) John ga sono syorui ni me o toosi-wasure-ta.
 John NOM those papers DAT eye ACC pass-forget-PAST
 “John forgot to skim through the papers.”

Similar idiomatic constructions can be readily found on the Internet:

- (38) a. ?Sono hito no tame ni hone o ori-tukus-oo to suru
 that person GEN sake DAT bone ACC break-do.exhaustively-HORT COMP do
 mono
 person
 “People who are ready to make an effort for him”
 b. yappari yafuoku de tyantosita VHS o te ni ire-naos-oo ka
 also Yahoo.auctions at proper VHS ACC hand DAT enter-redo-HORT Q
 to mayoi-masu.
 COMP hesitate-PRES.POL
 “After all, I’m wondering if I should buy again a proper VHS from Yahoo auctions.”

Me o toosu (lit. ‘pass one’s eye’) in (37) means ‘skim, glance over’ and *hone o oru* (lit. ‘break one’s bones’) and *te ni ireru* (lit. ‘enter into one’s hands’) in (38-a-b) mean respectively ‘make an effort’ and ‘obtain’. These are idioms which, as shown by the examples, can appear in V-V

3 V-V Compounds

complex predicates.

As already mentioned, idioms are not interpreted compositionally. Instead, they must be learned as such, so they are stored in the Lexicon. It follows that when they are inserted into a derivation, they must form a constituent (a discussion on idioms as a constituency test can be found in Chomsky, 1986). But if control-II type verbs have the structure proposed by Kato (2003) and Yumoto (2005), there is no point in the derivation where V₁ and the direct object form a constituent.³ Therefore it is incorrectly predicted that object-verb idioms are not possible in control-II compounds. However, the data in (37) and (38) show that such constructions are possible, so the complement of the V₂ must be at least as big as [DO V₁].

A time-honored test for constituent structure is the use of a pro-form. The string that can be replaced by a pro-form is a constituent. For instance, *do so* in English can replace the verb+direct object, showing that they form a constituent (the VP), in contrast with the subject-verb string, which cannot be replaced by a pro-form.

In Japanese, the pro-form test can be performed by using the *soo suru* ('do so') construction. As argued for instance by Tateishi (1994), the verb+direct object can be replaced by the *soo suru* pro-form. In the following examples, the bolded parts are replaced by the pro-form in the second sentence:

- (39) Taroo wa **terebi o mi-ta.** Ziroo-mo soo si-ta.
Taroo TOP TV ACC watch-PAST. Ziroo-also so do-PAST
"Taro watched TV. Ziro did so, too."

However, the verb alone, without the direct object cannot be replaced by *soo suru*:

- (40) *Taroo wa terebi o **mi-ta.** Ziroo-mo terebi o soo si-ta.
Taro TOP TV ACC watch-PAST. Ziroo-also TV ACC so do-PAST
*"Taro watched TV. Ziro did so TV, too."

It should be noted that not every verb can be replaced by *soo suru*. Shibatani (1978) points out that only verbs that select for a volitional agent may undergo this process. Verbs which take an

³It could be argued that the DO and V₁ are adjacent, which could account for the idiomatic reading. However, simple linear adjacency is not sufficient for idiomatic reading. As O'Grady (1998) shows, in the idiom *kick the habit*, the object can appear with modifiers, e.g. one can say *kick the filthy habit*. It is clear that linear adjacency is not sufficient to account for such instances, but constituency is. In fact, O'Grady (1998) develops a theory of idioms in which not constituency, but licensing chains are the relevant condition for idiom interpretation. Here, I will keep to the widely accepted idea that constituency is a necessary condition for idioms (e.g. Chomsky, 1986).

experiencer subject cannot be replaced by the pro-form:

- (41) *Ziroo ga **zetuboosita**. Taroo-mo soo si-ta.
 Z. NOM despaired. T-also so do-PAST
 “Ziro despaired. Taro did so, too.”

Let us turn now to V-V predicates and test whether V₁ can be replaced by the pro-form. Consider the data in (42):

- (42) Raising:
 a. *Ame ga furi-hazime-ta. Yuki-mo soo si-hazime-ta.
 rain NOM fall-begin-PAST. Snow-too so do-start-PAST
 “Rain started to fall. Snow did so, too.”
 Control-I:
 b. Ken ga hon o yomi-sobire-ta. Boku-mo soo si-sobire-ta.
 Ken NOM book ACC read-fail-PAST. I-too so do-fail-PAST
 “Ken failed to read the book. So did I.”
 Control-II
 c. John ga ronbun o kaki-naosi-ta. Bill-mo soo si-naosi-ta.
 J NOM article ACC write-redo-PAST. Bill-too so do-redo-PAST
 “John rewrote the article. Bill did so, too.”

In the raising construction (42-a), the pro-form is impossible since, as noted by Shibatani (1973), Kageyama (1993), the *soo suru* construction is possible only with volitional subjects. In (42-b), a control-I verb and its DO are replaced by the pro-form. This is uncontroversial. For control-II constructions like that in (42-c), it has been proposed in the literature (Kato, 2003, Yumoto, 2001, 2005) that the DO is the object of the V₁-V₂ complex, not of the V₁ alone. However, the data shown above indicate that this cannot be the case. Instead, the DO+V₁ string must be embedded under V₂, the same as in raising or control-I constructions.

In light of these data, I assume with Kageyama (1993) and contra Kato (2003), Yumoto (2001, 2005), that in control-II constructions, the complement of V₂ must be at least a VP, not smaller. Note that these arguments only define the *smallest* size of the complement. Nothing so far has been said about how large it can be — more concretely, if it is a *v*P with a PRO subject, like in control-I constructions or if it is a ‘bare’ VP.

As already noted, Kageyama (1993) argues that control-II verbs take a bare VP complement. In §2.1.4, I argued that in Japanese the small *v* has phonetic content, and it corresponds to the

transitivity marker present on causative / inchoative pairs such as *moeru* / *moyasu* ('burn'). In V-V compounds, V₁ always appears with this marker. In fact, Japanese verbs never appear without this transitivity marker, so it could be assumed that in Japanese any verbal root or stem is always a *v*P, never a VP.⁴ The V₁ must therefore be a *v*P, bigger than assumed by Kageyama.

Another argument for this view comes from the fact that V₁s can sometimes appear in the passive⁵. As I discussed in section 2.1.7.2, passive *v*_{passive} must attach to a full *v*P phrase. If passive is possible for V₁, this means that a *v* head must be present. While this might be considered to be a theory-internal argument, it shouldn't be forgotten that Kageyama's postulating a bare VP complement is also theory internal.

I have argued that passive only attaches to a *v*. Moreover, it is known that only verbs which have an external theta role can passivize, as argued by Baker et al. (1989), Marantz (1981), Perlmutter (1978) on the basis of the 1-Advancement Rule of Perlmutter (1978), which prohibits more than one derived subject per clause. The condition that passivization is possible only if there is an external thematic role accounts for why raising verbs, passives and unaccusatives cannot be passivized (examples from Baker et al., 1989):

- (43) a. *John was seemed to have left.
 b. *The vase was been broken by John.
 c. *In dit veeshuis werden de kinderen erg snel gegroeid.
 in this orphanage are the children very fast grown
 ‘In this orphanage the children are grown very fast.’

In (43-a) a raising verb, in (43-b) a passive and in (43-c) a Dutch unaccusative are passivized. All these constructions are ungrammatical, because none of them projects an external thematic role. But the external θ role is introduced by the *v* head. It follows that only verbs with a full *v* can be passivized.

Let us return now to the question of control-II verbs. Kageyama shows that some control-I verbs can take a passivized V₁ as their complement. This option is quite restricted, but nevertheless possible. One such verb is *oeru* ('finish'):

- (44) Yoogisya wa hayaku sirabe-rare-oe-tai to negatte-iru.
 suspect TOP quickly investigate-PASS-finish-DES COMP pray-PRES
 ‘The suspect wants the investigation to be over quickly.’

⁴Kishimoto (2006) argues that in nominalizations, too, the nominalizer is affixed to a *v* not to a bare V.

⁵See §3.10 for more details and data.

Here, if V₂ *oeru* takes a bare V complement (as Yumoto claims), or even a bare VP (as Kageyama argues), there is no place to accommodate the passive head. The structure is:

- (45) [[[V₁] passive] V₂]

If the lower verb does not project a *v* head, it doesn't have an external role. Therefore, passivization is predicted to be impossible. In (45), passive can attach to V₁ only if V₁ has a full *v*P structure.

To conclude, there are both empirical and theoretical reasons to regard the complement of control-II verbs as a full *v*P, not smaller (i.e. not a VP or even a V).

We have established that the lower verbal shell in control-II constructions is a full *v*P. A related question is whether there is a controlled PRO in the specifier of that *v*P. Kageyama argues there is not. The choice between the presence and absence of a PRO in the embedded V₁ is largely a theory-internal matter. My personal intuition is that there is a PRO in the Spec *v*1P, based on data from honorification. Kuno (1987) shows that non-subject honorification is blocked by an intervening element.⁶ In control-II verbs, non-subject honorification of the object is impossible, suggesting that there is a PRO blocking the agreement relation between the higher verb (V₂) and the low object.

- (46) Control-II:

*Sensei o o-okuri-naosi-su-ru.
 professor ACC NS.HON-send-re.do-NS.HON-PRES
 "I saw the professor off again."

Kuno argues that non-subject honorification can take place across a clause boundary, so the ungrammaticality of (46) cannot be due to the fact that the honorified nominal is not an argument of the verb bearing the honorific morphology. The remaining explanation is that the impossibility of (46) is due to an intervening PRO between the V₂ and the object.

A possible objection to this argument is that non-subject honorification is not possible for raising verbs either; but those verbs do not involve a PRO. Consider the raising verbs in (47):

- (47) Raising:

*Sensei o o-okuri- {kake / dasi} su-ru.
 professor ACC NS.HON-send- {be-about-to / begin} NS.HON-PRES

⁶See also section 2.2.5.

“I am about to / begin to see the professor off.”

There is no intervening PRO between the V₂ and the honorified object, so the ungrammaticality of (47) cannot be due to some locality effect. But Kuno (1983) shows that non-subject honorification is possible only with controlling, agentive subjects. This can be seen in the simplex clauses in (48) (Kuno, 1983, p. 27):

- (48) a. *Tanaka wa Yamada-sensei ni o-ni-site-iru.
 T TOP Y-professor DAT NS.HON-resemble-NS.HON-PRES
 “Tanaka resembles Prof. Yamada.”
- b. *Tanaka wa, kyonen hazimete, Yamada-sensei o o-siri-si-ta.
 T. TOP last.year first.time Y-professor ACC NS.HON-know-NS.HON-PAST.
 “Tanaka met Prof. Yamada last year for the first time.”

From a syntactic perspective, it could be said that only *vs* that select an agentive subject can have the non-subject honorification agreement feature. Put differently, non-subject honorification is a volitional act, which is not compatible with non-intentional subjects such as experiencers.

Thus, the reason that (47) is out has to do with the fact that raising verbs do not have a controlling subject, so non-subject honorification is not possible in these structures. On the other hand, the same cannot be said about example (46), where the verb bearing the honorific morphology is a control verb (therefore it has an agentive subject). The most plausible reason for the ungrammaticality of (46) then remains the hypothesis that there is a blocking PRO in the spec of the lower V.

Moreover, as discussed above, an external argument must be present within the projection of V₁, in order to account for the possibility of passivization of V₁. Therefore, a PRO has to appear in the spec of *v*₁P.

3.6 CASE

Let us now investigate the locus of case assignment in the V-V complex predicates. It will become apparent that in this regard, too, these constructions do not behave as a uniform class.

3.6.1 PASSIVIZATION

As already mentioned, there are certain differences in the behavior of the various classes of V-V constructions with regard to passivization. The data in (49) illustrate this point:

(49) Raising:

- a. *Saikin wa konpyuuta ga syoogakusei ni sae tukai-das-are-ta.
 Recently TOP computer NOM primary.schooler by even use-start-PASS-PAST
 “Recently, computers have started to be used even by elementary school students.”
- b. *Kinoo no paati de wa keeki ga tabe-sugi-rare-ta.
 Yesterday GEN party at TOP cake NOM eat-exceed-PASS-PAST
 “Cake was overeaten at the party yesterday.”

Control-II:

- c. Koozan ga hori-tukus-are-ta.
 Mine NOM dig-exhaust-PASS-PAST
 “The mine was worked out.”
- d. Zyuunen de roon ga harai-oe-rare-ta.
 Ten.years in loan NOM pay-finish-PASS-PAST
 “The loan was paid off in ten years.”

Control-I:

- e. *Sekkaku no gotisoo ga tabe-sokonaw-are-ta.
 Precious GEN feast NOM eat-fail-PASS-PAST
 (Lit.)“Precious food was failed to eat.”
- f. *Geinouzin no sukyandaru ga kiki-aki-rare-ta.
 Performer GEN scandal NOM hear-tire-PASS-PAST
 (Lit.)“Scandals about celebrities are tired of hearing about.” (Kageyama, 1993)

These data show that in raising and in control-I constructions the case of the embedded object comes from the lower verb. On the other hand, in control-II constructions, it is the higher verb that assigns case. Koizumi (1995, 1998) argues for the same case patterns, based on the interaction between the scope of the DOs and the V2s, interactions which have been previously mentioned.

For the category of control-II verbs, it is not only the accusative case of the direct objects that comes from V2. If a V2 takes a ditransitive as its complement, passivization data show that the dative case of the goal argument is also assigned by V2. Recall that in a Japanese double object construction, either one of the two arguments can be promoted to the subject position by passivization. The same happens if the construction is embedded under a control-II verb and the passive morpheme appears on the higher verb. Consider the data in (50):

- (50) a. Kodomo ni okasi o atae-naosi-ta.
 child DAT cake ACC give-redo-PAST
 “I gave the cake to the child again.”

3 V-V Compounds

- b. Okasi ga kodomo ni atae-naos-are-ta.
cake NOM child DAT give-redo-PASS-PAST
“The cake was given again to the child.”
- c. Kodomo ga okasi o atae-naos-are-ta.
child NOM cake ACC give-redo-PASS-PAST
“The child was given the cake again.”

When passivized, (50-a) can yield either (50-b), in which the theme argument has become the subject or (50-c), where the goal has been promoted. The possibility of passivizing the indirect object clearly demonstrates that V1 doesn’t assign any case at all: all its internal arguments are assigned case at the level of V2.

This has another interesting implication. It could be argued that in control-II constructions, the case array of V2 is inherited from the lower verb. When they are used independently as full lexical verbs they are transitive verbs, so one could imagine that these V2s might have an accusative feature to check. However, they are not ditransitive verbs, so it can’t be assumed that they also have a dative case to assign. It follows that their case features are always inherited from the lower verb. Compare this with causative constructions, where the case array of the causative verb is independent from the presence of case features on the lexical verb (or absence thereof).

3.6.2 POTENTIAL CONSTRUCTIONS

When discussing causative constructions in chapter 2, we have seen that passivization is not always a reliable test for case. If a verb can be passivized, it means that it assigns structural case to the direct object in the active structure, but if passivization is not possible, it doesn’t mean the opposite. This is because passivization involves two steps: case deletion and movement. On the other hand, the potential construction differs minimally in that movement does not take place. Let us see if the potential construction yields the same results as the passivization test for the V-V constructions.

The following data are from Kishimoto (2007b):

(51) Raising:

- a. ?*Ano-hito ni ronbun ga kaki-das-e-ru.
that-man DAT paper NOM write-start-POT-PRES
“That man can start writing a paper.”

Control-I:

Raising	Control I	Control II
V ₁	V ₁	V ₂

Table 3.1: Case assigners in V-V constructions

- b. *Ano-hito ni ronbun ga kaki-sokone-rare-ru.
 that-man DAT paper NOM write-fail-POT-PRES
 “That man can fail to rewrite the paper.”

Control-II:

- c. Ano-hito ni ronbun ga kaki-naos-e-ru.
 that-man DAT paper NOM write-fix-POT-PRES
 “That man can rewrite the paper.”

The behavior of the potential construction corroborates the results of passivization: both tests indicate that in raising and control-I constructions, the direct object is assigned case by the lower verb (V₂), while in control-II constructions, the case comes from the upstairs verb (V₁).

*

Based on the data from passive and potential construction, the case assigners in the V-V constructions are summarized in Table 3.1.

An alternative view is that of Miyagawa (1989), who proposes that some aspectual verbs (namely what we have identified as raising and control-II verbs) must be transparent with regard to case assignment. That is to say, for him it is still the lower verb that normally assigns case, but when the passive is attached to the higher verb, it can skip over it and absorb the accusative case of the lower verb.

(52) active:

DO ...V₁ ...V₂

ACC

passive:

DO ...V₁ ...V₂-PASS

ACC

↑

One of the basic assumptions used in this work is that such a process as the one on (52) cannot

3 V-V Compounds

take place. Any affixes attached to a verb can modify only that verb, not those of a distinct one. It should be also noted that in Miyagawa's approach, these operations take place in the Lexicon (including passivization) and involve apparently no structure but simply the adjoining of strings. I assume, on the other hand, that all these operations are syntactic in nature.

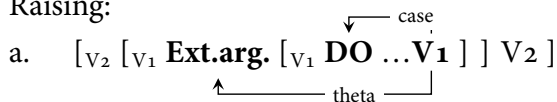
So far I have argued that there is a correlation between case, phases, and depletion of the arguments from the Numeration: they all take place at the same level. When all the arguments have been merged (and therefore assigned thematic roles), case is assigned to the internal arguments and the ν P phase is determined. If there is still one argument left in the Numeration to be merged, the phase is inhibited until the remaining argument is introduced in the derivation. Let us see how the empirical findings about V-V constructions fare with regard to this hypothesis.

Raising verbs behave as expected: the external argument is merged in the Spec of V_1 , therefore the DO is assigned case at that level (i.e. in the embedded predicate).

Control-II verbs offer no surprise either: case is assigned by the highest verb, when the external argument is merged. The lower verb introduces an external argument (the PRO) as well, but the phase is not spelled-out at that level, since there is another argument still in the Numeration. Therefore, case assignment is procrastinated until the level of V_2 is reached.

Control-I verbs, however, break the pattern. Even though V_2 has an external argument, case assignment takes place at the level of V_1 . Compare the well-behaved (53-a) and (53-b) with the unexpected (53-c):

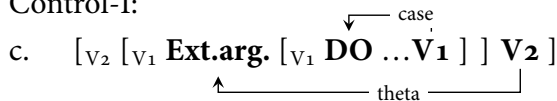
(53) Raising:



Control-II:



Control-I:



Control-I verbs seem to violate the working hypothesis I have assumed throughout this thesis. Later in this chapter I will argue that the behavior of these verbs can be explained and that it does not falsify the hypothesis.

3.7 SIK...NAI CONSTRUCTION

The NPI *sika* ('only') must be bound by the sentential negative *nai*. Moreover, since the work of Muraki (1978), it is generally assumed that the NPI and the negation must be clause mates. Consider the following examples:

- (54) a. Gakusya ga boohura sika kono kawa ni sunde-i-nai koto o
 scholar NOM mosquito.larva only this river in live-PRES-NEG fact ACC
 tasikameta.
 proved
 "The scholar has proved that only mosquito larvae live in this river."
- b. *Gakusya ga boohura sika kono kawa ni sunde-iru koto o
 scholar NOM mosquito.larva only this river in live-PRES fact ACC
 tasikame-na-katta.
 prove-NEG-PAST
 "The scholar hasn't proved that only mosquito larvae live in this river."

In (54-a), *sika* is in the same clause with the negation. However, in (54-b), the *sika* phrase is embedded in the complement of the main verb, while the negation is in the matrix clause. The distance between the two is too big, so the sentence is ungrammatical.

The condition doesn't always hold. For instance some complements seem to be exempted from the condition, as discussed by Muraki (1978), Yamashita (2003):

- (55) John wa Tookyoo ni sika ik-oo to iw-ana-i.
 John TOP Tokyo to only go-HORT COMP say-NEG-PRES
 "It is only to Tokyo that John says he will go."

Here, although *sika* and the negation are in different clauses, the example is well-formed.

Another way of circumventing the clause-mate condition is the overt movement of the *sika* phrase from the embedded clause into the matrix clause. This shows that the distance between *sika* and *nai* is the relevant factor. If this distance is reduced by movement, the relation between *sika* and *nai* can hold. Consider the following example, from Matsumoto (1996):

- (56) a. BLS ni sika John wa [PRO it-ta] koto ga nai.
 BLS to only John TOP [PRO go-PAST] COMP NOM have.NEG
 "John does not have the experience of going to conferences other than BLS."

3 V-V Compounds

- b. ??BLS ni shika John wa [PRO ik-anakat-ta] koto ga aru.
 BLS to only John TOP [PRO go-PAST-NEG] COMP NOM have.
 “John has the experience of going only to BLS.”

In (56-a) *BLS ni sika* (‘only to BLS’) has been raised from the embedded into the matrix clause; thus it is close enough to be licensed by the negation. On the other hand, if the negation is in the embedded clause, raising of the *sika* phrase into the matrix clause results in a deviant construction, as seen in (56-b). On the basis of these data, Matsumoto (1996), who couches his analysis in the framework of LFG, argues that the clause-mate condition on *sika...nai* holds at c-structure, not f-structure. In the framework adopted here, the condition holds not at the merger of the *sika* phrase but at the derived position. It is important to note that, according to Matsumoto, *BLS ni sika* in (56-a) is not scrambled into its surface position but displaced there by an instance of A movement. Long-distance scrambling (an instance of \bar{A} -movement, Saito (1992)) does not affect the relation between the *sika* phrase and the negation.

It should also be noted that there seems to be considerable idiolectal variation with regard to the clause mate condition. For instance, Yoshimura (2006) assigns a full star to (57):

- (57) *Akira wa John-sika ki-ta to iwa-naka-tta.
 Akira TOP John-only come-PAST COMP say-NEG-PAST
 “Akira didn’t say that only John came.”

In contrast, the very similar example (58) is considered only ‘slightly awkward’ by Tanaka (1997):

- (58) (?)Taroo ga Hanako-sika LGB o yon-da to iwa-nai.
 Taroo NOM Hanako-only LGB ACC read-PAST COMP say-NEG
 “Taro says that Hanako read only ‘Government and Binding’.”

Here I will assume that the clause-mate condition is basically correct and leave the correct analysis of the counterexamples for future research. A promising line of investigation is that suggested by Yamashita (2003), who proposes that the NPI and the negation must be in the same phase (in Chomsky’s terms). If the *sika* phrase is ‘trapped’ within a lower phase, the Neg head cannot Agree with it. Additional support comes from the fact that *sika* subjects in embedded clauses are more acceptable than *sika* objects. This is because subjects are located on the edge of a phase, therefore they should be accessible from within the higher phase.

	Control I	Control II	Raising
V ₁ -V ₂ -POT	*	✓	*
Case	V ₁	V ₂	V ₁
V ₁ - <i>wa</i> -V ₂	✓	✓	✓
V ₂ -passive	*	✓	*
V ₂ external argument?	yes	yes	no
<i>shika...nai</i>	*	✓	✓

Table 3.2: Differences between V-V constructions

In any case, it is clear that the Neg head hosting the *nai* morpheme must enter into a checking relation / Agree with the *sika* phrase and that this relation is subject to locality conditions.

With this much background in mind, let us turn to V-V complexes and see how they behave with regard to the *sika...nai* construction.

(59) Raising:

- a. Hon-sika yomi-sugi / dasa -nai.
 books-only read-overdo / start NEG
 “It’s only books that I don’t read too much / start reading.”

Control-I:

- b. *Hon-sika yomi-sobire / sokone / aki -nai.
 books-only read-miss / miss / get.tired.of NEG

Control-II:

- c. Hon-sika yomi-naosa / tukusa -nai.
 books-only read-redo / do.exhaustively NEG

These data show that raising and control-II constructions behave as a single clause, while control-I constructions have biclausal properties.

Remember that even if initially *sika* and the negation are too far apart, overt A-movement of the *sika* phrase into a closer position can result in a well-formed construction. So in (59-a) and (59-c), it could be the case that raising and control-II structures are in fact bi-clausal and that the DO undergoes A-movement into the matrix clause, thus giving rise to the transparency effects observed in (59). While this is possible, I do not know of any arguments for this view and will not pursue it any further.

To summarize the discussion so far, the properties of V-V constructions discussed in sections 3.6 through 3.7 are summarized in table 3.2.

3.8 RESTRUCTURING

It has been known for a while now that among the Verb+Infinitive constructions, there are some which display some mono-clausal properties (Aissen & Perlmutter, 1976, Rizzi, 1978). These 'restructuring' constructions behave as if a two-clause structure was reduced to one clause. Clauses normally define a locality domain, so some operations across a clause boundary are not permitted, but in the restructuring constructions, these locality domains become 'transparent'.

One of the classic arguments is the clitic climbing phenomenon: normally, a clitic pronoun can only appear in the clause in which it is an argument, but in restructuring environments it can (or must) climb into the upper clause. Consider for instance the Romanian examples given below. In (60-a), where *poate* ('can') takes a subjunctive complement, the clitic pronoun *îl* remains in the lower clause, but in (60-b), where the complement is an infinitive, the clitic raises into the matrix clause.⁷

- (60) a. Ion poate [să îl vadă]
 Ion can SUBJ it see.PRES.3SG
 “Ion can see it.”
 b. Ion îl poate [vedea]
 it can to.see

However, formulating a rigorous definition of restructuring is no easy task. The properties of restructuring constructions vary from language to language. For instance, long passive can be used as a test for restructuring in German (Wurmbrand, 2001), but the same test is not operational in Italian.⁸ (61-b) is ungrammatical, in spite of the fact that *volere* ('want') can be shown to be a restructuring verb:

- (61) a. dass der Traktor zu reparieren versucht wurde.
that the tractor.NOM to repair tried was
“that they tried to repair the tractor.” (Wurmbrand, 2001)
- b. *Questo libro è stato voluto leggere (da Giovanni).
This book has been wanted to.read (by Giovanni)
“This book has been wanted to be read (by Giovanni).” (Burzio, 1986)

⁷Incidentally, *putea* is the only restructuring verb existent in modern Romanian.

⁸See section 3.10 for more on passivization in Italian.

Even though both languages have passives and they both have restructuring verbs, restructuring constructions behave differently under passivization. This shows that the properties of restructuring constructions vary from language to language, so one cannot talk about restructuring as being a unified phenomenon. Instead, restructuring is the result of the interplay between various factors: the size of the infinitival complement, the nature of the restructuring verb (lexical, semi-functional), locality considerations and so on.

So what exactly is restructuring and how can it be defined? To the extent that one can talk about ‘restructuring’ as an umbrella term that encompasses a variety of structures, I take it — as a working definition — to be a complex predicate construction which exhibits one or more monoclausal properties.

In the old days, restructuring was seen as involving a process of ‘tree pruning’ by which nodes were deleted, transforming an originally bi-clausal structure into a mono-clausal one. Clearly, such approach is too permissive and violates established principles of grammar, such as the Projection Principle. In more modern analyses (Cinque, 2004, Wurmbrand, 2001), monoclausality is assumed throughout the derivation.

For Japanese, a systematic study of restructuring predicates was done by Miyagawa (1987)⁹. He discusses the purpose expressions *~ni kuru* (‘come to’) and *~ni iku* (‘go to’) and argues that they are restructuring predicates. The purpose expressions take as complement a non-finite verb in the so-called *renyōkei* form.

- (62) Hanako ga hon o kai ni it-ta.
 H NOM book ACC buy to go-PAST
 ‘Hanako went to buy a book.’

Miyagawa argues that when the verb is adjacent to the purpose expression, the construction is restructuring. If, however, there is intervening material between the purpose expression and the lower verb, such as an emphatic particle *wa* or other phrases, restructuring fails to obtain.

One of the arguments he presents is that the NPI *sika* can appear inside the lower predicate and the negation *nai* in the main clause. This is, as discussed previously, a test of monoclausality. Consider the following examples:

- (63) a. Hanako ga tosyokan ni zassi sika kari ni ik-ana-i.
 Hanako NOM library to magazine only borrow to go-NEG-PRES

⁹But see also Muraki (1978).

3 V-V Compounds

“Hanako goes to the library to borrow only magazines.”

- b. *Hanako ga zassi sika kari ni tosyokan ni ik-ana-i.
Hanako NOM magazine only borrow to library to go-NEG-PRES

In (63-a) the verb *kari* (‘borrow’) is adjacent to the purpose expression, so restructuring obtains. However, in (64-b), the phrase *tosyokan ni* (‘to the library’) breaks the adjacency between the two, so there is no restructuring. Now *sika* and *nai* are in separate clauses, so the sentence is ungrammatical.

Another argument for restructuring is the potential construction, whose properties have already been discussed. Miyagawa shows that in restructuring environments, the potential construction can attach to the purpose expression and, as a result, the DO of the lower verb can appear with nominative case. On the other hand, if restructuring is blocked by an intervening element between the verb and the purpose expression, the DO must appear with accusative case:

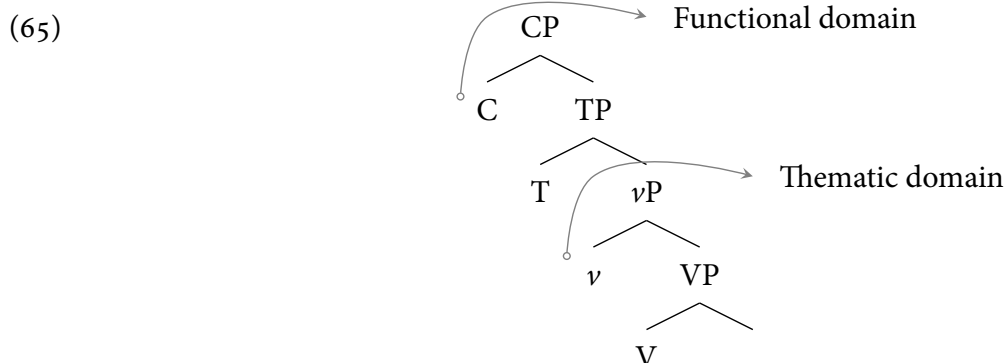
- (64) a. Boku wa biiru o/ga kai ni ik-e-ru.
I TOP beer ACC/NOM buy to go-POT-PRES
“I can go buy beer.”
b. Boku wa biiru o/*ga kai ni wa ik-e-ru ga,...
I TOP beer ACC/*NOM buy to TOP go-POT-PRES but
“I can go buy beer, but...”

Although Miyagawa does not state this explicitly, it can be concluded from the data above that in restructuring environments (64-a) the case of the DO comes from the higher predicate (the restructuring verb).

In what follows, I will argue that the class of restructuring predicates in Japanese should be extended to include the V-V constructions as well.

3.9 RAISING VERBS

A clause can be seen as consisting of two distinct domains: (i) the thematic domain, which is the locus of θ -role assignment and (ii) the functional domain, which is the locus of feature checking and movement triggers.



In between these domains, there is a layer of semifunctional projections (the small v) which has properties of both functional and lexical heads: it introduces an argument (the subject), so in this respect it is like a lexical head, but it also checks case, which makes it similar to a functional category.¹⁰

Let us consider again the category of raising verbs. They do not assign case to the internal arguments, they do not introduce an external argument and they appear with neither subject nor non-subject honorifics. Moreover, they cannot passivize. Kishimoto (2007b, 2009) argues that the failure of raising verbs to passivize has to do with Burzio's Generalization which states that all and only the verbs that assign a subject θ -role are capable of assigning accusative case (Burzio, 1986, p. 178). If raising verbs don't have an external argument, they must be unable to assign accusative case. Thus, they behave like unaccusative verbs, and unaccusatives cannot passivize.

The point is certainly valid, but I would like to suggest an alternative view on raising verbs. Their behavior falls into place if we assume that they are functional heads. In other words, they are merged in the functional domain, after the first cycle is finished. They are introduced in the derivation *after* the v head. When the v head is merged, the following operations occur: the external argument is introduced in the Spec of vP and case is assigned to all the internal arguments of the lexical verb (the V_1). Raising verbs are merged at a later stage, so to say 'too late' for case-checking or theta-assignment.

The same holds true for the impossibility of honorification. Raising verbs are merged higher than the locus of honorification, therefore they cannot enter into a checking relation and bear honorific morphology.

¹⁰On the notion of semi-lexical categories, see Corver & van Riemsdijk (2001).

3 V-V Compounds

An additional argument that these verbs are not lexical categories comes from the behavior of the raising verb *sugiru* ('do in excess').¹¹

First, note that the desiderative *hosii* can only attach to verbs, not to adjectives:

- (66) a. Kimi ga ki-te hosii.
you NOM come-CONNECTIVE want
"I want you to come."
b. *Utukusiku-te hosii.
beautiful-CONNECTIVE want
"I want you to be beautiful."

The verb *sugiru* can attach to an adjective:

- (67) Omo-sugi-ru.
heavy-do.in.excess-PRES
"It's too heavy."

What happens then if the desiderative morpheme is attached to the sequence Adj+*sugiru*? One could expect the construction to be well formed, since *sugiru* is morphologically a verb and *hosii* is able to attach to verbs. However, this prediction is refuted by the data:

- (68) *Omo-sugi-te hosii.
heavy-do.in.excess-CONNECTIVE want
"I want it to be too heavy."

This fact suggests that *sugiru* is transparent with regard to the properties of its complement: the Adj+*sugiru* string has the same category as the adjective alone. If the raising verb were a full lexical element, this transparency effect would not have obtained.

This phenomenon is reminiscent of the behavior of Italian restructuring verbs with regard to auxiliary selection. It is well known that in a restructuring environment, the auxiliary verb is selected according to the properties of the lower verb, not of the higher one. A transitive verb like *volere* ('want') normally selects *avere* ('have') in the *passato prossimo* (present perfect). However, when its infinitival complement is an unaccusative and restructuring applies, the auxiliary is *essere* ('be'), i.e. the auxiliary normally selected by the unaccusative verb:

¹¹I am thankful to H. Kishimoto for pointing out this argument.

- (69) a. Mario **ha** voluto un regale
 M. has wanted a present
- b. Mario **è** voluto tornare a casa
 M. is wanted return to home
 “Mario wanted to go back home.”

Both the Japanese *sugiru* and the Italian restructuring verbs are inert: they fail to impose their own selectional properties; instead, they inherit those properties from their infinitival complements. This suggests that they are not full-fledged lexical verbs.

I claim that raising verbs in Japanese are a type of restructuring predicates. They are functional heads with no case features to assign and no θ -role either. In general, restructuring verbs tend to be modals and aspectuals (Roberts, 1997). The majority of raising verbs in Japanese have an aspectual meaning, too: begin, end, be about to. I have claimed here that they are functional categories, above the vP cycle. Given their semantics, I assume that they head an aspectual projection, situated lower than T. The analysis is in the same spirit as that proposed by Cinque (2004), which will be detailed in the next section.

One prediction of the present analysis is that raising verbs should not be able to appear to the left of the causative morpheme. This is because the causative head is in the thematic domain — it introduces an argument. If raising verbs are merged higher than the thematic domain, it should be impossible to causativize them.

- (70) a. *John ni biiru o nomi-sugi-sase-ta.
 J. DAT beer ACC drink-overdo-CAUS-PAST
 “I made John drink too much beer.”
- b. John ni biiru o nom-ase-sugi-ta.
 drink-CAUS-overdo-PAST
 “I excessively made John drink beer.”

As expected, the V-CAUSATIVE-raising ordering is possible, but V-raising-CAUSATIVE is out. This provides additional confirmation that raising verbs are introduced in the derivation after the thematic domain is completed.

Additional examples seem to support the claim (thanks to H. Kishimoto for pointing out these data). Consider:

3 V-V Compounds

- (71) a. ??Biiru o nomi-das-ase-ta.
beer ACC drink-start-CAUS-PAST
“(I) made (him) start to drink beer.”
- b. ?*Biiru o nomi-kake-sase-ta.
beer ACC drink-begin-CAUS-PAST
“(I) made (him) begin to drink beer.”
- c. Biiru o nomi-hazime-sase-ta.
beer ACC drink-begin-CAUS-PAST
“(I) made (him) begin to drink beer.”

Examples (71-a, b), which involve a raising verb are degraded, but in (71-c) the verb *hazimeru* (‘begin’) is used, which can behave as a control verb. Thus, the example is grammatical.

A related proposal, as already mentioned in §1.3, is that of Fukuda (2007) who argues that the so-called raising verbs are, in fact, functional projections situated above *vP*.

3.10 CINQUE’S ANALYSIS

Restructuring verbs observe a strict ordering: when two of them appear in the same structure, only one ordering is possible for them (Cinque, 2004):

- (72) a. Non vi vuole smettere di importunare.
not you wants stop to bother
“He doesn’t want to stop bothering you.”
- b. *Non vi smette di voler importunare.
not you stops to want bother
“He doesn’t stop wanting to bother you.”

Cinque’s theory is that the restructuring predicates are in fact functional heads,¹² and these structures are always monoclausal, with only one lexical predicate (the most deeply embedded verb). These functional heads can be seen as part of the extended projection of the VP (in Grimshaw’s (2005) terminology). This explains the strict ordering observed among these verbs (the so-called Cinque Hierarchy).

In a language where such verbs do not induce restructuring, such as Romanian, the structure is clearly multi-clausal and the strict hierarchy between the verbs is absent. Compare the Italian examples in (72) with the Romanian ones in (73):

¹²But see Wurmbrand (2004) for arguments against this view.

- (73) a. Nu vrea să înceteze să vă vadă.
 “He doesn’t want to stop to see you.”
 b. Nu încetează să vrea să vă vadă.
 “He doesn’t stop wanting to see you.”

With this background in mind, let us look at the interaction between restructuring predicates and passivization. Cinque (2003) notes that, contrary to the received knowledge that the majority of the restructuring verbs in Romance languages do not passivize (Aissen & Perlmutter, 1976, Burzio, 1986), there are, in fact, several restructuring verbs which can appear in the passive.

- (74) a. L'ha dovuta riscrivere.
her-has needed rewrite
"He had to rewrite it."
b. *È stata dovuta riscrivere.
is been needed rewrite
"*It was had to rewrite."

The sentence in (74-a) is clearly in a restructuring environment, as it can be seen from the clitic *l'* which has climbed into the main clause. This structure cannot be passivized (74-b). Still, there is a subset of restructuring predicates which permit this operation:

- (75) a. La fini di costruire il mese scorso.
her finished to build the month past
“He finished building it last month.”
- b. La casa fu finita di costruire il mese scorso.
the house was finished to build the month past
“The house was finished to build last month.”

Why are then some restructuring verbs passivizable and others not? Cinque proposes that those which do not appear in the passive are generated higher than the Voice head — the head that bears the passive morphology. On the other hand, those verbs which may be passivized are located lower than the Voice head.

- (76) $\underbrace{[F_1 \dots [F_2 \dots [F_3 \dots [\text{Voice}^0 \dots [F_4 \dots [F_5 \dots [F_6 \dots [\text{VP}]]]]]]]}_{\text{unpassivizable}} \dots \underbrace{[F_4 \dots [F_5 \dots [F_6 \dots [\text{VP}]]]]}_{\text{passivizable}}$

3 V-V Compounds

This approach makes a clear prediction: high restructuring heads which cannot passivize should be able to take a passive as their complement, but heads below the Voice head should not. Cinque's claim is that this is the case, indeed. Example (77) shows the behavior of a low verb, *passare*. In (77-b), it is passivized. As expected, it cannot take a passive as its complement, as shown in (77-c):

- (77) a. Vi passeremo a prendere più tardi.
 you pass.we.FUT to fetch more late
 "We'll pass by to fetch you later."
 b. Sarete passati a prendere più tardi.
 will.be passed to fetch more late
 (Lit.) "You will be passed by to fetch later."
 c. *Gli passò ad essere presentato uno straniero.
 to.him passed to be introduced a foreigner
 "A foreigner will come by to be introduced to him."

Compare the above with a 'high' restructuring verb which cannot passivize but can embed a passive:

- (78) a. Gianni me lo ha voluto dare.
 Gianni me it has wanted give
 "Gianni wanted to give it to me."
 b. *Mi è stato voluto dare.
 to.me was been wanted give.
 "It was wanted to give to me."
 c. Gianni gli voleva essere presentato.
 Gianni to.him wanted be introduced
 "Gianni wanted to be introduced to him."

This is similar to my proposal regarding raising verbs in Japanese: they are higher than the 'lexical' domain, merged after the external argument has been introduced in the derivation. Since they are above νP , they cannot be passivized, but they can embed a passive. As discussed above, another reason why they cannot be passivized has to do with Burzio's generalization. It might seem tempting then to extend the same approach to the control type of V-V constructions, and assume that all V2s are functional heads. However, while the analysis works for raising verbs, there are some problems with the control predicates, which I will discuss presently.

There is one weakness in Cinque's theory of restructuring: if restructuring verbs are functional heads, they cannot project any arguments. More specifically, they cannot have an external argument. All restructuring clauses must, therefore, be raising constructions: the subject is merged in the Spec of the lexical verb and then raises above the restructuring head, to T, in the same fashion as the raising V-V constructions in Japanese. The problem is, however, that some of these restructuring predicates do, in fact, impose semantic restrictions on the subjects they appear with. Consider the contrast in (79). First, the epistemic verb *dovere* ('must') does not block an inanimate subject in (79-a); thus it behaves like a raising verb. On the other hand, the verb *volere* ('want') can only appear with an animate subject, so (79-b) is out:

- (79) a. La casa gli doveva piacere.
 "The house had to appeal to him."
 b. *La casa gli voleva appartenere.
 "The house wanted to belong to him."

This suggests that while *dovere* is a raising verb which does not assign an external thematic role, *volere* is more like a control verb which projects its own external argument. Italian restructuring verbs are therefore divided into raising and control predicates (Burzio, 1986, Roberts, 1997), just as the Japanese V-V complexes. This is at odds with Cinque's claim that all restructuring heads are functional heads and therefore cannot project any arguments. In order to solve this contradiction, he makes use of the notion of *adjunct θ -role*, proposed by Zubizarreta (1982). This move has the effect of a *deus ex machina*, and, as noted by Wurmbrand (2004), it weakens considerably the theta theory.

To account for the data, a less rigid theory of restructuring can fare better. As proposed by Wurmbrand (2001, 2004), restructuring can be (i) *functional*, corresponding to Cinque's functional heads or (ii) *lexical*, where the restructuring predicates are lexical verbs, projecting their own VP. The 'control' type of restructuring predicates (e.g. the verb *volere*) would fall under the second category. Being a lexical verb, a control verb is allowed to project an external argument and there is no need for the stipulative notion of adjunct θ -role.

There is no need to throw the baby out with the water: Cinque's approach to restructuring can still be maintained, albeit for a smaller number of predicates, i.e. for raising verbs. However, for those verbs which have control properties, it seems more viable to say that they are lexical predicates.

3 V-V Compounds

A second reason for not cramming together all V2s into the category of functional heads has to do with passivization. Cinque's data show that for Italian restructuring verbs, passive can appear either (a) before the restructuring predicate or (b) after it, depending on the type of verb. Crucially, it cannot appear in both positions. If one predicate takes option (a), it cannot also take option (b) and vice versa.

In Japanese, control-II verbs can be passivized, as discussed above (§3.6.1). If the 'functional' approach were correct, it would mean that they take the option (a), i.e. they are lower than the Voice head. Therefore, one would expect that they cannot take passivized complements. Some researchers claim that this is the case (Kageyama, 1993, Matsumoto, 1996):

- (80) Sono mondai wa *kangae-rare-naoshi-ta / kangae-naos-are-ta.
 that problem TOP think-PASS-redo-PAST / think-redo-PASS-PAST
 "The problem was thought about again."

However, Yumoto (2005) offers some counterexamples:

- (81) *riyoos-are-tukusu* ('be exhaustively used'); *kumitate-rare-naosu* ('be re-constructed / set up'); *mitome-rare-au* ('be mutually acknowledged')

In fact, a search on the Internet reveals other verbs that allow the V-rare-V pattern as well. For example, a gourmand notes:

- (82) Nabe no soko ni tor-are-wasure-ta itokonnyaku-toka suki desu.
 Pot GEN bottom on take-PASS-forget-PAST konjac.food-such.as like COPULA
 "I like stuff such as konjac food left at the bottom of the pot."

and a disgruntled music lover complains:

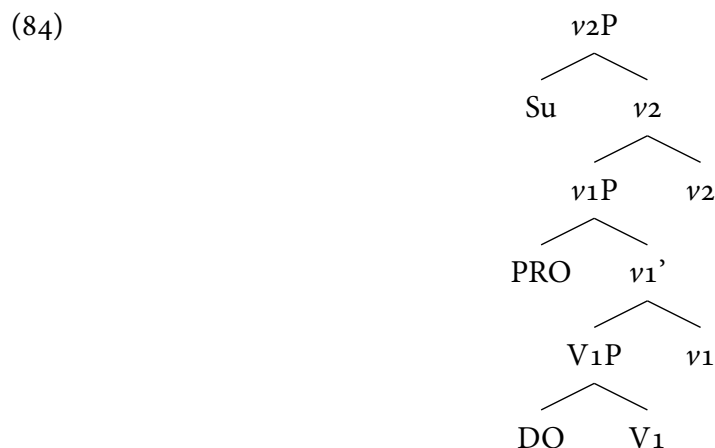
- (83) Meikyoku wa moo kak-are-tukusite-simat-ta no dewanai ka.
 good.songs TOP already write-PASS-exhaust-finish-PAST PRT is.not Q
 "Aren't all the good songs already written?"

With these verbs, both V-rare-V and V-V-rare sequences are possible. Since the control-II verbs can appear either to the right or to the left of the passive head, they are not subject to the strict ordering requirements imposed on functional heads. Moreover, as already discussed, there is good evidence that they project an external argument. In light of these considerations, it would be unreasonable to assume that they are functional heads, as in Cinque's theory. In a

sense, they do behave like restructuring heads, in that they assign case to the arguments of the lower verb and they display monoclausal properties with regard to the behavior of the *sika...nai* construction. On the other hand, they are clearly different from the raising predicates. I will assume therefore that they are restructuring heads, but not functional heads.

3.11 CONTROL-II

Like raising verbs, control-II verbs are transparent with regard to the *sika...nai* construction, so they behave as monoclausal structures. However, in contrast with raising verbs, they introduce an argument, so they cannot be pure functional categories. Moreover, this is correlated with a different case assignment mechanism. For these reasons, I propose that control-II V-V constructions have the structure shown in (84).



There is only one lexical verb here, namely the V_1 . The projection of the restructuring verb is part of the extended projection of V_1 ; it belongs to the same cycle. The major difference with the raising verbs discussed in section 3.9 is that here the restructuring verb is lower, still within the thematic domain of the verb. Thus, the restructuring verb introduces an external argument and it is also able to assign case. The structure proposed is very similar with that of causative constructions: both the causative and the control-II verbs are semifunctional heads that are merged in the higher strata of the thematic domain but lower than the functional domain.

3.11.1 RESTRUCTURING AND INCORPORATION

It has been already mentioned that emphatic particles can intervene between the two verbs, V₁ and V₂, especially if the construction has a contrastive meaning. These particles bring to light an interesting fact regarding the properties of the control-II verbs.

- (85) a. Ronbun wa kaki-oe-rare-ta.
 essay TOP write-finish-PASS-PAST
 (Lit.)“The essay was finished writing.”
- b. *Ronbun wa kaki-wa si-oe-rare-ta ga ...
 write-TOP do-finish-PASS-PAST but
 (Lit.)“The essay was finished writing, but...”

When the string V₁-V₂ is broken by an intervening particle, long passive becomes impossible. This is evidence that in these constructions case comes, exceptionally, from the lower verb instead of the higher one. Obviously, the decisive factor here is the failure of V₁ to incorporate into V₂. This is in sharp contrast with causative constructions, where the intervention of an emphatic particle does not have the same effect:

- (86) Hanako ga hasiri-wa sase-rare-ta.
 Hanako NOM run-TOP CAUS-PASS-PAST
 “Hanako was forced to run.”

The crucial difference between control-II constructions and causatives is that in the former, but not the latter, incorporation must take place. If incorporation doesn’t take place, there is no restructuring process.

The contrast in (85) is reminiscent of the restructuring constructions discussed by Miyagawa (1987): he argues that restructuring can only apply when the main verb is not separated by anything from the purpose expression.

This constitutes one major difference between restructuring in Japanese and Romance languages: in Japanese verb incorporation is a necessary condition for the transparency effects, while in Italian, etc. such requirement seems to be absent. If there is intervening material between V₁ and V₂ in control-II structures, case is assigned by the downstairs verb, so one can assume that restructuring is blocked:

- (87) Restructuring:

- | | | |
|----|---------------------|---|
| a. | V_1-V_2 | ✓ |
| b. | V_1 -wa si- V_2 | * |

The case features of the lower verb (corresponding to v_1 in (84)) are inherited by the restructuring verb, v_2 by incorporation of the former into the latter. However, if incorporation is not possible because of intervening material between the two verbs, case transmission cannot take place. In order to save the derivation, case is assigned downstairs by v_1 . Only in this scenario is the case assigned before the merger of the last argument. This is not part of the normal course of operation, but rather a Last Resort move to prevent a crash that would result from the DO being left without a case.

In contrast, in Italian (and other languages) the restructuring predicate and its complement can be separated by, e.g. adverbs:

- (88) Questi libri si volevano **proprio** leggere.
these books REFLEXIVE wanted really to.read
“People really wanted to read these books.” (Roberts, 1997)

Here, the adverb *proprio* ('really'), shown in bold face, intervenes between the two verbs. Still, restructuring takes place, as shown by the promotion of the lower object to matrix subject position in this 'impersonal *si*' construction (see Rizzi, 1978, for details).

Since there is no strict adjacency condition between the two verbs in Italian, it could be concluded that raising and incorporation of the lower verb into the upper one does not take place. Nevertheless, it should be mentioned that some analyses of restructuring claim that there is incorporation, but its effects are obviated by later operations.

For instance, Roberts (1991) argues that the lower verb raises and incorporates into the higher one, but then the higher verb excorporates and moves alone to T. Thus, the two verbs end up occupying different surface positions, so material can intervene between them:¹³

- (89) $V_1 \dots (\text{intervening material}) \dots [t_1 + V_2] \dots t_2$

In a later article (Roberts, 1997), he doesn't use the excorporation approach any longer, but claims that the lower verb, even though it incorporates, is spelled-out in a different position than the higher verb. Put differently, one part (V₂) is pronounced at the head of the chain and another part (V₁) at its tail. The effect is similar to that in (89), the difference being largely

¹³See also Guasti (1997) for an excorporation approach to Italian causatives.

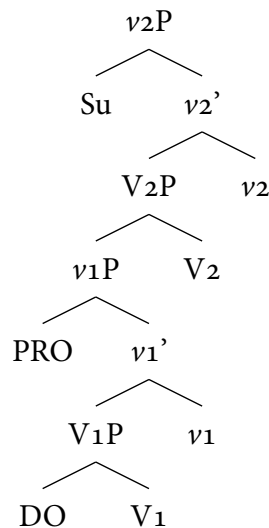
theoretical.

To conclude, it seems that incorporation in Italian (and other languages) is still an unsettled issue and largely a theory-internal one. For Japanese, on the other hand, there is empirical evidence that in Control-II constructions and in purpose expressions incorporation is obligatory.

3.12 CONTROL-I

The purpose expressions discussed by Miyagawa (1987), raising and control-II verbs behave as monoclausal with regard to the *sika...nai* construction. Unlike them, control-I verbs do not permit the *sika...nai* construction. Moreover, these verbs are opaque: no operation on them affects the lower complement. Long passive is prohibited, potential construction cannot change the case of the DO, scope relations between the V2 and the DO are fixed. These properties clearly indicate that control-I constructions are biclausal. I have argued that the other V-V constructions are restructuring constructions, which implies that there is only one full verbal projection, with its functional and semifunctional categories. On the other hand, control-I structures consist of two full verbal projections, independent of each other. The structure I propose is illustrated in (90).

(90)



This structure explains why case assignment to the DO takes place in the lower shell, instead of being postponed until all the other arguments have been assigned. Since the two verbal projections are distinct from each other (so it is in this sense that the structure is biclausal), they

form two independent domains, call them cycles or phases. Thus, the case features they have are separated. The accusative of the DO is assigned by v_1 , which is the head that also introduces the external argument for that cycle. Raising and control-II verbs are part of the extended projection of V_1 (in this sense, the present proposal is compatible with the idea defended by Napoli (1981) and Rosen (1990) that restructuring verbs are a species of auxiliaries), but control-I verbs form an independent phase from the lower verbal projection. The hypothesis that case is assigned to the internal arguments by the same head that introduces the external argument is therefore not falsified by these constructions, because this mechanism only operates on single cycles.

3.12.1 THE NATURE OF *OWARU*

There appears to be a problem with the analysis proposed here. H. Kishimoto (p.c.) brings to my attention the fact that *owaru* ('finish') is transparent with regard to *sika...nai*:

- (91) $\overbrace{\text{Hon-sika yomi-owara-nai}}$
 book-only read-finish-neg

Furthermore, $V_1 + \textit{owaru}$ cannot passivize, which indicates that it is a control-I verb. Kishimoto suggests that the failure of *sika* to be bound by the sentence negation with verbs like *sokoneru* or *sobireru* could be due to the fact that these verbs have an inherent negative meaning. This negation, present in the lexical specification of the verbs, acts as an intervener which blocks the relation between *sika* and *nai*:

- (92) *sika ... V_1 ... sokone -nai
 $\underbrace{\hspace{1.5cm}}_{\text{NEG}}$

This is a serious problem for the present analysis: I have argued that control-I verbs enter into biclausal structures, which would explain their behavior with regard to case assignment. Crucially, I regard the *sika...nai* construction as a valid test for mono / bi-clausality. But if the above is true, the analysis has to be revised.

However, I believe there is good evidence that the present analysis can be maintained.

First of all, if the lexical meaning of the verb could cause an intervention effect, the same behavior should be expected in a simplex structure. That is to say, (92) should be ungrammatical regardless of the presence or absence of V_1 . In a simple structure in which the *sika* phrase is

3 V-V Compounds

below *sokoneru*, the sentence negation c-commands the verb and the verb c-commands the *sika* phrase, so the intervention effect should arise. But such construction seems to be possible:

- (93) Hikari no syuuritu o honno wazuka sika sokone-nai masuku
 light GEN yield ACC very little only miss-NEG mask
 “A mask that absorbs only a tiny amount of light.”

This casts some doubt on the validity of (92). Furthermore, while *sokoneru* and *sobireru* could indeed be conceived as carrying negative meaning, the same cannot be said for the verb *akiru* (‘get tired of’). Yet, this verb appears in blocking structures, as illustrated in example (59-c) on page 125. The configuration (94) is out, in spite of *akiru* not having an inherent negative meaning:

- (94) *sika ...V1 ...aki -nai

These facts indicate that it is not the meaning of the verb that produces the intervention effect. The question that remains to be answered is why *owaru* behaves differently than other control-I verbs and permits an embedded *sika* phrase with a matrix negation.

I believe the answer to this lies in the nature of the verb itself. It could be tempting to argue that *owaru* is either raising (Koizumi, 1995, Matsumoto, 1996) or ambiguous between control and raising (Kageyama, 1993). Several instances can be found in the literature in which this verb can appear with inanimate, non-volitional subjects, which could be used as an argument that it can be a raising verb. Consider the following examples:

- (95) a. Hanabira ga hiraki-owar-u.
 petal NOM open-finish-PRES
 “The flowers stop opening their petals.”
 b. Kane ga nari-owaru.
 bell-NOM ring-finish
 “The bell stops ringing.” (Teramura, 1984)
 c. Buranko wa yure-owat-ta.
 swing TOP swing-finish-PAST
 “The swing ceased swinging.” (Shibatani, 1973)

However, this is a rash conclusion. It turns out that this possibility seems to be restricted to certain types of subjects. There are cases in which an inanimate subject is not possible:

- (96) *Ame ga furi-owat-ta.
 rain NOM fall-finish-PAST
 “The rain stopped falling.” (Kishimoto, 2009)

Moreover, *owaru* fails other tests for raising verbs. For instance, it cannot appear with subject-verb idioms (Kishimoto, 2009). The imperative is impossible with raising verbs, as expected since they do not project a volitional agent. However, *owaru* can appear in the imperative (Shibatani, 1973). The honorification pattern is also that of a control verb:

- (97) a. *Sensei wa kono hon o o-yomi-**ni-nari**-owari-masi-ta.
 profesor TOP this book ACC S.HON-read-S.HON-finish-POL-PAST
 “The professor finished reading this book.”
 b. ??Sensei wa kono hon o o-yomi-owari-**ni-nari**-masi-ta.
 S.HON-read-finish-S.HON-POL-PAST.

These properties are good evidence that *owaru* is indeed a control verb. The apparent counterexamples in (95) are best analyzed as instances of pseudo-control. The notion of pseudo-control is introduced by Pustejovsky (1995) to deal with examples like (98):

- (98) The paint finished drying.

Finish is a control verb, so (98) should be out. But Pustejovsky (1995, p. 206) argues that the qualia (basically, the semantic properties) of the subject make it compatible with a control structure: the paint can dry on its own (see also Kishimoto, 2009, for discussion).

As already mentioned, *owaru* cannot passivize:

- (99) *kono hon ga yomi-owar-are-ta.
 this book NOM read-finish-PASS-PAST
 “This book was finished reading.”

This suggests that the case of the direct object is assigned by the lower verb (V₁), so we are dealing with a control-I construction. However, there is evidence to the contrary:

- (100) a. “Nezimakidori” **ga** yomi-owar-**e**-nai watasi
 “Wind-up Bird” NOM read-finish-POT-NEG I
 “...I, who could not finish reading ‘Wind-up Bird Chronicle.’”
 b. Karesi ga modottekuru koro ni gohan **ga** tukuri-owar-**e**-ru
 Boyfriend NOM return time at food NOM prepare-finish-POT-PRES

3 V-V Compounds

- yoo-ni kitakusimasu.
in.order.to return.home
“I’m going home so that I can finish cooking by the time my boyfriend comes home.”
- c. Kyuusyoku **ga** tabe-owar-**e**-na-sasoo.
school.lunch NOM eat-finish-POT-NEG-it.appears
“I don’t think I can eat all my school lunch.”
- d. Ooyoso itiniti-de dorama ‘24’ **ga** mi-owar-**e**-ru.
About one.day-in TV.show 24 NOM watch-finish-POT-PRES
“You can watch an entire ‘24’ series in about one day.”

As the data in (100) show, when *owaru* takes the potential morpheme, the lower object may appear in the nominative. This proves that the case of the direct object in the normal (i.e. non-potential) construction is assigned by *owaru* itself, not by the lower verb. Consequently, *owaru* should not be analyzed as a control-I verb, but as control-II instead. As to why passivization is impossible, I have no valid explanation at the present, but recall that passivization is sometimes more restricted than the potential construction (as seen for causatives). There must be some additional factors that block the passivization of *owaru* but not of other members of its class.

To conclude, there is good evidence that *owaru* is a control verb, but not of the same category as *sokoneru*, or *sobireru*. Since it belongs to the class of control-II verbs, which form monoclausal structures, it is in fact expected to be transparent for the *sika...nai* construction. The analysis proposed at the beginning of this section can be maintained: control-I verbs appear in biclausal constructions, without restructuring.

3.13 SEMANTIC WEIGHT

Intuitively, one can perceive a semantic difference between the control-II and control-I verbs: the latter seem to carry more semantic content than the former. As a student of Japanese, I can certainly testify that I have learned some of the control-I verbs only very recently, while I acquired control-II verbs a long time ago. It seems reasonable to assume that one learns the more general words first and only later the more specialized ones. No one has learned to say in English *touriquet* before they learned the word *get*. However, the question is: how to test if a word has less semantic content than another?

Ritter & Rosen (1996) propose that semantic weight is inversely proportional with the number of contexts in which an item may appear and with the complexity of its dictionary definition.

Items with more semantic content can appear in a fewer number of contexts, since they are more specialized. On the other hand, a word with less semantic content can appear in a very large number of frames and in order to define it, the dictionary must list more information — since it is semantically underspecified, it can ‘pick’ more meanings in different contexts. The case study performed by Ritter & Rosen involves the verbs *walk* and *run*. The first one is more specialized and carries more semantic content, hence the frames in which it can appear are more limited. As a result, its dictionary definition doesn’t have to list too many meanings. In contrast, *run* can appear in a very large number of contexts, with totally different meanings (*run a business*, *run to school*, *run for president*, etc.). Things might seem a little confusing: how could a verb have less meaning if its dictionary entry spans over 3 pages? There is no trick here: it can have a lot of meanings (and the dictionary has to list them all) precisely because it is semantically underspecified and so it is compatible with many interpretations.

It stands to reason that the less semantic content a word has, the easier it is for it to bleach and grammaticalize. Ritter & Rosen propose a continuum of semantic weight. At the heavy end one finds full lexical items with specialized meanings. At the other end there are light elements such as auxiliaries.

To test these ideas on Japanese V-V predicates, I performed a search on the *Eijirō* dictionary (available at <http://www.alc.co.jp/>) for members of each category of V-V compounds, and recorded the number of hits (including example sentences) for each of them. The results can be seen in table 3.3 on the next page. The differences are striking: one order of magnitude between raising and control-II and again one order of magnitude between control-II and control-I. Even allowing for errors due to unknown factors, there are clear-cut thresholds between the 3 categories of verbs.

If for a given item the semantic weight is inversely proportional with the number of entries listed in the dictionary for that item, the results presented here confirm the claims of this chapter: semantically, the raising verbs are the ‘lightest’, since they are functional categories; they are followed by restructuring control verbs (control-II), which I claimed have semi-functional status and, finally, the ‘heaviest’ ones are the fully lexical control verbs (control-I).

In his analysis of Japanese restructuring, Miyagawa (1987) (see §3.8) notes that among motion verbs, only *kuru* (‘come’) and *iku* (‘go’) induce restructuring; other verbs which can be used in purpose expressions, such as *dekakeru* (‘go out’) or *tobei-suru* (‘go to America’) fail the tests for restructuring. Miyagawa admits that he can’t really explain why this is the case. But in the light of the present discussion, I believe the answer to be clear: *go* and *come* are semantically

Type	Example	No. hits
Raising	<i>sugiru</i>	1100
	<i>dasu</i>	5567
Control-II	<i>naosu</i>	785
	<i>tukusu</i>	266
	<i>oeru</i>	265
	<i>owaru</i>	390
Control-I	<i>kaneru</i>	12
	<i>akiru</i>	19
	<i>sobireru</i>	4
	<i>sokoneru</i>	76

Table 3.3: Number of results on *Eijirō*

lighter, and they are closer to auxiliaries and other grammatical items than *tobei-suru* is.

These findings bring additional support to the analysis presented in this chapter, but it could be objected (Y. Matsumoto, p.c) that there is no clear relation between the number of hits in a dictionary and semantic weight. Granted, the property of “semantic weight” is not easily quantifiable, as it is not a discrete property. Rather, ‘weight’ is on a continuum and is best measured relative to other items. Semantically light elements will require more explanations and examples, as their meaning can shift according to the frame in which they occur. On the other hand, the meaning of heavier elements can be pinpointed by a shorter explanation. To illustrate, in my trusty Kenkyūsha *New Pocket Japanese-English Dictionary* (Masuda, 1988), the verb *sobireru* is translated as: “fail to, lose (miss) a chance to”. No more explanations seem to be necessary. On the other hand, for the verb *dasu*, the same dictionary lists a total of 12 separate meanings (including its use as a V2): “put out, expose, exhibit, send, publish” and so on. Thus it could be said that *dasu* is semantically more underspecified than *sobireru*, i.e. ‘lighter’. In this way we can establish a connection between the number of meanings listed under an item and its relative semantic weight.

3.14 SUMMARY

There are three major types of verbs that appear in V-V constructions: raising verbs, control-I and control-II, with quite distinct properties.

I have argued in this chapter that raising and control-II verbs are similar to the restructuring verbs of Italian, Spanish and German. They have a different status than that of full lexical verbs: (i) raising verbs, I have claimed, are functional projections and (ii) control-II verbs are semi-functional projections. This explains the monoclausal properties of the V-V constructions and the fact that they only establish one case domain. The distinction functional / semifunctional explains the different properties of these two type of verbs. Roughly, the functional heads (raising) do not introduce any arguments, while the semi-functional ones (control-II) introduce an agent argument. This also correlates with the different case assignment patterns of these constructions: those heads that do not introduce an agent argument do not assign case either, and vice versa.

The restructuring analysis is similar in spirit with other modern approaches to restructuring, in that it implies no ‘tree pruning’ and no violation of the Projection Principle: what goes in must come out. The structure starts out as monoclausal and remains that way throughout the derivation.

Control-I verbs are different and they do not appear in a restructuring environment. That is to say, they project their own independent verbal shell and therefore they appear in ‘biclausal’ constructions. This allows us to maintain the proposal that the same head that introduces the external argument is responsible for the case of the direct object.

Further evidence for the analysis proposed here comes from the degree of semantic underspecification of these verbs. Raising verbs are the most underspecified, therefore the closest to grammatical items, while, at the other end, control-I verbs are the most lexical in nature.

4 CONCLUDING REMARKS

The present study stems from an inquiry into causative constructions, whose case patterns were baffling me. However, it soon became clear that the same behavior as in causatives can be found into a larger number of complex structures, suggesting the existence of a more general mechanism.

We have seen that in three different types of complex predicates the case array is determined by the highest head that introduces the last argument, the external argument. Empirically, the generalization is solid — the sole exception was the case of control-I verbs, but I claimed that they fall outside the scope of the generalization. Theoretically, the idea is plausible: if syntax has a division of labor between two big domains, the thematic and the functional one, it seems reasonable that operations of one domain do not take place until the previous one has finished. These domains also correspond roughly to the notion of phase, as introduced in recent years by Chomsky.

In a way, the present proposal could be seen as an extrapolation to Burzio's generalization: for simple predicates, there is a tight connection between the existence or absence of the external argument and the verb's capability to assign case. In complex predicates, a similar connection seems to exist, even though the external and the internal argument (the recipient of case) might receive thematic roles from different predicates (i.e. the subject from V₁ and the object from V₂).

In the process, I have also argued that the class of restructuring predicates in Japanese should be increased to include more verbs than the ones originally proposed by Miyagawa (1987). Additionally, I claimed that Japanese has two different types of restructuring, functional and semi-functional. Modern work on restructuring has shown a similar distinction to exist in European languages, suggesting that we are dealing with a wider generalization.

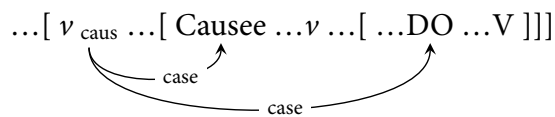
An interesting fact that was discussed in section 2.3 is that there are different locality conditions for different syntactic operations: case in causatives and ditransitives turned out to be free from intervention effects; passivization, on the other hand, is sensitive to structural configura-

4 Concluding remarks

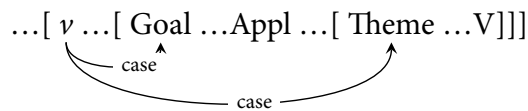
tions which can block movement. The data were explained by an interplay between the type of operation (multiple vs. simple Agree) and the syntactic configuration (presence or absence of incorporation). Let us see now the full paradigm, including the complex predicates discussed in chapter 3.

Case was shown to be assigned by the highest verbal head for causatives, ditransitives and control-II predicates. On the other hand, raising verbs and control-I do not assign case. Instead, the lower verb is responsible for the case of its object(s). These findings are summarized below:

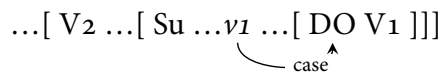
(1) a. Causatives:



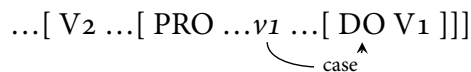
b. Ditransitives:



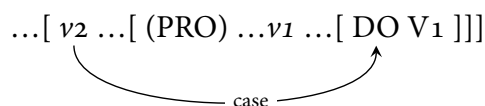
c. Raising:



d. Control-I:



e. Control-II:



The availability of long passive was different in each of these cases. Causatives do not admit long passives, but ditransitives do. Within the class of V-V compounds, it is only control-II verbs that can appear in long passive constructions. Schematically, the possibilities are shown in (2):

(2) a. Causatives:

-
- b. Ditransitives:
-
- c. Raising:
-
- d. Control-I:
-
- e. Control-II:
-

For causatives (2-a) I have argued that incorporation does not take place. As a result, the DO cannot raise over the Causee due to a locality condition. On the other hand, in ditransitives (2-b), incorporation is obligatory. This renders the Goal and Theme equidistant, so any of them can passivize.

In the case of (2-c) and (2-d), the impossibility of long passive is expected: In these constructions, the case is assigned by the lower verb (cf. (1-c) and (1-d)). It follows that long passive is excluded from the start.

With regard to the passivizability of control-II verbs (2-e), there are two options: (i) assume with Kageyama (1993) that there is no PRO in the lower shell, so that the DO is free to passivize or (ii) there is a PRO in the lower shell, as I conjectured at the end of §3.5, but because incorporation does take place in these structures, the DO and PRO are equidistant. T searches for a Goal to satisfy its EPP feature and to discharge its nominative case. But PRO doesn't need case, so an economy principle (maximize matching effects, as proposed by Chomsky) could rule out the passivization of the PRO. If incorporation doesn't take place (due to the presence of emphatic particles), the DO cannot passivize.

4.1 REMAINING ISSUES

At the end of this work, I will outline some problems which remain unsolved in the present framework as well as some issues that warrant further investigation.

4 Concluding remarks

One such issue is the mono-clausality test. In the present work, I have used the *sika...nai* construction as the relevant test. This construction has been used before in the literature to this end (e.g. Miyagawa, 1987). However, any additional tests to corroborate the data obtained from this construction would be welcome.

Another interesting line of investigation is the interaction between secondary predicates and V-V control constructions. Normally, a direct object can be modified by a secondary predicate. However, Y. Yumoto (p.c.) points out that in V-V complex predicates, the object of the low verb cannot appear with a secondary predicate. In her framework, this can be explained by the fact that the DO is not a true object of the low verb (the DO is projected within the upper VP shell). In the present analysis I have dealt mainly with case and restructuring issues, and I have not touched upon secondary predication. However, the issue opens up a promising topic for future research.

One problem which appears difficult to deal with in the present framework is the availability of low passive, i.e. the possibility to passivize the embedded verb. As discussed in §3.5 and §3.10, it is sometimes possible to passivize the V1 in a control-II construction. Also, it is marginally possible to passivize the lexical verb in a causative construction, as discussed for instance by Aissen (1979), Watanabe (1993).

For causatives, the outcome of this operation is correctly predicted by the present approach: since the case of the arguments is assigned by v_{caus} , after the passive has applied, the NP originating as the DO of the lexical verb is predicted to bear accusative case. Let us see how this works, step by step:

- (3) a. NP₁ ga NP₂ o V \implies passivization
- b. NP₂ ga (NP₁-ni) V-PASS \implies causativization
- c. NP₃ ga (NP₁-ni) NP₂ o V-PASS-CAUS

When a transitive verb is passivized, its case feature is deleted and the direct object receives case from T (3-b). However, if causativization applies after passivization, since the causative morpheme is able to assign case, the DO will receive accusative (3-c) from v_{caus} . This is in agreement with the actual data (example from Watanabe, 1993):

- (4) Mary wa Taroo o Jiroo ni home-rare-sase-ta
 M TOP T ACC J by praise-PASS-CAUS-PAST
 ‘Mary made Taroo be praised by Jiroo.’

The exact same logic should apply for low passives in control-II constructions: since the case assigner is merged after the passive head has been introduced, it should be able to assign accusative case to the DO of the low (passivized) verb. However, the data contradict this prediction. In reality, in these constructions the object of the verb appears in nominative:

- (5) Nairu-gawa no mizu ga riyoo-sare-tukusi-ta
 Nile-river GEN water NOM use-PASS-exhaust-PAST
 “The water of the Nile has been completely used up.”

For the time being, I have no convincing explanation for this phenomenon and I will leave the finding of a solution for future research.

Another issue which I have not touched upon is the problem of the case features of the embedded verbs. For instance, in causative constructions, the lexical verb has case features to discharge, but these never get discharged. From a strict theoretical perspective, these unchecked features should crash the derivation. It could be argued that these case features are inherited by the higher verb (the causative morpheme), but the mechanism of inheritance is unclear, since in causatives there doesn't appear to be any incorporation. For control-II V-V compounds, incorporation is a prerequisite for restructuring, so the case features of the lower V₁ can be transmitted to the upper V₂, as I have in fact suggested in section 3.6.1, but the same mechanism doesn't seem to be available for causative constructions. A possible solution would be to have the case features computed only at the phase level and assigned as needed, disregarding the presence or absence of case features. This would have the added benefit of explaining why sometimes unergative verbs are able to assign case, such as in *John ran himself tired*.

This study of complex predicates in Japanese has not been a long journey, but hopefully it has been an interesting one. We have met some challenging problems and I have tried to offer, within a unified framework, what I hope to be some convincing solutions. And, to quote Karl Popper, „even if you do obtain a solution you may then discover to your delight, the existence of a whole family of enchanting though perhaps difficult problem children for whose welfare you may work.”

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