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A COMPARATIVE STUDY OF TENSE AND ELLIPSIS

Ayumi Matsuo, Ph.D.

University of Connecticut, 1998

This thesis is about Tense systems within noun phrases and elliptical constructions. The first half of the thesis concerns the interpretive differences on Tenses caused by Specificity of object NPs.

In chapter 2, I argue that one of the differences between a specific NP and a non-specific NP is related to another temporal phrase that a specific NP has but a non-specific NP does not have. In Chapter 3, a few other differences between a specific and a non-specific object NPs are discussed; in other words, I argue that a specific object NP ends up occupying a different syntactic position than a non-specific object NP does. In doing so, I will focus on Japanese, in which there has been very little discussion about Specificity.

In the second half of the thesis, I will discuss the temporal interpretations in ellipsis constructions; namely, Antecedent-Contained Deletions and Sluicing. ACDs are claimed to be only made with a specific NP object; hence, the temporal system within a specific NP that is discussed in Chapter 2 and 3 becomes crucial in this chapter. After discussing Tense systems in ACDs, I will move my discussion to Tense and Aspect Parallelism that is observed in ACDs. There has been a lot of disputation concerning how ellipsis sentences are constructed. One side argues that it is a deletion process that takes place in PF under identity and the other side argues that it is a copying process that takes place in LF. Looking at some semantic phenomenon such as Tense, I will claim that LF-copying is necessary to account for this phenomenon. In the last chapter, I will discuss the similar line of comparison of Tense and Ellipsis--Sluicing. I propose that we can find a strong relationship between Tense and Pronouns in Sluicing examples.

**A COMPARATIVE STUDY
OF TENSE AND ELLIPSIS**

Ayumi Matsuo

B.A., Kobe College, 1993

M.A., University of Connecticut, 1996

A Dissertation

Submitted in Partial Fulfillment of the

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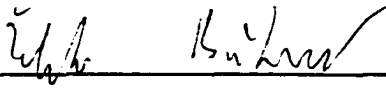
Doctor of Philosophy Dissertation


**A COMPARATIVE STUDY
OF TENSE AND ELLIPSIS**

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Chapter 1

Introduction

This thesis is a comparative study of Tense and Ellipsis, mainly focusing on Antecedent Contained Deletions (ACDs) and Sluicing.

1.1 Outline of the Thesis

Traditionally, Tense was thought to be purely semantic. However, since Zagana (1989), the two temporal points that are necessary in representing a relational property of Tense, which is a dyadic predicate, are integrated into Phrase structure as arguments. These arguments are called two time phrases: ZPs (Zeit (Time) Phrases). This initiated a productive line of research on the relationship between the semantics and syntax of Tense. Even though this theory of Tense successfully accounts for Tense interpretations in simple clauses and complement clauses, the contrast in the interpretational possibilities in (1), which arises due to the specificity of the object NPs, has never been discussed in a syntactic framework:

- (1) John sought the person who was laughing. (shifted, independent and simultaneous)
- (2) John sought a person who was laughing. (shifted and simultaneous)

The available readings in (1) and (2) are different in that in (2), the time of the person's laughing can precede, follow or be simultaneous to the time of John's seeking the person.

Example (2), on the other hand, lacks one of the three interpretations. In (2), the time of a person's laughing can precede or be at the same time as the time of John's seeking the person; however, it cannot follow the time of John's seeking the person. In Chapter 2, I will explore the possibility that the difference in permissible interpretations of (1) and (2) is brought about by the difference in specificity of the NPs. I postulate that specific DPs contain ZPs. A ZP in specific DPs is postulated to refer to the Utterance Time.

In Chapter 3, I argue for another difference between a specific and a non-specific object NPs; namely, that specific object NPs move to AgroP-Spec but non-specific object NPs stay in situ. I focus on Japanese. Even though there is a considerable amount of research with respect to which positions specific and non-specific NPs occupy in many languages, there has not been thorough research to investigate whether or not specific and non-specific NP occupy separate positions in Japanese, or if that is the case, what exactly these positions are. I discuss several examples of scope interactions between object NPs headed by *only* and verbs, clefts and binding that support my hypothesis that object NPs in Japanese occupy the distinct positions that Diesing (1992) claims holds of German, Dutch and several other languages. Throughout this thesis, I assume the Split VP Hypothesis argued for in Johnson (1991), Koizumi (1995), Lasnik (1995; a, b and in press).

Chapter 4 concerns ACDs, which are claimed to be only possible with specific NP objects (Diesing (1992)). I take a further look at the specific object NPs that appear in ACD sentences and at how the ZP in specific NPs plays a role in temporal interpretation in ACD sentences. I investigate how a Tense operator¹ in a VP, which is called an event variable by Carlson (1995), behaves in ACDs. There have been competing ideas how ACDs are actually constructed: including the NP extraposition account (proposed by Baltin (1987)), the LF Quantifier Raising account (May (1985), Kennedy (1997) etc.); and the Case-driven movement to AGR-O Spec account (Hornstein (1994), Takahashi (1993) and discussed in Lasnik (1993)). In discussing the phenomenon of Tense parallelism in ACDs

¹This tense operator is a copy of an internal ZP, according to Stowell. This copy resides inside a VP and gives VP the information about which event time the VP has to refer to.

observed in (3) and (4), I will claim that overt Case-driven movement to AGR-O and LF-copying are both necessary to account for ACD examples. 3

(3) *?John read the same books that Mary will [e].

(4) John read the same books that Mary did [e].

(3) has a Tense mismatch in predicates; the former verb *read* is in Past Tense and the latter verb that is elided is preceded by the future auxiliary *will*. This kind of requirement of Tense parallelism is only observed in ACD sentences, and is not found in sentences with non-ACD as in (5), VP-ellipsis as in (6) or pseudo-gapping examples as in (7).

(5) John read the same books that Mary will read (non-ACD)

(6) Mary read the books and Fred will, too. (VP-ellipsis)

(7) Mary read the books and Fred will, the magazine (pseudo-gapping)

I suggest a way to account for the Tense mismatch phenomenon seen in (3) through recourse to an LF-copying analysis. As part of this account, I propose that when a VP is copied in [e], the temporal variable in VP is also copied and this temporal variable plays a role in deciding whether the Tense is matched or not.

The latter part of Chapter 4 concerns Aspect Parallelism in ACDs. I will investigate whether Aspect parallelism has something in common with Tense parallelism in ACD sentences. I examine Aspect mismatch in ACD constructions and other VP-ellipsis constructions within the framework proposed in Stowell (1993), Brugger (1996), Demirdache & Uribe-Extebarria (hereafter; D&E) (1997) and Travis (1991). McCawley (1971) claims that atelic verbs (activity and stative verbs) behave differently from telic verbs (achievement and accomplishment verbs) when they appear in the Present Perfect. For example, the Present Perfect of an atelic verb is ambiguous ((8) and (9)):

(8) Max has slept for two hours (now-i.e., he is still sleeping)

(9) Max has slept (he is no longer sleeping at UT-T) (D&E 10;1997)

By contrast, telic verbs are not ambiguous:

(10) John has arrived. (i.e., that John is still here.)

I claim that ACDs also exhibit Aspect Parallelism in examples such as (11):

(11) Max has lived in Vancouver for 3 years in the same house that Mary has.

In (11), both Max and Mary have to be living in Vancouver at the Utterance Time although only the matrix clause has the adverbial phrase: *for 3 years*. Unlike ACD constructions, other VP-ellipsis examples tolerate Aspect mismatch much more readily. With respect to ACDs, I claim that this aspectual information in VP has been copied in [e] after *has* in the relative clause; hence, there is no way for an embedded VP to have a different interpretation.

Finally, Chapter 5 discusses a similar interaction between Tense and Ellipsis--in Sluicing constructions. I argue that just as with pronouns, there are strict and sloppy readings of Tense. As is the case with pronoun indices, a sloppy reading of Tense is more widely accepted than a strict reading. What is intriguing is that we see a great similarity between the behavior of Tenses and Pronouns. Those native speakers who allow a strict interpretation of Tense also allow a strict reading regarding pronoun indices. It has long been argued that there are great similarities between Tenses and pronouns, (see Partee (1973)); this chapter provides supporting evidence for the argument made by Partee (1973), Heim (1994) and Kratzer (1998).

Chapter Two

Tense Ambiguity and Specificity

2.1 Introduction

Traditionally, Tense phenomena have been considered to be purely semantic; however, in the last ten years, extensive research has been done on the relationship between the semantics and the syntax of Tense. In the sentence "Mary walked to school", the main verb with Past Tense indicates that the event time of Mary's walking precedes the time when the sentence is uttered. The time that this sentence is uttered is called the Utterance Time and the time when the event takes place is called the Event Time. The sentence above is considered true only when the Event Time of Mary's walking precedes the Utterance Time. The Event Time and the Utterance Time are represented in a syntactic structure in Enç (1987), Zagana (1989) and Stowell (1993)'s work. For example, Stowell (1993) suggests that there are phrases called Zeit (Time) Phrases (henceforth; ZPs) and an external ZP and an internal ZP denote the Utterance Time and the Event Time respectively.

This chapter investigates the Tense mechanism in complex sentences. It has been observed that different readings arise in (1) and (2), a complex sentence with a complex NP and a complex sentence with *that*-clause.

- (1) John met the professor who won the Nobel Prize.
 - a) John met the professor after s/he won the prize.
 - b) John met the professor before s/he won the prize.
- (2) John said that the professor won the Nobel Prize.
 - a) John said that the professor won the prize after s/he won the prize.

In (1), the tense of the matrix verb and the tense of the embedded verb have no dependency on each other so the sentence has two readings as in (1a) and (1b); the embedded Past Tense makes the embedded Event Time be any point in the past irrespective of the matrix Event Time. Sentence (2), on the other hand, is unambiguous. The embedded tense has a dependency on the matrix tense in (2). The Event Time of the professor's winning the prize has to precede the Event Time of John's saying.

These differences are accounted for by Stowell (1993) through the mechanism of Quantifier Raising (QR). In the following sections, Stowell's theory is modified so that it can accommodate the phenomena in (3)-(4), besides those in (1) and (2). This modification avoids certain problems caused by QR; my analysis does not call for any movement.

- (3) John sought the person who was laughing. (specific)
 - a) John sought the person after the person was laughing.
 - b) John sought the person when the person was laughing.
 - c) John sought the person before the person was laughing.
- (4) John sought a person who was laughing (non-specific)
 - a) John sought a person after the person was laughing.
 - b) John sought a person when the person was laughing.²

Despite the fact that (3) and (4) share similar phrase structures, (4) lacks one of the three readings that (3) has. There are two events in (3) and (4): John's seeking a person and the person's laughing. The former event is marked with Past Tense and the latter with Past Progressive. In (3), there is no obligatory temporal ordering relation between the two events. This is not the case with (4): in (4), the person's laughing must precede the time of John's seeking him. The only difference between the two is that the relative head has *the* in (3) and *a* in (4). In Stowell's theory, both specific and non-specific NPs must undergo QR

²These examples are suggested by Lasnik (p.c.).

in (3) and (4); therefore, on that account it is mysterious why one of the readings is missing in (4). 7

I propose here that only specific DPs contain ZPs; this is why these different tense interpretations arise depending on whether or not the DP is specific. Following Stowell, I assume that there is an external ZP (Zeit Phrase), often called a PRO-ZP, that refers to a reference time and an internal ZP referring to the Event Time. Tense determines the relationship between the external ZP and the internal ZP of the same clause. The PRO-ZP, the reference time argument, is fixed by Control Theory; it always is conindexed with the most local c-commanding ZP in the same way that a controlled-PRO is conindexed with the most local c-commanding noun. As for an embedded clause, the PRO-ZP takes the matrix Event Time as its reference time. However, when the specific DP intervenes between them, it blocks the control relationship. In my proposal, specific DPs contain ZP; and thus they have the ability to serve as the most local controller for the embedded PRO-ZP.

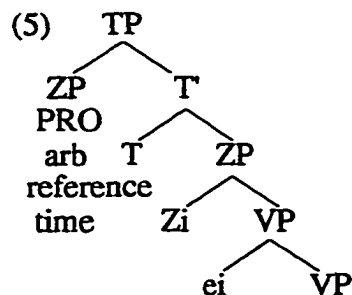
In Section 1, I review Stowell's analysis of Tense. Section 2 shows how different readings are licensed in different structures (cf. (1)&(2)). In Section 3, I discuss certain problems with Stowell's analysis. In Section 4, I modify Stowell's theory to solve the problems of the previous section.

2.2. The Analysis of Tense

2.2.1. Tenses as ZPs in Stowell (1993)

When a sentence is uttered, Tense has the role of describing when the event happens with respect to the time of utterance. In other words, Tense has the function of determining the relationship between the Utterance Time and the Event Time. Stowell accounts for this relational characteristics of two temporal points, the Event Time and the Utterance Time,

through the syntactic structure in (5). Following the idea of Zagana (1990), he argues for 8
 ZPs that correspond to the Utterance Time and the Event Time. These two ZPs are the
 specifier and the complement of a TP: properties of the T head determine how the two ZPs
 are related. Thus, in (5), Tense takes an external argument that denotes the reference time
 and an internal argument that denotes the event time of the verbs.



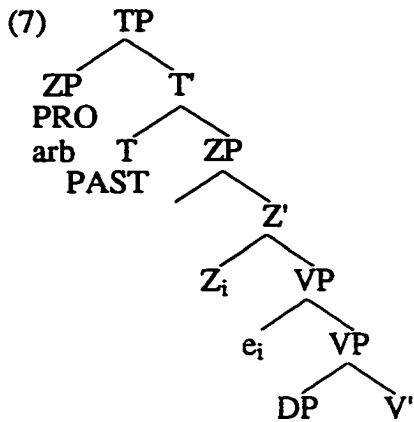
If Tense is Past, then the Event Time precedes the reference time. If it is Future, the
 opposite is true. The external ZP is a PRO-like element. When the external ZP is in a
 matrix clause, it does not have any c-commanding ZP; hence, it denotes the Utterance
 Time. When the external ZP is in an embedded clause, it is c-commanded by *e*, which is
 the nearest possible controller. In Stowell's theory, this *e* is a temporal argument and it is
 controlled by the head of the matrix internal ZP which denotes the event time.³

2.2.2. *Tenses in Simple Sentences*

In this section, I will review how the grammar of Tense functions in finite sentences in
 Stowell's analysis. Consider the following simple sentence. In Stowell (1993), (6) is
 represented with the following grammatical structure.

³This idea of *e* is related to Higginbotham (1985)'s idea of a predicate having an event argument or a Davidsonian argument.

(6) John died.



In (7), the matrix external ZP is not controlled by anything so it denotes the Utterance Time. Past Tense under T makes the event ZP pick any point which precedes the Utterance Time, so this sentence is true if John's dying happens before the Utterance Time.

2.2.3. Complement Tenses

Let us next consider how Stowell's analysis accounts for Tense in complement clauses, such as in (8).

(8) John said [that Bill was sick].

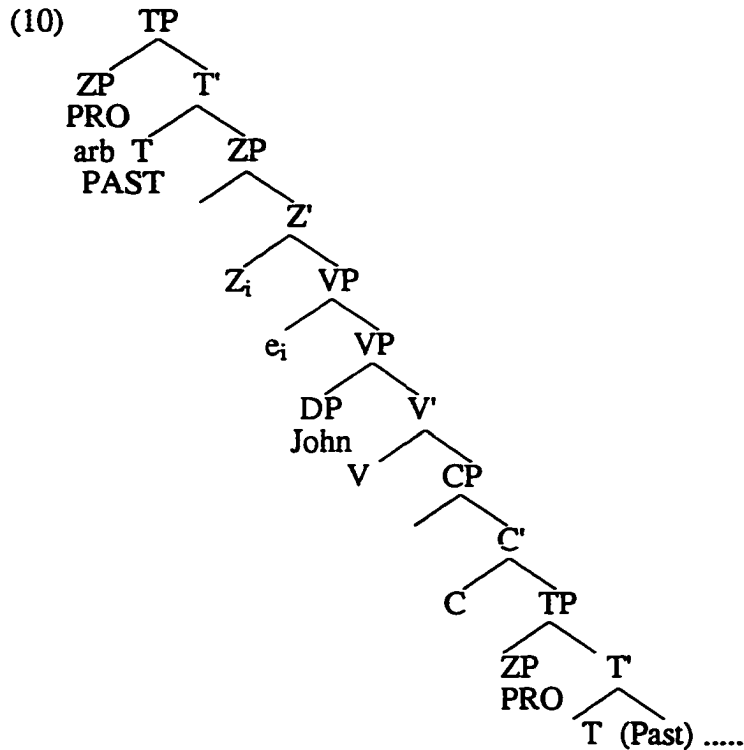
(8) has both a shifted and a simultaneous reading. The shifted reading is the reading where the time of Bill's sickness precedes the time of John's saying (i.e., (9)).⁴

	shifted reading	simultaneous reading
main clause	Past---E1--UT---Future	----E1---UT
embedded	---E2---	E2

E1=John's saying E2=Bill's being sick

⁴(9) includes a time chart for two events indicated as E1 and E2. UT stands for "Utterance Time" or "Speech Time". This chart reads as follows: suppose Time goes by from left to right. A past shifted reading is the reading where E2 precedes E1. A simultaneous reading is the reading where E1 and E2 both occur at the same time in the past.

Under Stowell's analysis, when the past-shift occurs, both Ts in the matrix and 10
 embedded clauses contain Past, as shown in (10):



In (10), the interpretation of the matrix clause is as I observed above; the reference time of the matrix clause is not controlled by anything so it denotes the Utterance Time; matrix Past Tense makes the matrix event-time ZP pick any time in the past, hence the matrix Event Time precedes the Utterance Time. As for the ZPs in the embedded clause, the PRO-ZP is controlled by the temporal argument, *e* in the matrix clause so it has the matrix Event Time as the reference time. Past Tense under embedded T makes the Event Time of the embedded clause precede the PRO-ZP, which refers to the matrix Event Time. In other words, the time of Bill's being sick precedes the time of John's saying and the time of John's saying precedes the utterance time. This reading is called the past-shifted reading as the embedded Past is determined with respect to the matrix Past.

The other reading, the *simultaneous* reading (cf.(9)), is related to the well known phenomenon called "Sequence of Tense" (SOT). It has been pointed out that SOT effects

occur when the embedded Past behaves as if it has no individual Tense (Ogihara (1995c) 11 and Stowell (1993)). Stowell proposes that the simultaneous reading occurs when the lower T position has a null Present Tense which denotes present Tense semantically even though it is morphologically past. In this case, the Event Time of the embedded clause denotes the same point as the Event Time of the matrix clause. In other words, in the simultaneous reading, the times of John's saying and of Bill's sickness coincide, and the time precedes the utterance time.⁵ This second reading is only possible when the verb of the embedded clause is stative as in (8).

Stowell does not investigate why SOT happens only when the complement verb is stative and fails to occur when the complement verb is eventive. However, this can be explained by a proposal made in Enç (1991). According to Enç, event verbs have a spatio-temporal variable associated with them but stative verbs do not.⁶ This accounts for the different behavior of stative and event verbs when they appear with the present tense (i.e., (11) and (12)).

(11) Sally knows the answer.

(12) Sally sings. (2;1991)

Enç observes that a sentence such as (11), with a stative verb, is true "if the situation it describes holds at the time of evaluation (1991;1)". On the other hand, (12) is not necessarily true even if the situation it describes holds at the time of evaluation. In other words, (12) is not true even if Sally's singing takes place at the time of evaluation but if she

⁵SOT is not observed in various other languages such as Japanese, Hebrew, Russian, Serbo-Croatian among others.

⁶This classification of verbs by Enç is different from the stage-level/individual-level predicate distinction discussed in Kratzer (1991) and Carlson (1995).

(1) John said that firemen were available (stage-level)

(2) John said that firemen were altruistic (individual-level)

Examples (1)&(2) both allow the SOT reading; hence, this means, if we follow Enç, that a stative complement verb, *be*, in (1)&(2) both have no spatio-temporal variable. However, Kratzer and Carlson argue that a stage-level predicate does but an individual-level predicate does not include spatio-temporal variable.

does not sing habitually. In fact, Sally need not be singing at the Utterance Time. Rather, 12 (12) has a generic reading; it describes the fact that Sally is in the habit of singing. It is unlike (11), which is true only if Sally knows the answer at the time of evaluation. Enç claims that the reason why (12) has a generic reading is that there is a variable in the event verb and the variable must be bound by something. However, the present tense does not have an ability to bind variables; hence, a generic operator must bind the variable in (12). Accordingly, the generic or habitual reading is present in (12). On the other hand, the stative verb in (11) does not have a spatio-temporal variable that must be bound; thus, we obtain a present tense interpretation in (11), in which the event is true at the time of evaluation.

The different nature of event and stative verbs, that is, event verbs have temporal variables but stative verbs do not, explains why SOT occurs only with stative verbs. When SOT occurs, the embedded verb must have a null present tense. According to Enç (1991), a present tense cannot bind a variable in an event verb. I assume that a present tense and a null present tense have the same characteristics with respect to the ability to bind a variable. Consider the example seen in (8) repeated here in (13).

(13) John said that Bill was sick.

If Enç's claim is right, it is possible for a verb without a variable, namely a stative verb, as in (13) to appear with a null present tense.⁷ Example (14) with a non-stative complement verb does not show SOT.

(14) John said that Bill kicked the ball.

⁷However, Enç's account or my extension to her account fails to capture the reason for the different temporal interpretations between (13) and (i):

(i) John said that Bill is sick.

I refer the readers to Ogihara (1995b) for the solution. This cannot explain why in non-SOT languages, the equivalent of (13) has a present tense in the embedded clause. Finally, this fails to account for why (13) allows a past-shifted reading where Bill's being sick precede John's saying so.

In (14), the variable in an event verb, *kick*, has to be bound. When a past tense binds it, 13 the interpretation where Bill's kicking takes place before John's saying is possible. Alternatively, the variable can be bound by a habitual operator: in this case, it means that John said that Bill used to kick the ball. However, if we want both times to denote the same point, we need to use the progressive form instead, as in (15).

(15) John said that Bill was kicking the ball.

The progressive form does not have a temporal variable associated with it; thus, a null present tense can appear with it giving rise to a simultaneous reading in (15). This analysis then raises the question about the interpretation of (16).

(16) John said that Bill kicks the ball.

In (16), the temporal variable of *kick* has to be bound; however, neither present tense nor null present tense is able to bind the variable. So, a generic operator binds the variable in (16) giving rise to a habitual reading of the complement clause.

2.2.4. Relative Clause Tenses

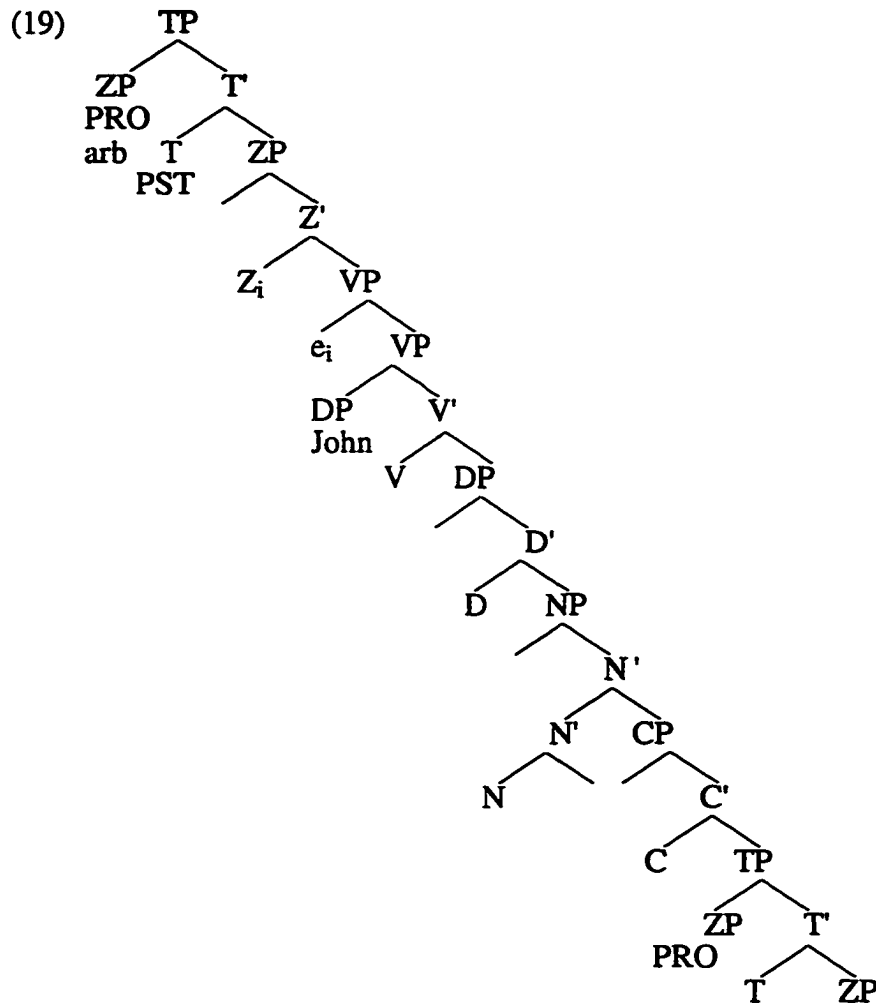
A sentence containing a relative clause, as in (17), has three readings: a past-shifted reading, an independent reading and a simultaneous reading⁸. The past-shifted reading is the one where the time of the boy's being sick precedes the time of John's giving a book to

⁸Stowell is not clear about the distinction between a shifted reading and an independent reading. In Section 3, I propose that an independent reading is the only reading that exists and a shifted reading and a simultaneous reading are nothing but special cases of an independent reading.

the boy. The independent reading is the one where the time of the boy's being sick has no 14
relationship with the time of John's giving a book to the boy; both are past with respect to
the Utterance Time. The simultaneous reading is the one where the time of the boy's being
sick and the time of John's giving a book to the boy occur at the same point (as illustrated
in (18)).

(17) John gave a book to [the boy who was sick].

(18)	independent	shifted	simultaneous
main	---E1---UT---	---E1---UT---	---E1---UT---
embedded	-E2----	E2--	E2
	E1=John's giving a book to the boy E2=the boy's being sick		



In Stowell's theory, both the past-shifted and the independent readings occur when the matrix and embedded T-slots have past tense in (19): the past-shifted reading arises when the DP that contains the relative clause stays in situ at LF. The independent reading occurs if the DP undergoes LF movement and adjoins to the matrix clause. If LF movement of the DP takes place and if the DP moves out of the c-command domain of the highest matrix ZP, the external ZP in the relative clause has no c-commanding controller. In this case, it refers to the Utterance Time in the same way that the external ZPs in matrix clauses do. Since LF movement, which Stowell proposes to be an instance of QR (Quantifier Raising), dissociates the embedded Event Time from the matrix Tense, the embedded event-ZP denotes a time which is completely independent from the time denoted by the matrix e . It

only has to be past with respect to the Utterance Time. Stowell proposes that the reason 16
that (8) does not have an independent reading is that CPs usually do not undergo QR. On
the other hand, the DP containing a relative clause can optionally undergo QR. The
simultaneous reading occurs when the embedded T does not have past but has Null Present
Tense. The embedded internal ZP is controlled by the matrix *e*; hence, the Event Time of
both matrix and embedded clause refer to the same point.

2.3. Problems with Stowell's Analysis

Stowell's theory of Tense runs into certain difficulties when other syntactic operations are
taken into consideration. Before going into detail, I would like to categorize independent
readings into two different classes. As seen above, the shifted reading is the one where the
embedded Event Time is dependent on the matrix Event Time. On the other hand, the
independent reading is the one where the embedded Event Time and the matrix Event Time
are independent of one another. Chart (20) shows that the shifted reading is an instance of
the independent readings.

- (20) John gave a book to [the boy who was sick]

	independent	shifted
main	---E1---UT---	---E1---UT---
embedded	-E2-----	E2--

E1=John's giving a book to the boy E2=the boy's being sick⁹

Let us call the independent reading which does not overlap with the shifted reading, namely, the reading where the embedded event time follows the matrix event time, an 'anti-shifted independent reading'. So, independent readings consist of anti-shifted independent readings and shifted readings.

- (21)
- | | | |
|--------------------------|---------------|---------------|
| anti-shifted independent | independent | shifted |
| main | ---E1---UT--- | ---E1---UT--- |
| embedded | --E2- | -E2----- E2-- |

- (22) Last year, John finally discovered [which students that just finished taking the exam] Mary liked.

For example, in (22) the *which*-phrase occupies the embedded CP-Spec position at S-structure and satisfies the requirements of the [+WH] Comp following *discover*. However, in (22), the time of the students' finishing the exam can precede the time of John's discovering which student Mary likes. This is not a possible environment for independent readings in Stowell's theory. In his analysis, the *which*-phrase must undergo QR out of the c-command domain of the matrix *e* to yield an independent reading. However, the *which*-phrase must be in the [+WH] Comp at LF in (22) and the external ZP in the *which*-phrase is c-commanded by the matrix *e*. The fact that an independent reading is possible in (22) shows that a phrase does not need to undergo QR to bring about an independent reading.

The same thing can be seen in the Japanese examples. Nakamura (1994) points out that the independent and the past-shifted readings are available in the same way in both

⁹The time chart in (20) is in the same format as the one in (9).

Japanese and English relative clauses. (23) has two readings; Nakamura proposes, 18 following Stowell, that the past-shifted reading is possible when the DP stays in situ at LF and the independent reading is obtained when the DP scopes out.

- (23) Taroo-wa [DP booru-o ket-ta otoko]-ni at-ta].
 Taroo-TOP ball-ACC kick-PST man-DAT meet PST
 'Taroo met a/the man who kicked a ball' (Past-shifted and Independent)

In this example, the time of the man's kicking a ball can precede or follow the time of Taro's meeting him.

However, examples such as (24) pose a problem for this QR-based analysis. The two readings, past-shifted and independent, are both possible in (24). This example contains an embedded relative clause, a WH-phrase and a Q-morpheme.

- (24) [John-ga [Mary-ga [NP choodo shiken-o oeta dono seeto]-
 John-NOM Mary-NOM just test-ACC finished which student
 o sukidatta ka] kyonen tuini mituketa] (koto)
 -ACC liked Q last year finally discovered fact
 'the fact that John finally discovered last year which students that just
 finished taking the exam Mary liked'

Saito (1989) shows that if an embedded Comp has a Q-marker, *ka*, it is a [+WH] Comp. The WH-phrase must move to the CP-Spec position at LF to satisfy the [+WH] feature of Comp. Saito shows that the traces that are left by these WH-movements are subject to the Proper Binding Condition. Example (25) satisfies (26), the Proper Binding Condition by Fiengo (1977) at LF because the trace of the WH-phrase is bound by the WH-phrase.

- (25) a. [s Mary-ga [s' [s John-ga dono hon-o toshokan-
 Mary-NOM John-NOM which book-ACC library-
 kara karidasita] ka] siritagatteiru] koto (S-Str)
 from checked-out Q want-to-know fact
 'the fact that Mary wants to know Q John checked out which book from the

library.'

- b. [s Mary-ga [s'[s John-ga t_i Toshokan-kara karidasita] donohon-o_i]
siritagatteiru] koto (LF) (Harada; 1972)

(26) Proper Binding Condition: Traces must be bound.

However, (27) is ruled out because the trace of the WH-phrase is not bound at LF, violating the Proper Binding Condition.

- (27) a. *[s John-ga dare-ni [s'[s Mary-ga kuru] ka] osieta] koto
John-NOM who-to Mary-NOM come Q taught fact
'the fact that John taught who Q Mary is coming' (S-str)
b. [s John-ga t_i [s' [s Mary-ga kuru] dare-ni_i] osieta] koto (LF) (190;1989)

In the same manner, in (24), the underlined NP must move to the embedded CP-Spec at LF. Then, the PRO-ZP which is in the complex-NP will have the matrix *e* as its antecedent. However, this means that an independent reading should not be available under Stowell's analysis since independent readings arise only when the complex NP moves out and adjoins to the matrix clause. So, the fact that an independent reading exists in (24) also shows that independent readings can be licensed even if the QR of the DP does not take place. It is difficult to explain why independent readings are possible in sentences with relative clauses such as (22) and (24) within Stowell's framework.

2.4. Proposal

In this section, I propose a way to account for the interesting phenomenon shown in (3) and (4) (repeated here in (28) and (29)), and also a way to solve the problem seen in Section 3.

- (28) John sought the person who was laughing.
 a) John sought the person after the person was laughing.
 b) John sought the person when the person was laughing.
 c) John sought the person before the person was laughing.
- (29) John sought a person who was laughing.
 a) John sought a person after the person was laughing.
 b) John sought a person when the person was laughing.

I propose that specific DPs such as *the person* in (28) contain another ZP. When the ZP of a specific DP intervenes between the matrix *e* and the embedded PRO-ZP, the PRO-ZP can no longer take the matrix Event Time as its reference time. This is because the ZP in the DP will be the most local controller for an embedded PRO-ZP. I also propose that this ZP of a specific DP always refers to Utterance Time. As a consequence, whenever a PRO-ZP has the ZP of a specific DP as its controller, the PRO-ZP will have Utterance Time as its reference time. As a result, the past tense is allowed to refer to any point in the past with respect to the Utterance Time. On the other hand, when this ZP in a specific DP is not present, the past tense refers to a point which is past with respect to the matrix Event Time.

Specific DPs can also be specified as DPs with "I-don't-care-when" operators in Enç (1986)'s terms. She asserts that NPs have a Tense that is independent from the Tense of the verb in examples such as (30). (30) has the semantic representation as in (31) in the traditional theory.

- (30) I met the American citizen.
 (31) $\lambda x[\text{American citizen}(x) \rightarrow \text{P I meet}(x)]$

In (31), the NP: *American citizen* has no tense operator, so it refers to *an American citizen* at the Utterance Time. However, Enç points out that that is not the only available interpretation of (30). She observes that (30) can be interpreted as a statement about a former American citizen as well as about a current American citizen. "I-don't-care-when"

operators are developed to account for the fact that *the American citizen* in (30) has different 21 temporal interpretations associated with it.

(32) $W\phi$ is true at time t iff $P\phi$ or ϕ or $F\phi$ is true at t ¹⁰. (411; 1986)

If the operator, W in (32), appears with nouns, then such nouns are not constrained with respect to which tense they refer to. (30) has a semantic representation as in (33):

(33) $\lambda x[W \text{ American citizen } (x) \rightarrow P \text{ I meet } (x)]$

On the other hand, a non-specific noun such as *an American citizen* has no specified tense. Example (34) is represented as in (35).

(34) I met an American citizen.

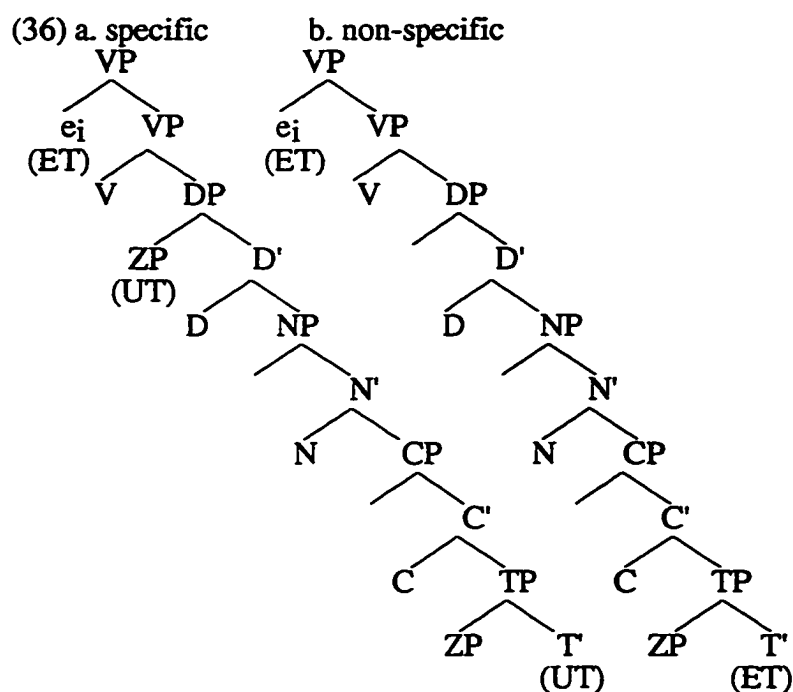
(35) $\exists x[P \text{ American citizen } (x) \rightarrow P \text{ I met } (x)]$

In (34), the American citizen that I met has to be an American at the time of meeting. S/he cannot be a former American citizen and this interpretation is different from the one in (33). Specific DPs refer to certain temporal points, which can be different from the Tense of the predicates, thanks to the operator W residing in Specific NPs. However, non-specific DPs do not have an independent Tense; in other words, they cannot refer to a temporal point that is different from the tense of a predicate. Non-specific NPs share the same tense as their associated verbs. In the following section, I discuss the internal structure of specific and non-specific DPs to account for this temporal asymmetry between specific and non-specific NPs.¹¹

¹⁰This "I-don't-care-when" operator is not totally flexible unfortunately and *the president* in (41) cannot refer to the future president. I assume it is because *the president* is only used to refer to either present or previous presidents. If you have not become a president, it is impossible to address you as *the president*, in which case, we need to use *a future president*.

¹¹Snyder points out that sentence (i) is a counter-example to this proposal:
(i) John first met the president in 1985.

My proposal uses structures in (36)a and b for specific and non-specific DPs, respectively.



In (36)a, the ZP of the specific DP intervenes between the matrix *e* and the embedded ZP; thus, the most local controller for the embedded PRO-ZP is not the matrix *e* but rather the ZP in the DP. Accordingly, the embedded PRO-ZP refers to the Utterance Time. When there is Past Tense under the embedded T slot, the Event Time of the embedded clause is past with respect to the Utterance Time. Consequently, three readings, the anti-shifted independent reading, the shifted reading and the simultaneous reading are all possible. The Chart in (37) recapitulates my discussion of the three readings (cf.(18) above).¹²

Snyder points out that *the president* in (i) can only refer to the current President, namely Bill Clinton and the President in 1985, Donald Regan. However, there is no reading where John met President Nixon. My analysis rules in such a reading. I need to collect more data on this matter and I must leave it to further study.

¹²Refer to Footnote 9 for how to read this time chart.

(37)	anti-shifted independent	simultaneous	shifted
	main ---E1---UT---	---E1---UT---	---E1---UT---
	embedded --E2-	E2	E2--

When past tense under the embedded T happens to refer to the very point when the matrix event happens, the simultaneous reading occurs¹³. If past tense picks out a point that follows the matrix event time, the anti-shifted independent reading occurs. When past tense refers to a point that precedes the matrix event time, the shifted reading occurs. On the other hand, when the relative clause has a non-specific DP as in (34)b, the anti-shifted independent reading is not possible because the embedded PRO-ZP cannot refer to the Utterance Time; the embedded Past is past with respect to the matrix Event Time. The embedded PRO-ZP has the matrix *e* as its most local controller and only the simultaneous reading and the shifted reading are available. The simultaneous reading arises when the T slot has null Present Tense and the shifted reading arises when T has Past Tense.

Let us see how my theory can account for those effects. First, examples (30) and (32) are explained as follows. Reinterpreting Enç, let us suppose that specific DPs contain a ZP. The ZP of a DP always refers to the Utterance Time so the Tenses of specific nouns can refer to any points with respect to the Utterance Time. This formalizes syntactically the idea of an "I-don't-care-when" operator. On the other hand, a non-specific noun does not have a ZP associated with it. In that case, the Tenses of NPs are controlled by an *e* of a main verb, which is why the NP: *a citizen* in (34) has to have the same Tense as the verb.

Second, let us go back to the examples of specific vs. non-specific complex DPs. The examples in (38) and (39) show that the interpretation of the embedded Tense depends on whether or not the relative head NP is specific.

¹³However, as we have discussed before, the simultaneous reading is possible only when the embedded verb is stative.

- (38) I sought the person who was laughing.
 (anti-shifted independent, shifted and simultaneous)
 (39) I sought a person who was laughing. (shifted and simultaneous)

(38) has a relative head, *the person* that is specific while (39) has a non-specific relative head, *a person*. In (38), the anti-shifted independent reading, the shifted reading and the simultaneous reading are all possible; in my approach, they are all instances of one type of interpretation. On the other hand, in (39), the anti-shifted independent reading is not easy to obtain; the most readily available reading is the shifted reading where the time of a person's laughing precedes the time of my seeking him. Accordingly, if temporal modification is added to (38) and (39) to force the anti-shifted independent interpretation, (39) with a non-specific DP becomes degraded (cf. (41)).

- (40) Yesterday, I sought the person who was laughing this morning.
 (41) ?? Yesterday, I sought a person who was laughing this morning.

(41) is not totally ungrammatical because an indefinite NP can be specific (refer to Eng (1991) for further discussion). Overall, examples (38)-(39) are well-explained if specific DPs contain a ZP that refers to the Utterance Time.

Finally, it follows that sentences with complement clauses such as in (42) pattern with (39) because there is no intervening DP with a separate Tense in it.

- (42) John said that Bill was sick. (simultaneous and past-shifted readings)

2.5. Non-Past Tense in Japanese

This section extends to Japanese the proposal made in the previous section regarding a separate ZP in specific DPs providing an explanation of a distinction between non-past tenses (Present vs. Future) embedded under past tense. Uribe-Etxebarria (1994)

claims that Future Tense : *will* in English is a manifestation of *woll* plus Future Tense and 25
will always takes the Utterance Time as its PRO-ZP. On the other hand, *would* always has
the past Event Time in its PRO-ZP position. When *woll* takes some past point as its PRO-
ZP, it is realized as *would* but when it takes the Utterance Time as its PRO-ZP, it is realized
as *will* . Ogihara (1996), following Kamp (1971), shows that there is a difference in
available interpretations between *will* and *would* . Consider the following examples:

- (43) a. A child was born that would become ruler of the world.
b. A child was born that will become ruler of the world. (1996;33)

In (43a), the embedded PRO-ZP is controlled by the Event Time: the time of the child's
birth, thus, the time of the child's becoming ruler must follow this Event Time and must
precede the Utterance Time. Things are different in (43b), however, when the embedded
PRO-ZP refers to the Utterance Time. Here, the time of the child's becoming ruler must
follow the Utterance Time.

Unlike English, Japanese lacks the distinction between *will* and *would*; moreover,
Japanese does not have any overt future morpheme. Ogihara claims that the present tense
morpheme *-(r)u* can be used in a sentence that talks about Future, which is why
-(r)u is called a non-past morpheme. The non-past morpheme in the following sentence is
ambiguous and it can refer to either Future or Present:

- (44) Taroo-ga koko-ni i-masu (1996;4)
Taroo-NOM here-at be-PRES (or non-past)
'Taro is here now' or
'Taro will be here'

Example (45), where the non-past morpheme appears in the embedded clause, is
ambiguous between (43a) and (43b).

- (45) Sekai no tootisha ni na-ru kodomo-ga umare-ta.
 the world of ruler to become-PRES child-NOM born-PAST
 ‘A child was born that would become ruler of the world.’
 ‘A child was born that will become ruler of the world.’

In (45), the ambiguity of non-past morpheme places the time of the child’s becoming ruler future or simultaneous with respect to the time of the child’s birth.

As summarized above, it seems impossible to distinguish, on the surface, Present Tense from Future Tense in Japanese; however, my proposal, which postulates separate Tenses in specific DPs, succeeds in distinguishing the interpretations associated with Japanese non-past tense morphemes. Consider now the following examples, with specific and non-specific DPs in (46a) and (46b) respectively:

- (46) a. Watasi-wa nooberushoo-o to-ru sono otoko-o sagasi-ta.
 I-NOM Nobel prize-ACC win-PRES this man-ACC seek-PAST
 ‘I sought this man who will win the Nobel prize.’ (future)
 ‘I sought this man who wins the Nobel prize.’ (present)
 b. Watasi-wa nooberushoo-o to-ru otoko-o sagasi-ta.
 I-NOM Nobel prize-ACC win-PRES man-ACC seek-PAST
 ‘I sought a man who wins the Nobel prize.’ (present)
 ‘I sought a man who would win the Nobel prize.’
 (future with respect to the matrix Event Time)
 ‘I sought a man who will win the Nobel prize.’ (future)

On my analysis, the specific DP in (46a) has an additional PRO-ZP in its SPEC position which refers to the Utterance time. Hence, the non-past Tense in the embedded clause should only have the Utterance Time and not a matrix Event Time as its PRO-ZP. As a result, the reading where the time of the man’s winning the Nobel prize is ordered simultaneous to or future with respect to the time of my seeking the man is not available in (46a). My claim is that non-specific DP in (46b) does not have any PRO-ZP in its SPEC position. Since nothing blocks the dependency of the matrix Event Time ZP and an

embedded PRO-ZP, I correctly predict that there is an additional reading available in (46b); 27
the non-past Tense can refer to Future with respect to the matrix Event Time, normally, the
time of my seeking a man. Consequently, the reading that is absent in (46a) is available in
(46b). The time of a man's winning a Nobel prize can be placed future with respect to the
time of my seeking the man.

(47a) a temporal ordering for (4a) **Non-Past (specific)**

-----ET (sought)---UT----->
 ---ET(winning a prize)--->

(47b) a temporal ordering for (4b) **Non-Past (non-specific)**

-----ET (sought)---UT----->
 ---ET(winning a prize)----->

As far as the Past Tense is concerned, as we have observed in (45), sentences involving
relative clauses with specific DP-heads have an interpretation where the embedded event
time refers to the point which is past with respect to the Utterance Time; whereas, sentences
involving non-specific DP-heads have a reading where the embedded event time refers to
the point which is past with respect to the matrix event time. This is summarized in (48a)
and (48b). With non-Past Tense, however, we obtain the schema in (47a) and (47b), with
the arrow pointing in the opposite direction.

(48a) a temporal ordering for (45) **Past (specific)**

-----ET (sought)---UT----->
<---ET(laughing)-----

(48b) a temporal ordering for (4\46) **Past (non-specific)**

-----ET (sought)---UT----->
<---ET(laughing)

In this section, I have discussed an array of interpretations exhibited by non-past tenses in Japanese. Once again, the ZP in specific DP-Specs hypothesis has played a role in distinguishing the possible interpretations.¹⁴ 28

2.6. Summary

In this chapter, I have tried to account for how anti-shifted independent readings can be brought about without making use of Quantifier Raising. I accounted for the availability of anti-shifted independent readings by proposing that the specific DPs have ZPs. When they appear between the matrix *e* and the embedded PRO-ZP, the PRO-ZP will not refer to the matrix Event Time but to the Utterance Time.

This modification of Stowell's analysis makes it possible to solve a problem with the QR account, which occurs when there is an interaction between WH-phrases and Q-markers.

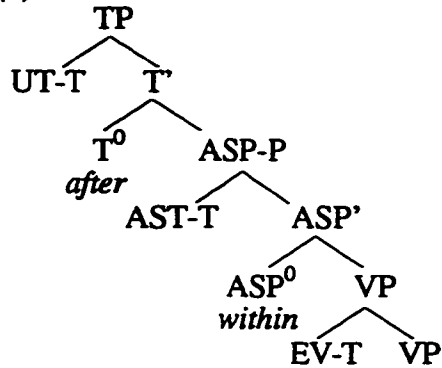
One consequence of my theory is that it explains why some tense related readings are not present in examples with complex NPs with non-specific nouns. A further consequence of this proposal is that this can explain why sentences with complement clauses do not allow independent readings but that sentences with complex-NPs with specific D-head do.

Appendix to Chapter 2: A Related Proposal in Aspect

Demirdache and Uribe-Extebarria (1997) (D&E) apply Klein's (1995) and Stowell's (1993) analysis of Tense to Aspect, thus providing a uniform structural representation of Tense and Aspect. Since Chapter Four of this thesis concerns both Stowell (1993) and

¹⁴There is one other syntactic evidence for this ZP, which is relative to Negative Polarity Licensing. I refer readers to Section 4.4.2 for this matter.

(3) The Phrase Structure of the Past Progressive



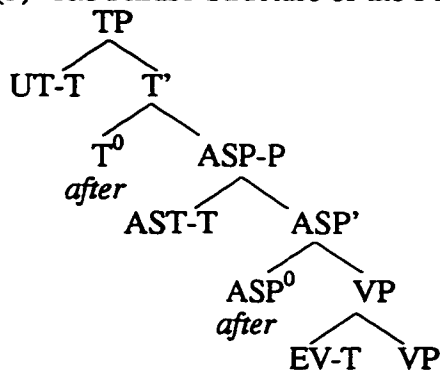
(3) yields an interpretation where AST-T falls within EV-T, and where AST-T is past with respect to UT-T. The temporal diagram in (4) represents this relation.

(4) ----_{EV-T}[----[AST-T]----UT-T----]----

What is crucial in (4) is that AST-T falls within EV-T but that the final point of this event is irrelevant. So, (1) is acceptable even if Laõa has not finished writing a book at UT-T. On the other hand, Perfect Aspect calls for the completion of an event; the final point must come before UT-T. Let us consider next the temporal situation of Past perfect in a sentence such as *Henry had built a house* in (5).

(5) The Phrase Structure of the Past Perfect

(1997;16)

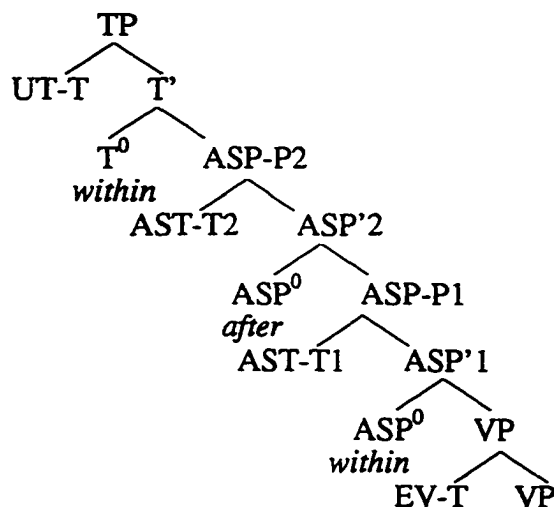


The Aspectual head has the meaning of *after* in the Perfect; thus, the event of Henry's 31 building must be completed prior to the Utterance Time. (5) shows that AST-T is ordered after EV-T and UT-T is ordered after AST-T, as shown in (6).

(6) -----EV-T[-----]-----[AST-T]-----UT-T-----

As D&E (1998) point out, (6) clearly asserts that the final point of the event precedes the AST-T; hence, it does not make sense to say (e.g. * *Henry had built a house but he never finished it*). Finally, they show that their analysis accounts for constraints on the interpretation of Recursive Aspect: for example, why we cannot say (**Rosa is having read War and Peace*) or (**Rosa is being reading War and Peace*) although we can say (*Rosa has been reading War and Peace*), whose phrase structure is shown in (7).

(7) The Phrase Structure of the Present Perfect Progressive (1997;17)



In (7), AST-T1 falls *within* the EV-T and AST-T2 comes after AST-T1. The time of utterance is within AST-T2.

(8) -----EV-T[-----[AST-T1]-----[AST-T2]-----]-
-----UT-T-----

What is important here is that AST-T2 picks a new temporal point with respect to AST-T1 32
in (8). D&E argue that we cannot use the progressive of a progressive or the progressive
of a perfect because in both cases, AST-T2 is included by some other temporal point such
as AST-T1 and does not play a role in indicating new viewpoints. The progressive of a
progressive looks like (9) and the progressive of a perfect looks like (10).

(9) *Rosa PROG PROG read W&P (1997;21)
-----EV-T[-----AST-T1[-----[AST-T2]-----]-----]-----

(10) *Rosa PROG PERF read W&P (1997;22)
-----EV-T[-----]---AST-T1[-----[AST-T2]-----]-----

In both (9) and (10), AST-T2 falls within AST-T1 so it is not picking out a new temporal
point at all. D&E claim that it is “superfluous-semantically vacuous-since it does not shift
the viewpoint” (1997;22).

D&E’s analysis has a virtue in proposing both Tense and Aspect are dyadic phrases
that relate two temporal points. This relationship between Tense and Aspect is supported in
Chapter Four of this thesis, which discusses the Tense and Aspect parallelism in
Antecedent Contained Deletions.

Chapter Three

Specificity of Noun Phrases

3.1. Introduction

In Chapter Two, I have argued that specific and non-specific NPs have different structures as far as Tense is concerned. Although there have been a number of studies were undertaken concerning Specificity in various languages such as Dutch (Reuland 1988; de Hoop 1992 (both cited in Diesing (1992)), English, Finnish (de Hoop 1992), German (Diesing 1992;1998), Turkish (Enç 1991), and Bengali and Scottish Gaelic (Ramchand 1995), Specificity in Japanese has not been discussed at all in detail. This chapter concentrates on the Specificity of object NPs in Japanese.

3.2. Languages that Display the Specificity of NPs

There are various languages in which the distinction between specific NPs and non-specific NPs is overtly displayed. Turkish is one such language and Enç (1991) discusses the overt manifestation of specificity in Turkish. Specific object NPs get Accusative Case in Turkish as shown in (1); whereas non-specific object NPs do not bear any Case as seen in (2).

- (1) Ali bir kitab-i aldi.
 Ali one book-ACC bought
 ‘A book is such that Ali bought it.’

- (2) Ali bir kitap aldı.
 'Ali bought some book or other' (1991;4)

Enç claims that NPs in Turkish are never ambiguous with respect to Specificity because of this surface Case marking.

Diesing (1992) observes that German and Dutch also display specificity; she proposes that the Subject NP in German and Dutch can appear either in a Spec IP or a Spec VP position but that when they appear in a Spec VP position, they must have a weak reading.¹⁵ Diesing uses the examples in Dutch by Reuland (1988) to back up her idea that specific NPs appear in a Spec-IP and non-specific NPs appear in a Spec-VP position.¹⁶

- (3) Fred denkt dat [IP twee koeie op het dak liggen].
 Fred thinks that two cows on the roof lie
 'Fred thinks that two (specific) cows are lying on the roof.'

- (4) Fred denkt dat [IP er [VP twee koeien op het dak liggen]]
 Fred thinks that there two cows on the roof lie
 'Fred thinks that there are two cows lying on the roof.'

In (3), *two cows* has a specific reading and cannot have an existential interpretation but in (4), *two cows* has an existential interpretation. In (4), the subject NP is in a VP-Spec position and *there* occupies an IP-Spec position.

¹⁵ An NP with a strong determiner yields a strong reading. The way of classifying determiners into strong and weak determiners is first proposed by Milsark (1974). Diesing recapitulates his claim as follows: "strong determiners presuppose the existence of the entities they are applied to but weak determiners are ambiguous between a presuppositional reading and a non-presuppositional reading" (59;1992). Here, I assume that Enç uses the term, specific NPs in the same sense as NPs with strong determiners, namely, strong NPs.

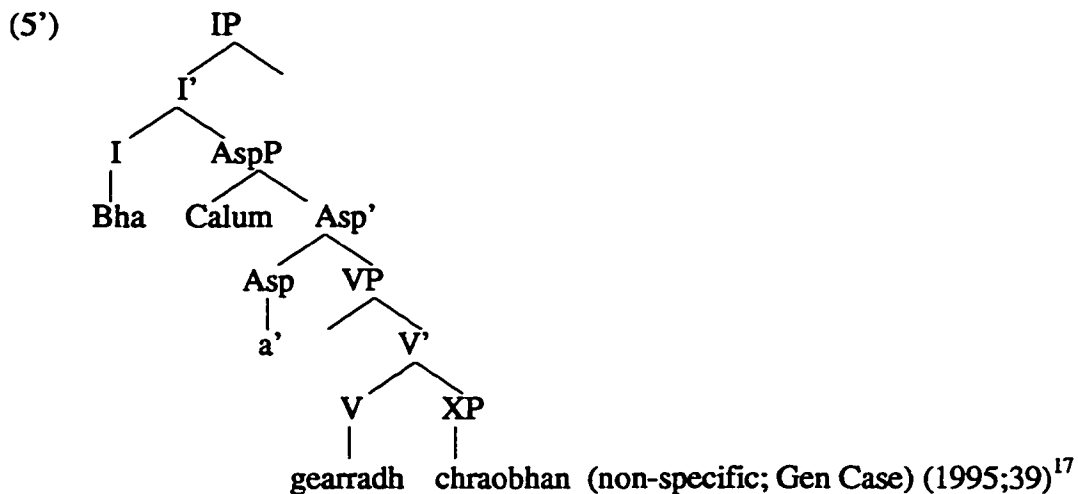
¹⁶ Bobaljik and Jonas (1996) claim that a strong subject NP appears in Spec Agr_SP and a weak subject NP appears in the Spec position of TP contra Diesing. Here, I take into consideration the fact that a strong and a weak subject NPs appear in different positions but leave aside the controversy where they actually are.

Ramchand (1995) observes the same phenomenon in Scottish Gaelic; she argues 35 that a specific object NP gets a 'direct' case but a non-specific object NP gets Genitive Case in separate object positions. Consider the following example:

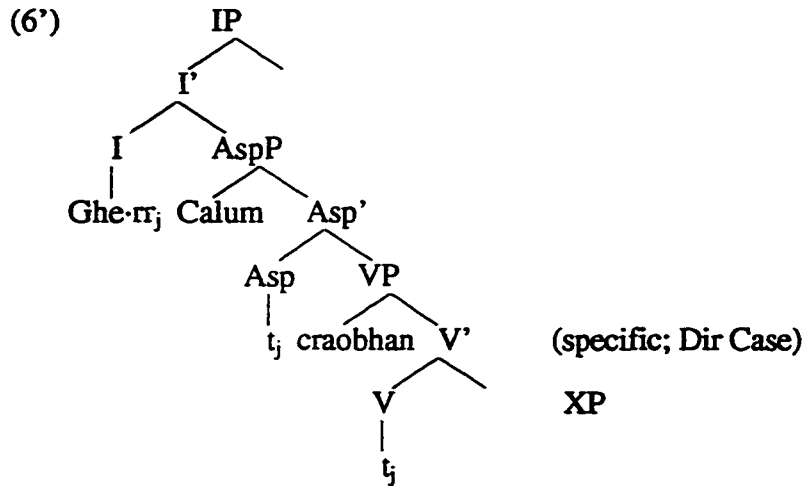
(5) Bha Calum a'gearradh chraobhan.
 Be-Past Calum ag cut-VNoun trees-Gen
 'Calum was cutting trees.'

(6) Ghe-rr Calum craobhan.
 Cut-Past Calum trees-Dir
 'Calum cut some particular trees.'

In (5), a bare plural is in post verbal position or verb complement position as seen in (5'), and it has a non-specific (weak) reading but in (6), it is claimed to be in a Spec VP position as seen in (6') and to have a specific (strong) reading.

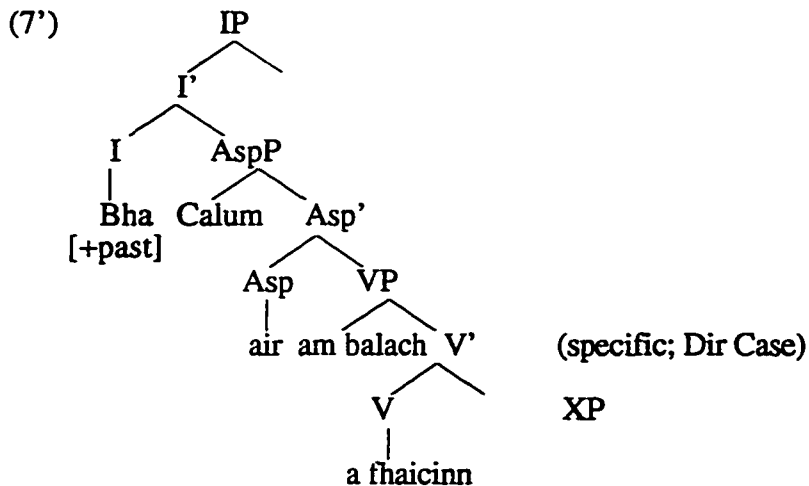


¹⁷Ramchand (1995) argues that a subject NP originates in an Asp-P Spec.



(6') does not clearly show that the specific object NP raises to the VP-Spec position; one more example like (7) is necessary.

- (7) Bha Calum air am balach (a) fhaicinn
 Be-Past Calum air the boy OAGR see-VNOUN
 'Calum had seen the boy'



The fact that *a fhaicinn* (see-VNOUN) follows the specific object NP that is marked with direct Case shows that there is object shift to a VP-Spec position when the object is specific. Ramchand (1995) claims Bengali also displays the specificity of NPs.

While there is considerable research with respect to which positions a specific and a non-specific NPs occupy in all these languages, it is very difficult to determine whether,

for Japanese, specific and non-specific object NPs occupy separate positions or not, or and 37
if so, where exactly these positions are, due to the possibility of scrambling in this
language. In the following section, I answer for these questions. In doing so, I will
assume the Split-VP hypothesis, as proposed in some version by Marantz (1990), Travis
(1992), Koizumi (1995), Lasnik (1995) among others; in Section 3.4.1, I will look at the
scope interactions between object NPs headed by *only* and verbs. In Section 3.4.2, I
investigate which position specific object NPs occupy by relating Specificity and Cleft
constructions. Finally, in Section 3.4.3, an asymmetry in binding configuration will
strengthen the claim that specific and non-specific object NPs occupy different positions in
phrase structure.

3.3. Scope of *Only* and Raising Verbs

Koizumi (1995) claims that there is a scope ambiguity between object NP that is followed
by *only* and a verb in raising constructions. The proposed interpretations are the one where
only plus NP takes wide scope over V2, such as *hajimeru* (start) in a serial verb like *tabe-*
hajimeru (start to eat) and the one where V2 takes wide scope over the object NP.
However, besides the two interpretations that Koizumi discusses, I claim that there is one
additional reading, which involves V1 instead of V2, such as *taberu* (eat) in *tabe-hajimeru*.
First, I will recapitulate his proposal and then talk about the additional reading.

Koizumi claims that the following example has two readings:

(8) John-ga ringo-dake-o tabe-hajime-ta

John-Nom apple-*only*-Acc eat-start-Past

'John started to eat only apples.' (1995;61)

i) the only thing that John started eating was apples (*only*>*start*)

ii) the thing that John started doing was eat only apples (*start*>*only*)¹⁸

This ambiguity is seen more clearly in the situation Koizumi uses, that of a chimpanzee eating pattern. He supposes that we conduct an experiment to observe what kind of fruits a chimpanzee named John eats and the result is summarized in (8').

(8') <u>Time</u>	3:30	3:35	3:40	3:45	3:50	3:55
<u>Fruit</u>						
bananas	-----					
apples		-----				
strawberries			-----			
oranges	-----					
kiwis			-----			(1995;61)

In (8'), John eats various fruits, sometimes various kinds at one time. For example, from 3:30 to 3:50, he ate bananas and from 3:35 to 3:55 he ate apples. In this scenario, we can use both interpretations of (8) in discussing the results.

(9) (John-wa) 3-ji-35-hun-ni-wa ringo-dake-o tabe-hajime-ta

John-TOP 3:35-at-TOP apples-only-Acc eat-start-PAST

'It is only apples that John started to eat at 3:35 (*only*>*start*)

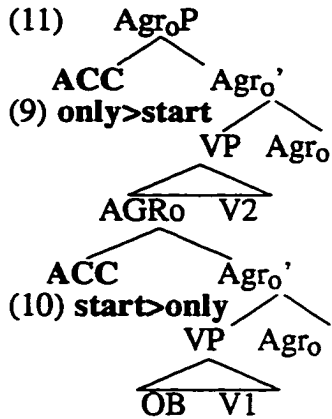
(10) (John-wa) 3-ji-50-pun-ni-wa ringo-dake-o tabe-hajime-ta

John-TOP 3:50-at-TOP apples-only-ACC eat-start-PAST

'At three fifty, John started to only eat apples.' (*start*>*only*)

¹⁸ These interpretations are not exactly the ones found in Koizumi (1995) but they are suggested by Lasnik (p.c.).

Koizumi uses this as evidence for the VP-shell hypothesis in Japanese and suggests that the two readings are given depending on where the object NP, *ringo-dake-o* appears. 39



When the object NP appears in the upper Agr_{OP} Spec, the interpretation in (9) is obtained; when it appears in the lower Agr_{OP} Spec, (10) is possible.

Besides these two discussed by Koizumi, however, there is one more reading that is possible in (8), namely, the reading where *only* plus NP takes wide scope over V1 but narrow scope with respect to V2 (*start > only > eat*). At this point, then it is not clear what the scope interaction which Koizumi assumes in (10), where *only* takes narrow scope with respect to *start* (*start > only*), must, in fact, mean. I will return to this point shortly but I suggest that this is the case where *only* takes narrow scope with respect to V1: *eat*. Let us consider when this third reading (*start > only > eat*) obtains. I suggest that this reading is obtained in the situation as in (12) where a different activity other than eating, in this case, riding a bike, is mentioned. In this third reading, *only* modifies the activity of eating apples and to make a fair comparison in this reading, we need to add a different predicate other than eating; for example, riding a bike,. The refined scenario looks like (12):

(12) Time 3:30 3:35 3:40 3:45 3:50 3:55 4:00

40

Fruit

bananas	-----
apples	-----
strawberries	-----
oranges	-----
kiwis	-----
ride a bike	-----

If the situation is modified as in (12), the third reading arises as in (13) in which the scope of the object NP calls between V1 and V2.

(13) (John-wa) 3-ji-35-hun-ni-wa ringo-dake-o tabe-hajime-ta

John-TOP 3:35-at-TOP apples-only-Acc eat-start-PAST

'It is only apples that John started to eat at 3:35.'

The thing John started doing at 3:35 was eat only apples. (F because John is eating bananas etc)

The only thing that John started doing at 3:35 was eat apples. (T because John started nothing else)

The only thing that John started to eat at 3:35 was apples. (True)

start>only>eat

In (13), the third interpretation of the sentence in which *only* takes scope between V1 and V2 is present.

Next, let us go back to the readings discussed by Koizumi and make sure that they are still available in the modified context.

(14) **Time** 3:30 3:35 3:40 3:45 3:50 3:55 4:00

41

Fruit

bananas	-----
apples	-----
strawberries	-----
oranges	-----
kiwis	-----
ride a bike	-----

In the situation described in (14), (15) allows a reading where the object NP takes wide scope over V1, *hajimeru*::

(15) (John-wa) 3-ji-35-hun-ni-wa ringo-dake-o tabe-hajime-ta
 John-TOP 3:35-at-TOP apples-only-Acc eat-start-PAST
 ‘it is only apples that John started to eat at 3:35.’ (only>start)

The thing John started doing at 3:35 was eat only apples. (F because John is eating bananas etc)

The only thing that John started doing at 3:35 was eat apples (F because John started riding a bike, too)

The only thing that John started to eat at 3:35 was apples. (True)

(16) yields the interpretation in which the object NP takes the smallest scope in situation (14):

(16) (John-wa) 3-ji-50-pun-ni-wa ringo-dake-o tabe-hajime-ta
 John-TOP 3:50-at-TOP apples-only-Acc eat-start-PAST
 ‘at three fifty, John started to only eat apples.’ (start>only)¹⁹

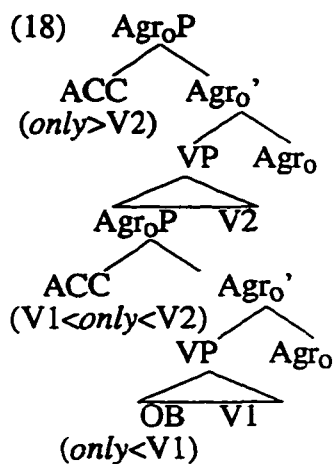
The only thing John started doing at 3:50 was eat only apples. (T because John is not eating anything else)

The only thing that John started doing at 3:50 was eat apples. (T because John started doing nothing else)

¹⁹ This means (eat>only) in my proposal but here I maintain Koizumi (1995)’s analysis.

The only thing that John started to eat at 3:50 was apples. (F because John did not start the 42 action of eating)

Modifying Koizumi's proposal, I assume that the object NP is the upper Agr_oP Spec Position in (14), the lower Agr_oP Spec in (15) and in the VP complement position in (16). The structure in (18) shows that the scope interaction can be predicted by which position *only* plus NP occupies—either a VP-complement position or an Agr_oP Spec position. If *only* plus NP occupies the position between V1 and V2, then the scope configuration (V1<*only*<V2) is produced.



In the following section, I will make use of this scope phenomenon and I will show how the different positions that specific and non-specific object NPs occupy in Japanese and the scopal interpretations are related to each other.

3.4.1. Scope of only and Object NPs

In this section, I show that the specificity of the object NPs changes the scope relations discussed above.

Let us look at a similar example to one that Koizumi looked at: (19) is an example with a *specific* object NP (marked with *kono*(this)); (20) is one with a *non-specific* NP (as shown by the classifier, 2-mai).²⁰

(19) John-wa kono aoi shatu-dake-o arai-hajimeta
 John-Top this blue shirt-only-Acc wash-start-Past
 ‘John started washing only this blue shirt’

(20) John-wa shatu-2-mai-dake-o arai-hajimeta
 John-Top shirt-2-CL-only-Acc wash-start-Past
 ‘John started washing only two shirts’

Instead of the chimpanzee experiment, let us construct a situation described in (21a) where John is washing various things in a washer. He started washing all his clothes at 3:30 but 10 minutes later, noticed that he forgot to put his blue shirt in. He threw in his blue shirt at 3:40.

(21a) <u>Time</u>	3:30	3:35	3:40	3:45	3:50	3:55	4:00
<u>Clothes</u>							
blue shirt			-----				
red shirt	-----						
socks	-----						
pants	-----						

²⁰Miyagawa (1986) observes that when an NP is modified by a classifier, that NP yields a non-specific interpretation.

- (22a) 3-ji 40-pun ni John-wa kono aoi shatu-dake-o arai-hajimeta
 3:40 at John-Top this blue shirt-only-Acc wash-start-Past
 ‘It is only this blue shirt that John started to wash at 3:40’ (only>start)²¹

Next, let us see the case where V2 has wide scope over the object NP. In (21a), suppose it took longer for the blue shirt to be washed because John threw it in later than other things. Now we utter (23a).

- (23a) 3-ji 50-pun ni John-wa kono aoi shatu-dake-o arai-hajimeta
 3:50 at John-Top this blue shirt-only-Acc wash-start-Past
 ‘at 3:50, John started washing only this blue shirt’ (start>only)

(23a) can be uttered in this situation; it has a reading where V2 has wide scope over the object NP. Interestingly, however, scope possibility changes when an object NP is non-specific as in (20). (20) does not have a reading where the non-specific object, *shatu 2-mai dake-o* has wide scope over V2, *hajimeta*. In other words, the reading that is parallel to (22a) is not available in situation (21b).

(21b) <u>Time</u>	3:30	3:35	3:40	3:45	3:50	3:55	4:00
<u>Clothes</u>							
shirt (I)							
shirt (II)							
red shirt							
socks							
pants							

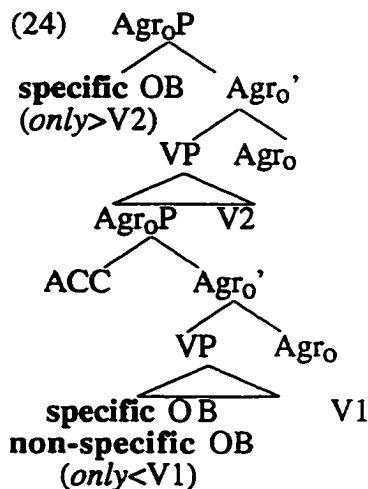
When *aoi shatsu* is non-specific, we cannot say (22b), even though (23b) is possible.

²¹ Here too, (only>wash) is consistent with my proposal but I use Koizumi’s approach.

- (22b) *3-ji 40-pun ni John-wa shatu-2-mai-dake-o arai-hajimeta
 3:40 at John-Top shirt-2-CL-only-Acc wash-start-Past
 'at 3:40, John started washing only two shirts' (only>start)

- (23b) 3-ji 50-pun ni John-wa shatu-2-mai-dake-o arai-hajimeta
 3:50 at John-Top shirt-2-CL-only-Acc wash-start-Past
 'at 3:50, John started washing only two shirts' (start>only)

As seen in (23b), (20) allows the reading where the object NP has the narrowest scope. This scope asymmetry of specific and non-specific NPs backs up Takahashi's (1993) claim that specific object NPs check structural Accusative Case via Spec-Head agreement with AGR. On the other hand, non-specific NPs bear inherent partitive Case which is assigned via Head-Complement relation. Since non-specific NPs do not have any reason to move to Spec of Agr_oP, we have an explanation for why the reading, where the object NP has wide scope over V2 is not available in (22b). The scope phenomenon that changes depending on the specificity of object NPs can be explained well in a structure in (24).



Since a non-specific object NP gets partitive Case in the VP-complement position, it is only 46 allowed the smallest scope with respect to the higher verbs.²² On the other hand, a specific object NP originates in the VP-complement position but moves to get Accusative Case in the Agr_OP-Spec position; it can have either wide scope over V2 or the smallest scope.²³

3.4.2. *Specificity and Cleft Sentences*

Koizumi uses cleft constructions as evidence for VP-Shell structure in Japanese. In this section, I will discuss why specific object NPs can appear in cleft sentences but non-specific object NPs cannot. There have been a few different ideas about how cleft sentences are constructed. Below, I provide a brief recapitulation of the proposals of Koizumi (1995) and Inoue (1997) regarding cleft, neither of which is concerned with specificity per se. I would also add some new data, which will provide a deeper picture of how cleft sentences are actually constructed and which analysis is compatible with the new data introduced here. I argue that Koizumi's analysis can better accommodate the data on clefts and specificity than can Inoue's analysis.

²²Stjepanovic (1996) argue that even inherent Case is licensed in Spec of Agr_O in Serbo-Croatian using the facts from binding, weak crossover and superiority. The equivalent of Partitive Case that a non-specific NP bears is Genitive Partitive in Serbo-Croatian and I assume that Genitive Partitive is different from inherent Case (such as Dative, Instrumental etc) that Stjepanovic is concerned with. However, this is still yet to be examined.

²³ Readers might wonder whether non-specific object NPs can take scope between V1 and V2; the judgments are subtle and this is a question for further research.

Inoue (1997) discusses the various differences which distinguish *wa*-clefts from *ga*-clefts as in (25) and (26).²⁴

(25) *Wa*-cleft: Hanako-ga katta no **wa** sono hon da
 Hanako-NOM buy-Past NM Top the book copula
 'It was the book that Hanako bought'

(26) *Ga*-cleft: Hanako-ga katta no **ga** sono hon da.
 Hanago-NOM buy-Past NM NOM the book copula
 'It was the book that Hanako bought'

She argues that the two types of clefts are constructed differently, based on the fact that they clearly show different behaviors summarized in (27).

(27) Differences between the *Wa*-cleft and the *Ga*-Cleft (1997;18)

	<i>Wa</i> -Cleft	<i>Ga</i> -cleft
a. multiple focus	allowed	no
b. reconstruction effects	observed	no
c. subadjacency	observed	no

- (28)a. Sono neko-o hirotta no **wa** Hanako-ga kooen-de da.
 the cat-ACC found NM Top Hanako-Nom park-in copula
 'It was Hanako in the park that found the cat.'
- b. *Sono neko-o hirotta no **ga** Hanako-ga kooen-de da.
 the cat-ACC found NM NOM Hanako-Nom park-in copula

²⁴ Inoue proposes that there are two kinds of *wa*-clefts; one type calls for a movement operation and the other type does not. Since the type that does not require movement is irrelevant for my argument, I will omit her discussion of the *wa*-clefts that do not call for any syntactic movement in this section.

- (29)a. Taro-ga aisiteiru no **wa** zibun no hahaoya-o da.
 Taro-Nom love NM Top self's mother-Acc copula
 'It is self's mother that Taro loves.'
- b. *Taro-ga aisiteiru no **ga** zibun no hahaoya-o da.
 Taro-Nom love NM Nom self's mother-Acc copula (1997;17)
- (30) a. *John-ga [atta koto-ga aru nihonzin]-o oozei sitteiru no **wa** Russell-ni da.
 John-Nom have met Japanese-Acc many know NM Top Russell-Dat copula
 'Who John knows many Japanese that met _{t_{who}} is Russell.'
- b. John-ga [atta koto-ga aru nihonzin]-o oozei sitteiru no **ga** Russell-ni da.
 John-Nom have met Japanese-Acc many know NM Nom Russell-Dat copula
 (1997;20)

(28) shows that *wa*-clefts allow multiple focus but *ga*-clefts do not. (29) shows that the subject-oriented anaphor: *zibun* can be co-indexed with the matrix subject *Taro* in *wa*--clefts but not in *ga*--clefts. (30) shows that Subjacency violations are observed in *wa*--clefts but not in *ga*-clefts. Inoue concludes that *wa*--clefts involve some syntactic movement out of a complex NP in (30) but that there is no corresponding movement in *ga*-clefts. Since *wa*--clefts involve syntactic movement, there is a reconstruction effect in (29a); this is why *zibun* can take the matrix subject, *Taro* as its antecedent. The following examples with quantifier scope also exhibit a similar contrast between *wa*--clefts and *ga*-clefts.

- (31) Dareka-o aisi-teiru to it-ta no **wa** daremo-ga da.
 someone-Acc love-Prog that say-Pst NM Top everyone-Nom copula
 'It is everyone that someone is in love with' ($\forall > \exists, \exists > \forall$)
- (32) Dareka-o aisi-teiru to it-ta no **ga** daremo-ga da.
 someone-Acc love-Prog that say-Pst NM Nom everyone-Nom copula
 'It is everyone that someone is in love with' ($*\forall < \exists, \exists > \forall$)

(31), the example of the *wa*--cleft, is ambiguous and *dareka* can take wide scope over *daremo* or vice versa. On the other hand, the reading in which the universal quantifier

takes wide scope is not available in (32). This is explainable assuming that there is 49 movement in (31) but not in (32). When the universal quantifier in (31) reconstructs, it produces a configuration where the universal quantifier can take wide scope; however, as long as the universal quantifier stays outside of the clause that contains the existential quantifier, there is no scope interaction and (32) remains unambiguous. The more basic phenomenon of using a trace for scope ambiguity is first discussed in Kuno (1973) (also see Hoji (1985) and Yatsushiro (1997)). Kuno (1973) observes that in (33), with a basic word order in Japanese, the existential Quantified NP, *someone*, takes wide scope over *everyone*:

- (33) Dareka-ga subeteno hon-o yonda
 someone-Nom all books-Acc read-Past
 ‘Someone read all books’ ($\exists > \forall$, $*\forall > \exists$)

On the other hand, when we scramble the object NP as in (34), the sentence becomes ambiguous.

- (34) Subeteno hon-o dareka-ga $t_{\text{subeteno hon-o}}$ yonda
 all books-Acc someone-Nom read-Past
 ‘Someone read all books’ ($\exists > \forall$, $\forall > \exists$)

In (34), another interpretation where *all* takes wide scope over *someone*. We conclude that in both (31) and (34), there is a movement and an NP reconstructs to a trace; hence, there is scope ambiguity.

We have to note, however, that the reconstruction effects noted in (29a) or (31) show different characteristics where Negative Polarity Items (NPIs) are concerned. Consider the following examples.

- (35) *John-ga kai-taku-nai no wa nanimo da.
 John-Nom buy-want-not NM Top anything copula
 ‘It is anything that John does not want to buy’
 (36) *John-ga kai-taku-nai no ga nanimo da.
 John-Nom buy-want-not NM Nom anything copula

If *wa*-clefts yield reconstruction for anaphor-binding as in (29a) or quantifier-scope as in (31), it should be possible for the NPI, *nanimono*, to be licensed in (35). On the other hand, we do not see any contrast between *wa*-clefts and *ga*-clefts with respect to NPI-licensing in (35) and (36). A similar example can be seen in English as discussed by Safir.

(37) *Anyone* doesn't seem *t* to be here.

In (37), *anyone* should be licensed if it reconstructs to the trace because it will be c-commanded by *not*, but that is not the case. (look at Safir, Aoun and Hornstein)

Since the purpose of this chapter is to investigate the location of specific vs. non-specific NPs by arguing for movement, the following discussion concentrates on *wa*-clefts that are constructed by movement. Let us consider the details of syntactic operations that Inoue claims are involved in *wa*-clefts. First, she claims that copula constructions have the form in (38a), prior to clefting:

(38a) Hanako-ga sono neko-o katteiru no da
 Hanako-Nom the cat-Acc keep-NM copula
 [IP e [SC e [CP hanako-ga sono neko-o katteiru no]]da]

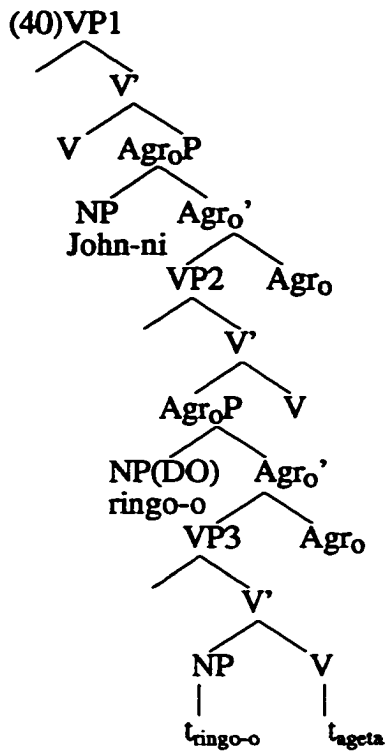
Then, a constituent within CP moves to “the empty expletive position of the copula” (1997; 28).

(38b) [IP sono neko-oi [SC (ti) [CP Hanako-ga ti katteiru no]] da]

The clefting operation then topicalizes the CP in (38b), yielding (38c):

(38c) [Top P [CP hanako-ga ti katteiru no]j-wa [IP sono neko-oi [SC (ti) tj] da]]

Inoue's analysis differs drastically from that of Koizumi in (38b), in that *any* constituent, even an NP, can move to the expletive position. Koizumi has a different view; for him,



So, if we move VP1, we obtain (41) and if we move VP2, then we obtain (42).²⁵

(41) Mary-ga ageta no-wa [_{VP1} John-ni ringo-o 3tu] da.
 Mary-Nom gave NL-TOP [John-Dat apples-ACC 3-CL] copula

(42) Mary-ga John-ni ageta no-wa [_{VP2} ringo-o 3tu] da.
 Mary-Nom John-Dat gave NL-TOP [apples-ACC 3-CL] copula

Example (41) shows that the verb, *ageta*, has moved higher than VP1. Interestingly, using the analysis of Koizumi, we find that the cleft operations back up the idea that an indirect object originates higher than a direct object, to be discussed in the next section.

²⁵Here, I do not consider the possibility of AgrOP movement but it is plausible that AgrOP moves instead of VP in (41) or (42).

When we look at double object constructions, there is a contrast in judgments that Inoue's analysis cannot account for. This is shown in (43):

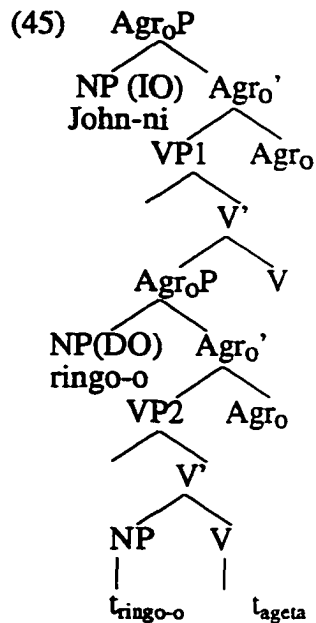
- (43) a. John-ga Mary-ni ageta no wa [VP ringo-o 3-tu] da
 John-Nom Mary-Dat give-Pst NM Top apple-Acc 3-CL copula
 'It is [three apples] that John gave to Mary'
- b. John-ga ageta no wa [Mary-ni ringo-o 3-tu] da
 John-Nom give-Pst NM Top Mary-Dat apple-Acc 3-CL copula
 'It is [three apples to Mary] that John gave'
- c. ??John-ga ringo-o 3-tu ageta no wa [Mary-ni] da
 John-Nom apple-ACC 3-CL give-Pst NM Top Mary-Dat copula
 'It is [to Mary] that John gave three apples'

In (43c), the indirect object has moved to the pre-copula position. (43c) contrasts in grammaticality with (43a) in which the direct object is clefted, and also with (43b) in which both direct and indirect objects are clefted. Inoue's theory cannot account for this difference in grammaticality; in her theory, any NP can be moved to the empty expletive position, as shown in (44a) and (44c). This predicts that there should not be any difference in grammaticality between (43a) and (43c).

- (44a) [IP e [SC e [CP John-ga Mary-ni ringo-o 3-tu ageta no]] da]
 [IP[ringo-o 3-tu]i to [SC ti [CP John-ga Mary-ni ti ageta no]] da]
 [Top [CP John-ga Mary-ni ti ageta no]j wa [IP ringo-o 3-tu [SC ti [CP tj]da]]
- (44c) ??[IP e [SC e [CP John-ga Mary-ni ringo-o 3-tu ageta no]] da]
 [IP[Mary-ni]i to [SC ti [CP John-ga ti ringo-o 3-tu ageta no]] da]
 [Top [CP John-ga ti ringo-o 3tu ageta no]j wa [IP Mary-ni [SC ti [CP tj]da]]

However, if we follow the idea proposed by Koizumi (1995), Lasnik (1995) and Yatsushiro (1997), by which the direct object originates in the VP-complement position

whereas the indirect object originates in the upper VP-shell, it becomes clear why (45c) is degraded. Consider again the tree diagram of the double object constructions ((40) repeated here as (45)).



Since the direct object originates lower than the indirect object, it is impossible to move the lower VP2 or VP1. This explains the degraded status of (43c). If we move VP1 in (45), it is impossible to strand a direct object and move only an indirect object. However, we can move both the direct and the indirect objects as in (43b) or only the direct object as in (43a). Since Inoue does not restrict which NP can move to the empty expletive position and which NP cannot, there is no way to rule out (43c). However, if we follow Koizumi's approach, which claims that clefts must be Agr_OPs or VPs movement, rather than NPs as in Inoue, we can explain why (43c) is impossible.

Next consider cases contrasting specific and non-specific object NP.

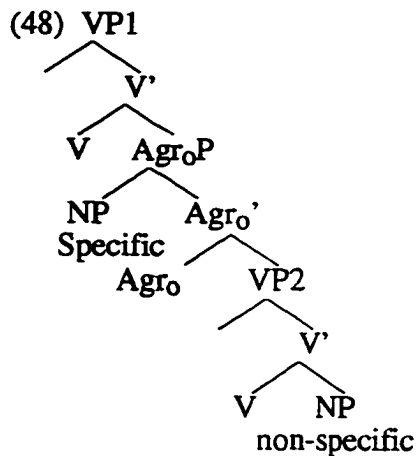
- (46) a. ??Kekkon sitai no wa [Mary-ga suisu-jin-to] da.
 marry want to NM Top Mary-Nom Swiss-Dat copula
 'It is Mary to a Swiss that she wants to marry.'

- b. Kekkon shitai no wa [Mary-ga ano suisu-jin-to] da.
 marry want to NM Top Mary-Nom that Swiss-Dat copula
 'It is Mary to that Swiss that she wants to marry.'

Example (46a) contains a non-specific NP, *suisu-jin*, and it means that Mary wants to marry someone Swiss. She does not have any particular individual in her mind; for example, she might want to marry any Swiss person because she has heard that Swiss people are kind. By contrast, (46b) contains a specific NP, *ano suisu-jin*. In this case, there is a particular Swiss person that Mary wants to marry. Significantly, there is a difference in grammaticality between (46a) and (46b). The sentence with a specific NP, (46b), is much better than that containing a non-specific NP. Here again, Inoue's analysis encounters a problem. Inoue's analysis predicts that both (46a) and (46b) can be constructed as shown in (47).

- (47) [IP e [SC e [CP Mary-ga suisu-jin to kekkon sitai no]] da]
 [IP[Mary-ga suisu-jin]i to [SC ti [CP ti kekkon sitai no]] da]
 [Top [CP ti kekkon sitai no]j wa [IP Mary-ga suisu-jin to [SC ti [CP tj]da]]]

Since Inoue's theory says nothing about prohibiting the extraction of non-specific NPs, it is not possible to account for the contrast seen in (46). However, if we assume that specific object NPs get Case in Agr_oP-Spec whereas non-specific NPs get Case in a VP-complement position as I argued in the section of the interaction between *only* and object NPs, we can account for the contrast in (46a) and (46b). First, let us review where specific and non-specific object NPs end up in diagram (48).



In (46a), the verb, *kekkon sitai* (want to marry) cannot be left in the pre-Topic position when it takes a non-specific object even though this is possible when it takes a specific object as in (46b). Koizumi argues that in an example like (46a, b), the verb moves to C; however, the verb is not allowed to move past the object NP and/or the subject NP in (46a). I propose that a verb moves up to VP1 to give Case to a specific-NP but when the object is non-specific, there is no reason for the verb to move. It can assign Case to a non-specific Object NP in situ.²⁶

Having this in mind, let us go back to the cleft examples (46) repeated here in (49):

- (49) a. ??Kekkon sitai no wa [Mary-ga suisu-jin-to] da.
 marry want to NM Top Mary-Nom Swiss-Dat copula
 'It is Mary to a Swiss that she wants to marry.'
- b. Kekkon shitai no wa [Mary-ga ano suisu-jin-to] da.
 marry want to NM Top Mary-Nom that Swiss-Dat copula
 'It is Mary to that Swiss that she wants to marry.'

²⁶ This proposal can be considered related to the generalization Holmberg (1986) notes, that object shift requires verb raising in Scandinavian languages. The difference between Holmberg (1986)'s generalization and our hypothesis here is that our hypothesis involves the necessary condition for Case checking; however, the former does not refer to Case checking configuration at all.

Our finding is distinct from Holmberg's generalization unless Holmberg's generalization is stated biconditionally. (46a) is the case where there is overt verb raising but no object shift and the sentence is degraded in its grammaticality (contra Holmberg's generalization).

- c. Mary-ga kekkon shitai no wa [suisu-jin-to] da.
 Mary-Nom marry want to NM Top Swiss-Dat copula
 'It is to a Swiss that Mary wants to marry.'

In (49b), the verb, *kekkon sitai*, moves to the higher VP to give Case to the specific NP, *ano suisu-jin*; however, it does not move in (49a) because it can give Case to the non-specific NP in the original VP position. Since the verb stays between the subject and the non-specific object NP, it is impossible to cleft them without the verb. (49c) shows that a non-specific object NP can be clefted by itself without a verb. The contrast between (49a) and (49b) show that in (49b), the verb has already moved higher than the subject NP and we are allowed to cleft the subject and the specific object NP. The data in (49a&b) supports our hypothesis; if both specific and non-specific NPs end up occupying the same position, we should not observe any difference in grammaticality.

Another possibility to account for the paradigm in (46a&b) is offered by the claim made in Lasnik (to appear); that there is an optionality of an Agr_oP node. Lasnik (to appear) proposes that scope ambiguity in (50a) and (50b), discussed in Chomsky (1995), can be well accounted for through the analysis that Agr_oPs can be optional:

(50a) I expected everyone not to be there yet. (not>∀;∀>not) (Chomsky 1995; 327)

(50b) I believe everyone not to have arrived yet. (not>∀;∀<not) (Lasnik to appear; 23)

In both (50a) and (50b), there is a reading where *every* takes wide scope over *not* and vice versa. If there is Agr_oP that *everyone* in (14) or (15) moves to, this movement must be obligatory due to EPP features that reside in Agr_o. Given there is no Quantifier Lowering or no trace that A-movement leaves, we lose an account for the reason why (50a) and (50b) are ambiguous.²⁷ Lasnik suggests that there should be an optionality for Agr_oP in a structure. When there is no Agr_oP, it yields the reading where *every* takes small scope and

²⁷ Here, our idea is based on the assumption that two different LF representations can account for the ambiguity of the sentences. Refer to Lasnik (to appear) for conclusive arguments against A-movement leaving a trace or Quantifier Lowering.

when Agr₀P projects in a structure, it brings about the reading where *every* takes wide scope over negation. 58

We can relate the paradigm in (46a&b) to this claim and propose that when an object NP is non-specific, there is no Agr₀P node; hence, there is no way to construct a cleft sentence by leaving only a V and by moving a subject NP and an object NP. However, when the object is specific, there is an Agr₀P node; it is possible to cleft a VP after the verb moves beyond the Specs of Agr₀P and Agr_sP.²⁸

Due to these contrasts (one in ditransitive clefts and the other in clefts with non-specific object NPs) that Inoue's analysis cannot account for, I rejected Inoue's claim that the phrase that follows *-wa* moves to the empty expletive position of the copula, and that the CP that is left behind moves to the TopP. Instead, I argued, following Koizumi, that one constituent can be clefted to the pre-copula position in the *wa*-clefts. I proposed that

²⁸This claim is compatible with the fact that the cleft sentence in (i) is unambiguous, which contrasts with the simple sentence in (ii), which is ambiguous between *many* taking wide scope over *not* and vice versa.

- (i) John-ga mot-te inai-no-wa shasin-o takusan-da
 John-Nom have-Prog not-CL-TOP picture-ACC many-copula
 'It is many pictures that John does not have' (many>not)
 (*not>many)
- (ii) John-wa shasin-o takusan mot-teinai
 John-Top pictures-ACC many have-Prog not
 'John does not have many pictures' (many>not)
 (not>many)

Following Lasnik's (to appear) proposal, I claim that (i) must project an Agr₀P node so that the cleft operation is possible. Hence, the object NP, *many pictures*, necessarily takes wide scope over negation. On the other hand, (ii) does not involve clefting and there is an optionality of Agr₀P node; besides the reading available in (i), the reading where *not* takes wide scope over *many pictures* is available. A similar point is made within a nominative-object construction (I thank Bošković (p.c.) for suggesting this point). Tada (1992) argues that a nominative-object gets Case in a higher position than an object with Accusative Case. Hence, (iii) is ambiguous but (iv) is not:

- (iii) John-wa migi-me-dake-o tsumu-reru.
 John-Tom right eye-only-Acc close-can
 'John can close only his right eye' (only>can); (can>only)
- (iv) John-wa migi-me-dake-ga tsumu-reru.
 John-Tom right eye-only-Nom close-can
 'John can close only his right eye' (only>can); (*can>only)

If we consider a cleft sentence with (iii) or (iv), there should be only one reading available, which is a reading where *only* take wide scope over *can*. This is exactly what is observed in (v):

- (v) John-ga tsumu-reru no wa migi-me-dake da.
 John-Nom close-can NL Top right eye-only copula
 'It is only his right eye that John can close' (only>can); (*can>only)

the contrast in judgments between (49a) and (49b) is explained by the different positions 59 that specific and non-specific object NPs occupy.

So far, we have looked at two pieces of evidence in support of our hypothesis that specific and non-specific object NPs occupy different positions in Japanese. First, we considered scope interaction; second, we looked at the *wa*-clefts that involve a movement operation. Next, we will consider the ability of specific and non-specific object NPs to bind an anaphor in Japanese.

3.4.3. Binding and Specificity

Katada (1991) gives a thorough description of reflexive pronouns and anaphors in Japanese such as *zibun* (self), *zibun-zisin* (self-self) and *kare-zisin* (he-self). In this section, I argue that specificity can generate asymmetries in binding.

Following Katada (1991), *kare-zisin* in Japanese is taken to be a local anaphor with no particular orientation.

- (51) John_i-ga [Bill_j-ga Mike-ni [kare-zisin _{i/j/k}]-no koto-o hanasita to] itta.
John-Nom Bill-Nom Mike-Date he-self-Gen matter-Acc told that said
'John said that Bill told Mike about self'

Kare-zisin can take *Bill* or *Mike* as its antecedent but not *John* in (51). Katada (1991) claims that the reason that the matrix subject cannot be an antecedent is due to the fact that *kare-zisin* does not have any operator property; hence, it cannot undergo LF-movement, unlike *zibun*, which is claimed to be an operator anaphor. In (51), the binding domain for *kare-zisin* is the embedded CP, which contains both a SUBJECT and the reflexive. Since both *Bill* and *Mike* c-command the reflexive in the binding domain, they can serve as antecedents. *John* cannot because it is outside of the binding domain. Let us next see

whether specific and non-specific object NPs show any difference in their ability to serve 60 as antecedents.

The examples in (52) illustrate an asymmetry between specific/non-specific NPs in their ability to count as antecedents for the reflexive pronoun.

- (52)a. John_i-wa (ayamatte) kare-zisin_i -no paatii-ni sono otoko_j-o shootai sita.
John-Top (mistakenly) self-Gen party-to this man-Acc invite do-Pst
'John mistakenly invited this man to self's party'
- b. John_i-wa (ayamatte) kare-zisin_i* -no paatii-ni otoko_j hitori-o shootai sita.
John-Top (mistakenly) self-Gen party-to man one-CL-Acc invite do-Pst
'John mistakenly invited one man to self's party'

(52b) involves a non-specific Accusative NP, as shown by use of the classifier, *hitori*; on the other hand, (52a) involves a specific NP, *sono otoko* (this man). We see an interesting contrast here, namely, that the specific object NP can serve as an antecedent for the reflexive anaphor but that a non-specific NP cannot. In Katada's analysis, the reflexive anaphor, *kare-zisin*, must be co-indexed with the NPs that c-commands it in an appropriate binding domain. The syntactic structures of (52a) and (52b) are as in (53a) and (53b), respectively.

- (54)a. Mary-wa ayamatte kare-zisin_i no heya-de sono otoko_i-o nagutta.²⁹
 Mary-Top mistakenly he-self-Gen room-in that man-ACC hit
 ‘Mary mistakenly hit that man in self’s room’

- (54)b. *? Mary-wa ayamatte kare-zisin_i no heya-de otoko hitori_i-o nagutta.
 Mary-Top mistakenly he-self-Gen room-in man one-CL-ACC hit
 ‘Mary mistakenly hit that man in self’s room’

In (54a), *kare-zisin* has a c-commanding NP *sono-otoko*, which can serve as its antecedent; however, this is not the case in (54b). The non-specific NP is, as seen in (53b), not in a high enough position to c-command *kare-zisin*. The matrix subject c-commands the reflexive but due to the gender mismatch, it cannot serve as an antecedent. The reflexive anaphor in (54b) is not bound by anything; hence, it is ungrammatical.

3.5. Conclusion

This chapter concerned Specificity in Japanese focusing on the positions that specific and non-specific object NPs occupy. Although it is harder to pin down specificity effects in Japanese with its relatively free word order, three pieces of evidence—scope phenomena, clefts and binding asymmetry—support our hypothesis that specific/non-specific object NPs end up in different positions in Japanese phrase structure. I have argued, following

²⁹A similar point should be observed with a nominative-object, which Tada (1992) claims to end up in a higher position than an Accusative Cased object NP. In (i), *sono otoko* (that man) can be an antecedent for *kare-zisin* (he-self-Gen):

- (i) Mary-wa kare-zisin_i-no heya-de sono otoko_i-ga nagu-reta.
 Mary-Top he-self-Gen room-in that man-Nom hit-can-Past
 ‘Mary could hit that man in his room’

We see a symmetry between a nominative object in (i) and a specific object in (54a), which I hypothesize to occupy a high enough position to bind a reflexive anaphor in a PP. Also, a non-specific object NP cannot appear as a nominative-object and (ii) is degraded:

- (ii) *Mary-wa otoko hitori-ga nagu-reta.
 Mary-Top man one-CL-Nom hit-can-Past

I propose this is because a non-specific NP does not move to a high enough position to get Nominative Case, which Tada (1992) proposes to be checked in Agr_{OP}-Spec.

Takahashi (1993), that specific object NPs get Accusative Case in the Agr_OP-Spec and 63 non-specific object NPs get Partitive Case in the VP-complement position. There is thus a strong similarity between Japanese and other previously studied languages such as German, Dutch, Finnish, and Scottish Gaelic.

Chapter Four

Tense and Aspect Parallelism in Antecedent Contained Deletions

4.1 Introduction

This chapter concerns two phenomena in Antecedent Contained Deletions (ACD): Specificity of Object NPs and Tense/Aspect parallelism. ACDs are first discussed in Bouton (1970) and then by Williams (1977), May (1985) among others. First, I argue, following Takahashi (1993), that overt movement of an Object NP to Agr_o-Spec is necessary to account for ACD phenomena. Next I present ACD sentences displaying some interesting Tense and Aspect parallelism as evidence for an LF-copying theory of ACD. This chapter is organized as follows. Section One includes an overview of two theories of ACD: those of Agbayani (1995) following May (1985), and Takahashi (1993). In Section Two, I discuss certain problems with Agbayani (1995)'s analysis. Section Three reviews the relationship between tense ambiguity and specificity previously introduced in Chapter 2. I show how the Specificity constraint in NPI licensing can be explained using Tense in specific DPs. In Section Four, I will go over the problems of a Case driven movement theory, discussed by Agbayani (1995), and show that they are not really problems. I will solve two of the three problems pointed out by Agbayani using Takahashi (1993)'s analysis of ACD, and also using my claim that specific DP has a separate Tense. The third problem pointed out by Agbayani (1995) sheds light on an interesting phenomenon of Tense; I will consider Tense interactions in ACD sentences and claim that this will suggest that the ACD constructions discussed involve LF-copying instead of PF-deletion. In the final part of Section Four, the analysis of Tense parallelism is extended to Aspect parallelism.

4.2.1 Takahashi's (1993) Approach

May (1985) raises the issue of an infinite regression problem in (1); namely, in (1), the VP, *suspected everyone Angleton did [e]* is copied in the null VP after *did*, [e], at LF. Since the copied VP also contains [e], it will bring about an infinite regression. However, May claims that this can be solved if the quantifier phrase raises. For example, consider the following example.

- (1) Dulles suspected everyone Angleton did [e]

May proposes that the quantifier phrase, *everyone Angleton did*, raises in (1) and that the null VP after *did* copies *suspected* and the trace of the quantifier phrase. Hence, the infinite regression problem does not arise. However, Takahashi (1993) points out that this QR approach is not compatible with the facts in (2) and (3) first observed by Diesing (1992):

- (2) a. I read every book that you did.
 b. I read each book that you did.
 c. I read most books that you did.
- (3) a.*? I read many books that you did.
 b.*? I read few books that you did.
 c.*? I read two books that you did.
 d.*? I read books that you did.³⁰

³⁰The judgments in (3) are those in Diesing, which I assume here based on the judgments given by the native speakers who I talked to. However, Fiengo and May (1994) put ? on the examples in (3). More significantly, Lasnik (p.c.) points out that Fiengo and May say that corresponding examples without ellipsis have the same status.

Diesing (1992) proposes that specific NPs in (2) raise but that non-specific NPs in (3) do not. Hence, the antecedent containment problem caused is solved in (2) but not in (3). Takahashi accounts for the pattern in (2) and (3) through the approach of Case driven movement. He argues that specific NPs such as those in (2) bear structural accusative Case which is checked via Spec-Head agreement with AGR. On the other hand, non-specific NPs as in (3) bear inherent partitive Case which is assigned via Head-Complement relation. A Theta-marker, a verb, assigns partitive Case to its object in (3). Since there is no movement to the Spec of Agr_o in (3), we cannot avoid the antecedent containment³¹; hence the sentences are degraded. In (2), however, the objects with their associated relative phrases move to the Spec of Agr_o and the null VP can copy the VP including the trace left by the object NP. That is why the sentences in (3) are grammatical.

Interestingly, this analysis by Takahashi(1993) as well as my claim support the claim of object raising made by Lasnik and Saito (1991) with respect to Condition A. Lasnik and Saito (1991) use the Condition A effect as one piece of evidence for object raising and they claim that ECM subjects behave in the same way as objects. For example, in (4), *each other* can be bound by the ECM subject because it raises up to Spec of Agr_o which c-commands *each other* in the adjunct phrase:

- (4) ?The DA proved [the defendants_i to be guilty] during each other_i's trials.³²

Takahashi (1993)'s analysis predicts that partitive direct objects, namely non-specific objects, cannot bind anything outside VP because they do not move to Spec of Agr_o. The

³¹There is no movement of a non-specific object because Takahashi rejects QR altogether.

³²Lasnik and Saito (1991) propose that (4) contrasts with its finite counterpart in (i):

(i) ?*The DA proved [that the defendants were guilty] during each other's trials.

following example with a non-specific ECM subject shows that Takahashi's theory is on 67 the right track.

- (5) a. *The DA often proves defendants_i to be guilty during each other_i's trials.³³

Unlike the specific ECM subject, *the defendants*, in (4), (5a) has a non-specific ECM subject, *defendants* and the non-specific ECM subject in (5a) cannot bind *each other* because it is not in a high enough position to bind items outside of the VP.^{34,35} As shown in (5b), however, a non-specific matrix subject can bind the reciprocal anaphor in an adverbial phrase because it is placed in a high enough position:

- (5) b. Defendants_i are often proven guilty during each other_i's trials.³⁶

4.2.2 Agbayani's (1995) Approach

Agbayani (1995) suggests that the QR approach first proposed in May (1985) can account for ACD phenomena better than the Case driven movement approach suggested by Takahashi (1993) and others. Agbayani (1995) claims that the Case driven movement approach fails when the following examples are considered. The first example involves

³³Boskovic (p.c) points out that there is a possibility for *defendants* to get Partitive Case, in which case, (5a) turns out to be grammatical. I have no answer for this question and I must leave this to my further study.

³⁴Lasnik and Saito (1991) uses a couple of more pieces of evidence based on NPI licensing and Condition B to argue for the same point. It is hard to construct a parallel argument here on Condition B due to the difficulty to vary the object NP to be specific and non-specific in the construction. However, we can construct an argument for NPI licensing in (i) and (ii):

(i) ?The DA proved none of the defendants to be guilty during any of the trials (specific)

(ii) *? The DA proved no defendants to be guilty during any of the trials (non-specific)

When the ECM subject is specific as in (i), it can license an NPI in an adverbial phrase; whereas, when it is non-specific as in (ii), it cannot license an NPI. This is consistent with the idea that non-specific object NPs (or ECM subjects) stay lower than a specific counterpart.

³⁵Refer to Bošković (1997) for another argument for this claim by Lasnik and Saito (1991). Boškovic uses an argument based on Coordinate structure and Across The Board Movement.

³⁶This example was suggested to me by Lisa Travis (p.c.).

scope of negation and specificity of the noun phrases. Agbayani (1995) observes that non- 68
ACD sentences such as those in (6) show scope ambiguity, while ACD sentences such as
those in (7) do not.

- (6) a. Robin bought two books that Pat reviewed
specific/non-specific
b. Robin didn't buy two books that Pat reviewed
E>Neg (specific) / Neg>E (non-specific)
- (7) Pat didn't read two books that Robin did
E>Neg (specific) / *Neg>E (*non-specific)³⁷ (Agbayani 1995:5)

He claims that the negation cannot take scope over the NP, *two books that Robin did*, in an
ACD example as in (7) as opposed to a non-ACD example as in (6b). He suggests that the
Case driven analysis of ACD cannot account for the scope fact seen in (7) because AGR_{OP}-
Spec is c-commanded by Negation and the NP should have narrow scope, assuming that
scope is determined by a c-command relation.

The second argument against the Case driven approach concerns
asymmetries in Negative Polarity Item (NPI) licensing. Consider the difference in NPI
licensing in non-ACD examples in (8) and ACD examples in (9):

- (8) a. Robin didn't read two books that any students read
b. Pat didn't review two recent articles that any linguists reviewed
*E>Neg (*specific)/ Neg>E (non-specific)³⁸

³⁷The reason why (7) is possible but (3c) is not is accounted for by Enç (1991). She claims that an NP can
be specific when it is in sentences with negation. The object NP in (7) is taken to be specific due to the
presence of the negation; however, the object NP in (3c) is hard to take as a specific noun because there is
no negation in that sentence. Lasnik (p.c.) points out it is hard to obtain a non-specific reading in (6a)
despite Agbayani's proposal. I assume that is because the sentence is in past tense and the event is already
specified in (6a). The non-specific version of (6a) might be able to be obtained more easily in (i):

(i) Robin often buys two books that Pat reviewed.

However, I still have nothing to say about a dispreferred reading in (6a), namely a non-specific reading.

³⁸The reason why (6b) has only a reading where the object NP is specific will be discussed in Section Four.

- (9) a.?* Robin didn't read two books that any students did
 b.?* Pat didn't review two recent articles that any linguists did.

In (8) the NPI, *any*, is licensed in the relative clause but not in (9). Based on these examples, Agbayani proposes that the object NPs in (9) raise above a Neg projection; Neg does not c-command *any*. Hence, the NPI in (9) is not licensed and the sentences are not grammatical.

A third argument against a Case driven approach concerns an asymmetry in tense licensing, first introduced by Agbayani (1995). Agbayani (1995) points out that the following is ambiguous with respect to the meanings of *would*.

- (10) Pat visited two cities that Robin would visit.

Temporally Dependent (non-specific)/Conditional Modal (specific)³⁹

(10) can mean 'If Robin visits cities then two of these cities are such that Pat visited them' and also 'There are two cities which Pat visited that Robin may⁴⁰ visit'. Agbayani calls the first interpretation Temporally Dependent and the second, Conditional Modal. The Temporally Dependent *would* is licensed when it is in the scope of the past tense. On the other hand, the Conditional Modal *would* does not have to be in the scope of the past tense. Agbayani (1995) points out that the first interpretation disappears if we change (10) to an ACD example such as (11):

- (11) Pat visited two cities that Robin would.

*Temporally Dependent (*non-specific)/Conditional Modal (specific)

³⁹Snyder (p.c.) points out that a temporally dependent reading can be about a specific object NP and a conditional modal reading can be about a non-specific object NP. Here, I leave it to my further research and go with Agbayani's analysis.

⁴⁰The modal, 'may' is ambiguous between epistemic and deontic but here, it is used in an epistemic sense.

Given the fact in (11), Agbayani (1995) claims that the object NP in (11) has raised past the matrix past tense.

To explain the contrasts given in (6) to (11), Agbayani (1995) proposes that the Case driven movement approach fails because it does not treat specific and non-specific NPs differently. Instead, Agbayani (1995) proposes an extension to the QR theory that “specific indefinite objects are licensed in the Spec of a functional projection dominating Tense and Negation phrases (Agbayani 1995:12)”. He proposes that the relevant structure is as in (12):

(12) [FP [DP indef. obj. (specific)] [F' [TP...[NegP...]]]]

With (12), (9b) is successfully ruled out because the object NP that contains an NPI: *two books that any students read*, moves to FP Spec at LF and Negation does not c-command it. Though this approach solves the three problems observed by Agbayani (1995), it raises a problem of its own. I discuss the new problem in the following section.

4.3 Some Problems with the QR Approach

In this section, I point out a phenomenon that Agbayani (1995)'s theory cannot account for. This is related to WH-phrases in ACD sentences. The following example contains an embedded relative clause, a WH-phrase and a [+WH] Comp:

(13) a. Bill didn't discover [CP [which of the three students]_j t_i [C' [C
[IP Mary liked t_j [CP that you might like t_j]_i]]]]
E>Neg (specific) / Neg>E (non-specific)

- b. Bill didn't discover [_{CP} [which of the three students]_j _{t_i} [_{C'} [_C [_{IP} Mary liked _{t_j} [_{CP} that you might [_e] _i]]]]]
 E>Neg (specific) / *Neg>E (*non-specific)

(13) involves an extraposition of *that you might like* and the underlying structure of (13b) is as in (13c):

- (13) c. Bill didn't discover [_{CP} [which of the three students [that you might [_e]]]_j [_{C'} [_C [_{IP} Mary liked _{t_j}]]]]

(13a) has two readings. In the first case, *which of the three students* picks out a particular individual (one of the three students that Mary liked). Here, *which of the three students* has scope over *not*. In the second case, no particular individual is picked out. Here, negation element has scope over the WH-expression. The first reading is often called *de re* and the second is called *de dicto*. The second reading disappears in an ACD example in (13b).

Lasnik and Saito (1992) claim that a [+WH] Comp must contain a [+WH] phrase at LF. In (13), the embedded CP has a [+WH] Comp and it should have the [+WH] phrase, *which of the three students* at LF. However, this is not compatible with Agbayani's analysis based on FPs. Even though he does not mention an interaction between WH-phrases and negation, I assume that his theory will represent an LF-interpretation of (13b) like (14):

- (14) [_{FP} [_{DP} which of the three students] [_{F'} [_{TP}...[_{NegP} not [_{VP} [_{CP} [_{C'} [+WH Comp ...

Agbayani (1995)'s claim is that "specific indefinite objects occupy a position above Negation and Tense where they are outside of the scope of these elements (1995:1)". His theory would explain that the reason why the indefinite object in (13b) has a scope over Negation is that the object NP raises above NegP as in (14). Also, the reason why an ACD construction is possible is that the antecedent containment is solved by this Quantifier Raising operation. However, this theory cannot account for the grammaticality of (13b) even though the embedded CP Spec does not contain a [+WH] phrase at LF. Instead, the WH-phrase should be in Spec of FP. If he were to propose that reconstruction takes place, then he would lose an account for the object having a wide scope over Negation.

In the following section, I will show that the Case driven movement approach proposed by Takahashi(1993) provides a solution to this problem. Also, I will show that two of the three arguments put forward by Agbayani (1995), evidence for the QR based approach, are not in fact a problem in the Case driven movement approach.

4.4 Proposal

4.4.1 Specificity and Tense Ambiguity

Before I go into detail about example (13), let me briefly go over my claim on specificity and Tense discussed in Chapter 2 since it will play an important role in solving the problem in (13).

I claimed that the proposal that specific DPs have a distinct tense in them can account for the tense ambiguity in examples such as those in (15) and (16):

- (15) John sought the person who was laughing
a. John sought the person after the person was laughing. (shifted reading)

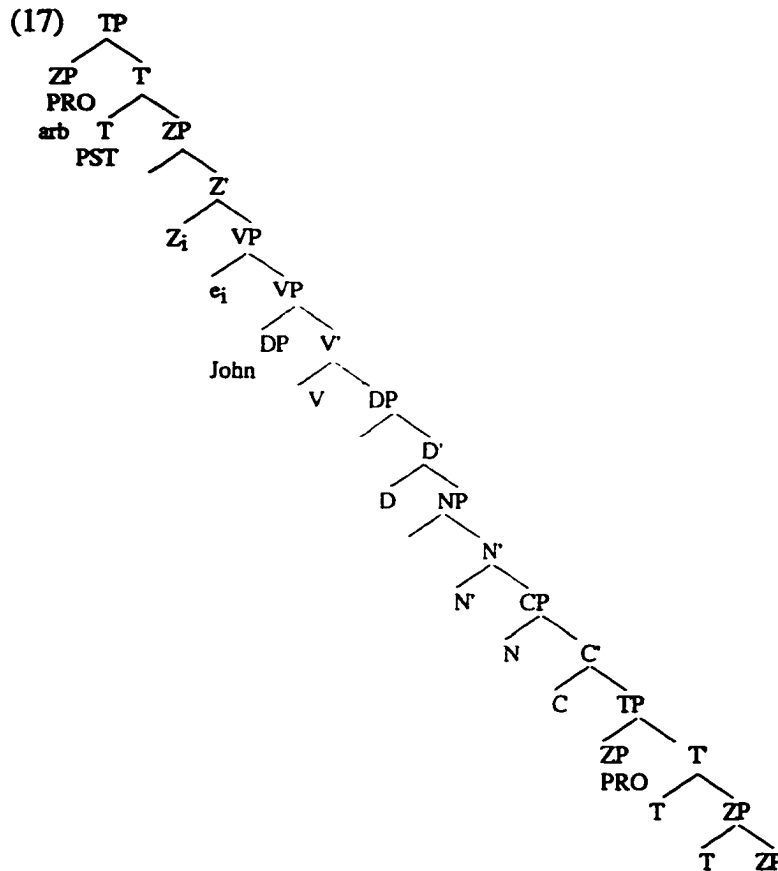
- b. John sought the person when the person was laughing. (simultaneous)
- c. John sought the person before the person was laughing. (independent)

(16) John sought a person who was laughing

- a. John sought a person after the person was laughing. (shifted)
- b. John sought a person when the person was laughing. (simultaneous)
- c.* John sought a person before the person was laughing. (independent)

Example (15) with the specific object DP has readings as in (a)-(c), while example (16) with the non-specific object lacks one of the three readings. Reading (16c), the independent reading, does not exist for (16).

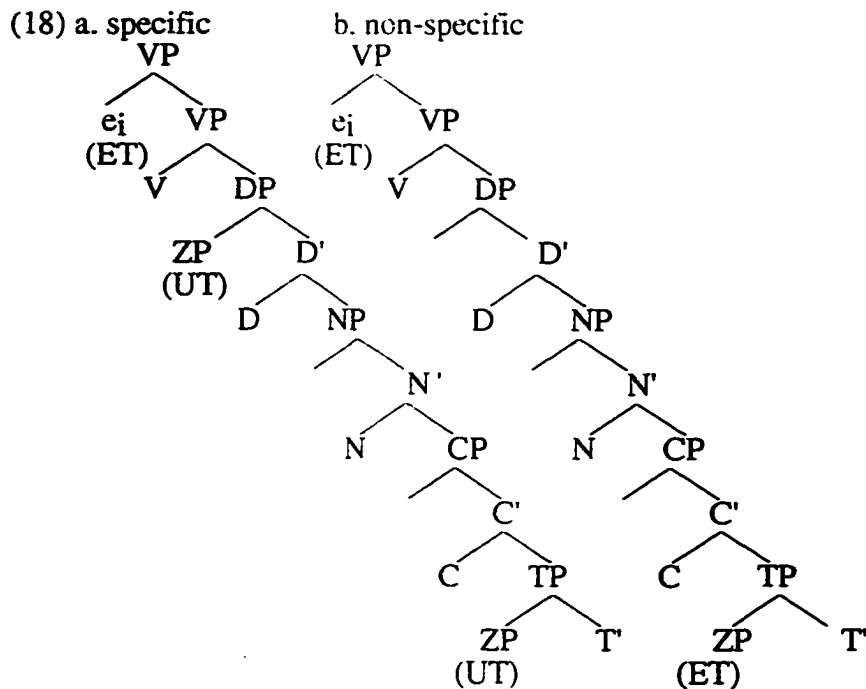
Zagona (1989) and Stowell (1993) claim that ZPs (Zeit (Time) Phrases) in a syntactic structure correspond to two temporal points: the Utterance Time: the time when a sentence is uttered and the Event Time (ET): the time when an event happens. Stowell claims that the fact that (15) has three interpretations, a past-shifted reading as in (15a), a simultaneous reading as in (15b) and an independent reading as in (15c), can be well-explained with the theory of control. Example (15) has the representation in (17).



In Stowell's theory, both the past-shifted and the independent readings occur when the matrix and embedded T-slots have Past Tense as in (17). The past-shifted reading arises when the DP that contains the relative clause stays in situ at LF. When it stays in situ, the embedded Event Time is controlled by the matrix Event Time so the reading in (15a) arises. The independent reading, where the embedded Event Time has no dependency on the matrix Event Time, occurs if the DP undergoes LF movement and adjoins to the matrix clause. If LF movement of the DP takes place and if the DP goes out of the c-command domain of the highest matrix ZP, the external ZP in the relative clause has no c-commanding controller. Then, it denotes the Utterance Time as external ZPs in matrix clauses do. Since LF movement causes the Event Time of the embedded verb to lose its relationship to the matrix Tense, the embedded event-ZP denotes a time which is

completely independent from the time denoted by the matrix event ZP. It has to be past 75 with respect to the Utterance Time (UT). However, this theory does not distinguish (15) from (16) because both embedded NPs must be allowed to undergo Quantifier Raising in this theory.

To account for the differences in the permissible readings of (15) vs. (16), I proposed that specific DPs contain ZPs.⁴¹ A ZP in a specific DP refers to the Utterance Time. When the ZP of a specific DP occurs between the matrix Event Time and an embedded PRO-ZP, the PRO-ZP can no longer refer to the matrix Event Time as its reference time. The ZP of a specific DP is the most local controller for the embedded PRO-ZP so the PRO-ZP has the Utterance Time as its reference time. As a result, an independent reading is available in (15), but not when the DP is non-specific, as in (16). The structures of (15) and (16) are shown in (18a,b), respectively.



⁴¹Refer to the arguments shown in Chapter 2 for the existence of this ZP.

In (18b), the relative clause has a non-specific DP and the embedded PRO-ZP cannot refer 76 to the Utterance Time. Its reference time is the matrix Event-Time; hence, the embedded Past Tense is past with respect to the matrix Event Time. That is why the third reading is not available in (16). The simultaneous reading arises when the T slot has null Present Tense instead of Past Tense. Stowell defines that null Present Tense is phonologically null and it refers to the point which the local external ZP refers to, as long as it is in the past.⁴² In the following section, we consider how the ZPs in the specific DPs can affect NPI licensing.

4.4.2 *Specificity and NPI Licensing*

Lee (1992) proposes that NPIs are checked in Spec of NegP at LF, which is an A'-position in English.

(19) *I deny [CP that [CP that McIntyre has any money] is certain] ⁴³

For the NPI, *any money*, to be checked at LF, it moves to Spec of NegP. However, this movement is across a subject island and violates the ECP. Lee (1992) claims that NegP Spec is an A'-position due to the following subject/object asymmetry.

- (20) a. *Anyone didn't meet Chomsky.
 b. Chomsky didn't meet anyone.

(20a&b) have an LF representation as in (20'a&b) respectively:

⁴²Stowell (1993) calls Null Present Tense a Past Polarity Item (PPI). In the same way that NPIs must be bound by Neg, PPIs must be bound by Past Tense.

⁴³Lasnik (p.c.) points out that (19) is not great even without an NPI. I have no answer for this and here, I just follow Lee (1992)'s analysis.

- (20'a) [AgrsP Anyone_i [TP[NegP t_i [Neg' not [AgroP [t_i Chomsky]]]]]]]
A A' A
(20'b) [AgrsP [TP[NegP anyone_i [Neg' not [AgroP [t_i Chomsky meet t_i]]]]]]]
A' A A

The reason why (20'a) is degraded is because it is a case of an 'improper chain'. If a NegP Spec position were an A-position, we should not observe the subject/object asymmetry

Following Lee's observation, I propose that when there is a specific DP intervening between a negation and NPI, the checking will not be possible because DP Spec, which is an A'-position, is filled by a ZP. Consider the following examples.

- (21) a. ?? John never reads books that have any pages missing.
b. * John never reads the books that have any pages missing.
c. * John never reads those books that have any pages missing.
d. * John never reads John's books that have any pages missing.

(May 1985:145)⁴⁴

In (21b,c and d), there are specific DPs: *the books*, *those books*, and *John's books*, intervening between the negation, *never*, and NPIs, *any*. As shown in (21b'), the NPI cannot move to NegP Spec because there is an intervening A'-position, namely a DP Spec position, that is filled by a ZP ((18a)). However, (21a) is marginal⁴⁵ because when the

⁴⁴ May (1985) proposes that *any*-NP is a quantifier phrase and he proposes that QR is subject to a “specificity constraint” using these examples. My proposal based on Lee can account for why (21b-d) are degraded within Relativized Minimality. May’s proposal calls for an additional constraint to rule out (19) besides “specificity constraint” whereas my proposal only calls for Relativized Minimality.

⁴⁵Example (21a) should be grammatical if my approach is right; however, May marks it as marginal. This judgment varies among speakers; for example, some speakers accept it as a grammatical sentence. At any case, I speculate that May's judgment is obtained because the NP *books* can be interpreted as both specific and non-specific. A similar sentence listed in (i) with a non-specific NP *a book* seems to be better than (21a).

(i) John never reads a book which has any pages missing.

It is because an indefinite object in (i) cannot be interpreted as specific. Refer to Enç (1991) for the cases where an indefinite NP can be taken to be specific.

NP, *books*, is interpreted as non-specific, there is no ZP in DP Spec hence the NPI can 78 make use of that position as shown in (21a').

(21a') [IP John [NegP never [vp reads [DP [books [which have any pages missing

(21b') [IP John [NegP never [vp read [DP ZP [those books [that have any pages missing

In the following section, I will use this proposal to solve the problems that Agbayani (1995) pointed out with respect to Case driven movement approach to ACD. I will show that if we add this claim of ZP in a specific DP to Takahashi's proposal, we will be able to solve the problems found by Agbayani (1995) as well as the problem with [+WH] Comp discussed in Section 2. Hence, the Case driven movement approach to ACD emerges as preferable to the QR based approach.

4.5 Solution to Agbayani (1995)'s Problems

The first piece of evidence that Agbayani (1995) uses to claim that QR is involved in ACD constructions is the interaction between a quantified NP and a negation as shown in (6) and (7) (repeated here in (22) and (23)).

- (22) a. Robin bought two books that Pat reviewed
specific/non-specific
- b. Robin didn't buy two books that Pat reviewed
E>Neg (specific) / Neg>E (non-specific)
- (23) Pat didn't read two books that Robin did
E>Neg (specific) / *Neg>E (*non-specific) (Agbayani 1995:5)

We do not need to rely on QR to account for the scope relation in (23) if we follow the Case driven movement analysis proposed in Takahashi (1993). The reading where the quantified NP takes narrow scope with respect to negation is absent in (23). I argue that an object NP must have a non-specific reading to take small scope with respect to the negation. If the non-specific object gets inherent Case and stays in the complement position of VP, then an infinite regression will not be avoided; hence, an ACD construction cannot be generated. On the other hand, if the object is specific, it gets Case in Spec of Agr_o⁴⁶. In this case, we can avoid a regression problem because the object containing *e* goes out of the VP that will be copied. That is why (23) only has a reading where the quantified NP is specific.

The second piece of evidence that Agbayani (1995) uses is the NPI licensing asymmetries ((8) and (9) repeated here in (24) and (25)).

⁴⁶Takahashi (1994), contra Pollock (1989) and Chomsky (1991), claims that NegP is located under Agr_oP due to the various phenomena such as object shift in Scandinavian languages, cases related to inner-islands etc.(refer to his thesis for the further explanation). This will explain why an object has a wide scope over the negation in (23). This structure also fits with pseudo-gapping construction that involves negation in (i).

(i) ??John didn't read three books and Mary didn't two magazines.

(i) is degraded for most speakers; however, there is a reading where the object NP takes wide scope over Neg. There is no reading where Neg takes wide scope over the object. If Agr_oP is above Neg and if a scope interaction is decided before *not* moving to Infl, we can account for this. However, I leave this for further research for a number of reasons. First, sentence (i) above is degraded in any case. Second, there is still considerable controversy concerning: whether or not NegP is projected below Agr_oP; whether relative scope is determined before or after Neg raising.

- (24) a. Robin didn't read two books that any students read.
 b. Pat didn't review two recent articles that any linguists reviewed.

*E>Neg (*specific)/ Neg>E (non-specific)

- (25) a. ?* Robin didn't read two books that any students did.⁴⁷
 b. ?* Pat didn't review two recent articles that any linguists did.

He argues that (25a&b) are degraded because the object NP raises beyond negation; hence, the NPI *any* cannot be licensed. *Any* has to be c-commanded by negation. However, if we follow the checking analysis of NPI proposed by Lee and adopt the proposal that a specific DP has a ZP in its Specifier position, we can account for why (25a&b) are degraded without relying on QR. The object NPs in (25a&b) are specific if we follow Takahashi (1993); hence, their DP Spec position is filled with ZP. This ZP prevents the NPI *any* from using DP Spec position as an escape hatch, *any* is thus unable to move to a Spec of NegP. That is why *any* cannot be licensed in (25a&b). If these NPs were non-specific, *any* within the NPs might be able to be licensed but this is beside the point since non-specific NPs cannot appear in ACD sentences.⁴⁸

Lastly, under our analysis, we can solve a problem that is impossible to avoid within the QR based approach in example (13) (repeated here in (26)).

- (26) a. Bill didn't discover which of the three students Mary liked that you might like.

E>Neg (specific) / Neg>E (non-specific)

⁴⁷Snyder (p.c.) points out that (25a) improves its grammaticality if you change it to (i):
 (i) Robin didn't read so many as two books that any students did.

I have no account for why this is the case and leave it to my further study.

⁴⁸I argue that it is impossible to construct ACD sentences with non-specific object NPs because a non-specific NP does not move to Agrop-spec to get Case. Hence, the antecedent containment cannot be solved.

- b. Bill didn't discover which of the three students Mary liked that you might.
E>Neg (specific) / *Neg>E (*non-specific)

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As mentioned earlier, I infer that Agbayani (1995) would have an LF representation of (26) as in (27):

- (27) [FP [DP which of the three students] [F' [TP...[NegP not [VP [CP [C' [+WH Comp...

Besides the problem that I discussed in (13), the Proper Binding Condition violation arises when we consider a WH-phrase not being in a Spec of [+WH] Comp at LF in (27). Suppose that the object *which of the three students* moves to Spec of FP as in (27) and the WH-phrase later moves down to CP Spec, then the trace of this object NP will not be bound by anything and the Proper Binding Condition proposed by Fiengo (1977)⁴⁹ (cf. (29)) will be violated. It will have a structure as in (28):

- (28) [FP [ti] [F' [TP...[NegP not [VP [CP [DP which of the three students]][C' [+WH Comp [IP Mary liked ti ...

- (29) Proper Binding Condition: Traces must be bound.

Agbayani (1995)'s analysis cannot account for the reason why (28) is grammatical and why it is the case that the only reading available in (28) is the one where a WH-phrase takes wide scope over the negation. Our theory, however, accounts for this successfully. In our

⁴⁹Chomsky (1995) assumes that we need something like the Proper Binding Condition to prevent anything from moving down.

theory, as shown in (30), the object *which of the three students* moves to Spec of Agr_o to 82 get its Case checked, and then moves to a Spec of Comp. Since the Spec Agr_o position is c-commanded by the Spec CP position, the Proper Binding Condition is respected.

- (30) [Bill didn't discover [CP which of the three students_i [Agr_oP t_i [Mary liked t_i...

4.6 Tense/Aspect Parallelism in ACD Sentences

4.6.1. Tense Licensing Asymmetries

The third piece of evidence in Agbayani (1995) concerns tense licensing asymmetries. Agbayani (1995) points out that the following example with a non-ACD construction is ambiguous with respect to the interpretation of *would*.

- (31) Pat visited two cities that Robin would visit.
Temporally Dependent (non-specific)/Conditional Modal (specific) (=10)

The first interpretation, the temporally dependent interpretation, disappears if we change (31) to (32), with an ACD construction.

- (32) Pat visited two cities that Robin would.
* Temporally Dependent (*non-specific)/Conditional Modal (=19)

Agbayani (1995) claims that the object DP undergoes Quantifier Raising beyond TP in (32) and that this is why the temporally dependent reading is impossible. However, I propose

that QR is not necessary to bring about tense asymmetries in (32). First, I claim that the 83 temporally dependent reading in (31) occurs only when the object DP is non-specific. Since a non-specific DP does not have a ZP in its Spec position, nothing intervenes between the matrix event ZP and the embedded event ZP. Hence, the embedded event ZP must be controlled by a matrix Event Time. On the other hand, the conditional modal reading arises when the object DP is specific. A specific DP contains another tense, a ZP in its Spec position which becomes a new antecedent for the PRO-ZP of the embedded Event Time on the matrix Event Time. The embedded Event Time is no longer an antecedent for the embedded RPO-ZP. This is why the embedded Event Time does not need to be temporally dependent on the matrix Event Time in the conditional modal reading. Second, let us apply this claim to an ACD example as in (32). As discussed above, the ACD construction is only possible when the object NP is specific. In that case, the specific object DP has its own ZP that can serve as an antecedent for an embedded PRO-ZP, in other words, it has a function of cutting a control relation between the matrix Event Time and the embedded Event Time. This is why only a conditional modal reading is present in (32). We do not need to hypothesize QR to an FP.

This observed relationship between Tenses in ACD constructions brings us to another topic; namely, are there any restrictions in combining two Tenses in ACDs? In the following section, I argue that there is a restriction and two Tenses must not have a mismatch in ACDs. Before going into detail, I will outline relevant parallelisms in ellipsis constructions, pronoun indices and quantifier scope.

Fiengo and May (1994) and Fox (1995) have observed that there is an effect of structural parallelism in VP-ellipsis constructions regarding pronoun indices and quantifier scope.⁵⁰ First, look at (1), in which Fiengo and May (1994) propose that there is a parallelism effect regarding indices. In other words, in (33), we see the parallelism between *Max's sister* and *Oscar's sister*

- (33) Max's sister said that he₁ saw his₁ mother and Oscar₂'s sister did,
too. (Fiengo and May (1994))

Fiengo and May (1994) claim that (33) is several ways ambiguous. (33) can have a strict reading as in (33a), a sloppy reading as in (33b) and a mixed reading as in (33c). The expressions in the brackets represent how *did* is interpreted.

- (33)a. Max₁'s sister said that he₁ saw his₁ mother and
Oscar₂'s sister [said he₁ saw his₁ mother]--strict reading
b. Max₁'s sister said that he₁ saw his₁ mother and
Oscar₂'s sister [said he₂ saw his₂ mother]--sloppy reading
c. Max₁'s sister said that he₁ saw his₁ mother and
Oscar₂'s sister [said he₁ saw his₂ mother]--mixed reading

They propose that there is an interesting contrast in a sentence such as (34), which does not involve a structural parallelism. In (34), the first conjunct has *Max* as its subject instead of *Max's sister*. They propose this is the reason why the indices cannot be assigned as

⁵⁰Tancredi (1992) points out that this phenomenon is observed in sentences without ellipsis but just with a deaccented VP.

specified in (34c) even though (33c) is grammatical with the same indices as in (34c). In 85 (34), the mixed reading represented by (34c) is not available.⁵¹

- (34) Max₁ said he₁ saw his₁ mother and Oscar₂'s sister did, too.
- a. Max₁ said he₁ saw his₁ mother and
Oscar₂'s sister [said he₁ saw his₁ mother]--strict reading
 - b. Max₁ said he₁ saw his₁ mother and
Oscar₂'s sister [said he₂ saw his₂ mother]--sloppy reading
 - c. *Max₁ said he₁ saw his₁ mother and
Oscar₂'s sister [said he₁ saw his₂ mother]--mixed reading

Fox (1995), following Hirschbühler's (1982) observation, extends this idea from Fiengo and May (1994) to apply to scopal ambiguities, such as those in examples (35) and (36):

- (35) a. Some boy admires every teacher and some girl does, too.
($\exists > \forall$; $\forall > \exists$)
- b. Some boy admires every teacher and Mary does, too.
($\exists > \forall$; * $\forall > \exists$)
- c. Some boy admires every teacher and Mary admires every teacher. (the
first conjunct: $\exists > \forall$; $\forall > \exists$)

The parallelism effect is kept in (35a); both the first and the second conjuncts have *some* plus NP as their subject but that is not the case in (35b). In (35b), the second conjunct has *Mary* as a subject instead of *some* plus NP. Fox claims that (35a) is ambiguous; *some* can

⁵¹Needless to say, the mixed reading as in (34c) is possible in a non-ellipsis example as in (i), especially with some focus on *his* in the second conjunct:

(i) Max₁ said he₁ saw his₁ mother and Oscar₂'s sister said he₁ saw his₂ mother, too.
Fiengo and May (1994) argue that it is an intrinsic property of ellipsis that does not allow a mixed reading.

take wide scope over *every* and *every* can take wide scope over *some*. On the other hand, 86
(35b) is unambiguous and there is only one reading; i.e., that in which *some* takes wide
scope over *every*. Notice that this is something special to a VP-ellipsis construction
because the non-VP ellipsis example in (35c) is ambiguous. Fox proposes Ellipsis Scope
Generalization in (36) can be drawn to accommodate the contrast between (35a) and (35b):

(36) Ellipsis Scope Generalization (ESG): The relative scope of two quantifiers, one of
which is in an antecedent VP of an ellipsis construction, may differ from the surface c-
command relation, only if the parallel difference will have semantic effects in the elided VP.
(14; 1995)

Following (36), the first conjunct in (35b) is unambiguous because the second conjunct is
unambiguous. Since QR is unnecessary in (35b)—it cannot bring about a different
interpretation unlike (35a) because there is no quantifier interaction in (35b), therefore, the
parallelism forces the first conjunct to have the reading only the second conjunct yields. In
other words, (35b) only has an interpretation where *some boy* and *Mary* have wide scope
over *every teacher*.

In ACD examples, a similar kind of parallelism effect is observed with respect to
Tense and Aspect. In other words, ACD constructions do not seem to tolerate different
tenses in the same sentences, whereas this kind of intolerance is not observed in VP-ellipsis
or pseudo-gapping examples. Consider the following examples where the first clause
contains a past Tense and the second clause contains a future Tense.

- (37) *?John read the same books that Mary will [e].
- (38) John read the same books that Mary did [e].
- (39) John read the same books that Mary will read (non-ACD)

(40) Mary read the books and Fred will the magazine (pseudo-gapping)

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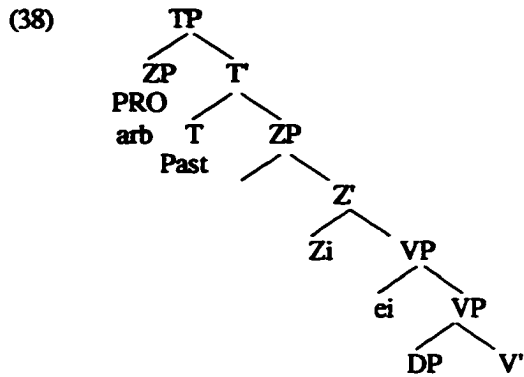
(41) Mary read the books and Fred will, too (VP-ellipsis)

(37) has a Tense mismatch in verbs; the former verb, *read*, is in Past Tense and the latter, *will [e]*, is in Future Tense. This kind of intolerance in Tense mismatch is only observed in ACD sentences and not in sentences with non-ACD as in (39), pseudo-gapping as in (40) or VP-ellipsis as in (41). Notice that the Tense and Aspect parallelism that I discuss here is more restricted than the scopal and indices parallelism that I summarized. Although the scopal and the indices parallelism is observed in all VP-Ellipsis examples including ACD and Pseudo-Gapping, it is not the case with the Tense and Aspect Parallelism. Example (39), which is a non-ACD example, contrasts with (37) and (39) is grammatical with Past in the matrix clause and Future in the embedded clause. Also, (40), the pseudo-gapping example, is good with the Past tense in the first conjunct and the Future tense in the second conjunct. Finally, (41), a VP-ellipsis, is also good with different Tenses.

I suggest a way to account for why ACD sentences with the Tense mismatch are degraded as seen in (37) by recourse to an LF-copying analysis. As part of this account, I propose that when a VP is copied in *[e]*, the temporal variable in VP (proposed by Stowell (1993)) is also copied, and that this temporal variable plays a role in determining if the Tense is matched or not.

4.6.3. *Syntax of Tense by Stowell (1993)*

Before I discuss what is copied and what rules out the ACD examples with Tense Parallelism, let me briefly recapitulate my analysis. As discussed in Chapter two, Stowell (1993) proposes that there are two phrases, called Zeit phrases (time phrases), in a syntactic structure, which refer to the Utterance Time and the Event Time respectively. The phrase structure for 'John ran' suggested by Stowell (1993) is in (38).



Past Tense under T requires the Event Time, namely, the time of John's running, to precede the Utterance Time, denoted by the ZP in TP-Spec. Crucially, there is a variable in VP coindexed with the event ZP, which is the lower ZP. This variable serves to inform a VP at which time that event takes place. Also, I propose that it is doing important work in Tense Parallelism in ACDs. With this in mind, let us go back to the ACD example with Tense mismatch.

4.6.4. *LF-copying and Tense Parallelism*

(39) *?John read the same books that Mary will.

(40) John read the same books that Mary did.

(41) *? John read the same books that Mary does.

(42) John reads the same books that Mary does.

(43) *? John reads the same books that Mary did.

The examples that we have seen exhibit the following patterns:

(44) Present...Present

Past...Past

Future...Future

(45) *Past...Present

*Past...Future

*Present...Future

*Present...Past

The grammatical example in (40) has an LF representation as in (46):

(46) John [ZP [ZP_i Past [VP [e_i read the same books that

UT ET ET ($e > u$)

[ZP [ZP_i Past Mary did [VP [e_i]

ET ($e > u$) ET($e > u$)⁵²

In (46), the matrix event-ZP refers to a point that is Past with respect to the Utterance Time and it binds a temporal variable within a VP that is represented as e_i . When the VP is copied, this temporal variable is also copied after *did*. This variable does not conflict with the Past Tense of *did* and this copying operation is perfectly possible in (46). By contrast, (39) has the LF representation in (47):

⁵²ET($e > u$) means that this Event Time is past with respect to the Utterance Time.

(47) *? John [ZP [ZP_i Past [VP [e_i read the same books that

UT ET ET (e>u)

[ZP [ZP_i Future Mary will [VP [e_i

ET (u>e) ET(e>u)

(47) has a matrix event-ZP that refers to a point that is Past with respect to the Utterance Time, and when its variable is copied, it brings about a contradiction with the Future Tense in *will*. The Future Tense in the embedded clause calls for the Event Time to follow the Utterance Time namely, (u>e). However, this tense does not match that of the variable in the copied VP, so a Tense mismatch arises. Let us next look at one more example, which involves Past and Present Tense as in (41). Its LF representation is as in (48) following VP-copying:

(41) *? John read the same books that Mary does.

(48) *? John [ZP [ZP_i Past [VP [e_i read the same books that

UT ET ET (e>u)

[ZP [ZP_i Present Mary does [VP [e_i

ET (u=e) ET(e>u)

(48) has a variable in VP that refers to a point that is past with respect to the Utterance Time, and when its variable is copied, it bring about a contradiction with the Present Tense in *does*. The Present Tense calls for an Event Time that refers to the same point as the Utterance Time but that is not the Tense that the variable in the copied VP has.

Uribe-Extebarria (1994) proposes that *will* calls for an Event Time to follow the Utterance Time but *would* calls for an Event Time to be past. If this is correct, (45) should

improve its grammaticality when *will* is changed to *would*, as in (49) and that is exactly 91 what happens. (49) has the LF representation in (50):

(49) John read the same books that Mary would.

(50) John [ZP [ZP_i Past [VP [e_i read the same books that

UT ET ET (e>u)

[ZP [ZP_i Present Mary would [VP [e_i

ET (u>e) ET(e>u)

Before moving to Aspect Parallelism, let me discuss one more point regarding Tense. This involves cases where the Future Tense appears in the matrix clause, as in (51) and (52):

(51) John will read the same books that Mary did

(52) John will read the same books that Mary does

It seems puzzling that (51) and (52) do not call for any Tense parallelism. When the matrix clause has Past and the relative clause has Future Tense, it seems degraded but when the order is reversed as in (51), it seems better. Bošković (p.c.) suggests that that must be because *will* takes a verb *read* with no Tense information in it—that is, it takes something bare, and it is true that we do not see any inflection in *read* in (51). Since *read* in (51) and (52) is bare and there is no Tense information in it, it can be copied after *did* or *does* and there will be no conflict with the Past Tense in *did* or Present tense in *does*. However, when the order is reversed as in (39) again, this is not true.

(39) *?John read the same books that Mary will [e].

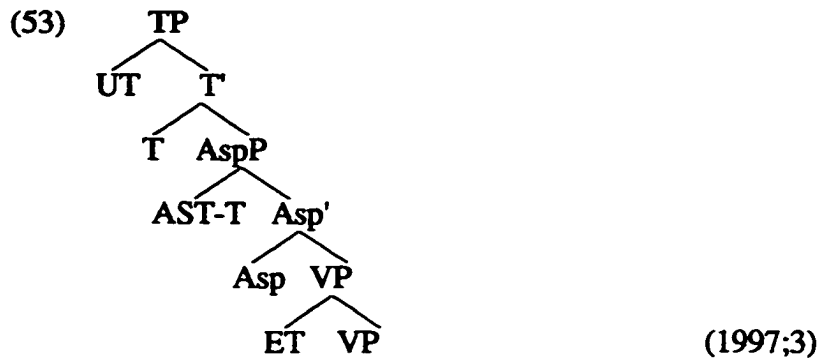
Since *will* in an embedded clause in (39) cannot take any verb with a variable that carries 92 information on Past or Present, (39) is degraded.

In the previous section, I claimed that the third argument that Agbayani (1995) uses can be addressed without QR and in this section. I have claimed that if we assume that in ACD constructions, there is LF-copying of a VP, we can obtain an explanation for cases where tense mismatch causes sentences to be degraded. Let me next move to the Aspect Parallelism in ACDs.

4.7. Aspect Parallelism in ACDs

Parallelism effect similar to that observed with Tense is also found with respect to Aspect. The Appendix of Chapter 2 summarizes the aspectual analysis of Demirdache & Uribe-Extebarria (D&E), so here, I briefly recapitulate the basics of the syntax of Present Perfect that I will be using.

Following Stowell (1993), Brugger (1996), D&E (1997) and Travis (1991), I assume that Aspect takes two time-denoting phrases as arguments. D&E propose that Aspect takes a reference time, called an Assertion Time (AST-T) as its external argument and an Event Time as its internal argument; the authors claim that the phrase structure of Tense and Aspect is as follows:



4.7.1 McCawley's (1971) Analysis of the Present Perfect in Telic and Atelic Verbs

McCawley (1971) claims that atelic verbs are ambiguous when they appear in the Present Perfect—unlike telic verbs, which are unambiguous.

(54) The Present Perfect of an atelic verb McCawley (1971)

1. "indicates that a state of affairs prevails throughout some interval stretching from the past into the present" when it appears with certain adverbials such as *for—times* or *since*-- (look at (55)).

2. it does not indicate a state of affairs stretching into the present when it does not appear with these adverbials as in (56):

Atelic

(55) Max has slept since 9pm. (now—i.e., he is still sleeping)

(56) Max has slept. (he is no longer sleeping at UT-T) (D&E 10;1997)⁵³

⁵³McCawley's generalization is not unanimously accepted. First, (55) with a *for*-phrase in (i) allows a reading where Max is not sleeping at the Utterance Time apart from a reading where Max is still sleeping:

(i) Max has slept for 8 hours.

There is a reading where Max in the past has slept for 8 hours. Here, I use an example with *since* in (55) which forces a reading where Max is still sleeping at the Utterance Time. Second, (56) is, according to some speakers, ambiguous between a reading where Max is still sleeping and Max is no longer sleeping. These two points, however, do not influence my argument of parallelism.

On the other hand, for telic verbs, “the Present Perfect indicates that the direct effect of a 94 past event still continues”. So, (57) means that John is still here at the Utterance Time:

Telic

(57) John has arrived. (indicates persistence of the result of John’s arriving, i.e., that John is still here.)

4.7.2 Aspect Parallelism and LF-Copying

Let us next look at how ACDs tolerate these different interpretations of the Present Perfect.

Atelic

(58) Max has slept in the same bed that Mary has.

–Max and Mary are no longer sleeping at the Utterance Time

(59) Max has lived in Vancouver since 1980 in the same house that Mary has.

a. Max and Mary are still living in Vancouver

b. *Max is living in Vancouver but Mary is not living in Vancouver

(60) Max has lived in Vancouver in the same house that Mary has since 1980.

a. Max and Mary are still living in Vancouver

b. *Max is not living in Vancouver but Mary is living in Vancouver

In examples (58)–(60), the atelic verbs: *sleep* and *live* are in the Present Perfect form. In (58), *slept* can only have the interpretation in (56); namely, Max and Mary are no longer sleeping at the Utterance Time.⁵⁴ In (59) and (60), both Max and Mary have to be living in

⁵⁴Some speakers point out that (58) can have an interpretation where Max and Mary are both sleeping at the Utterance Time. What is important here is that there is a parallelism effect and there cannot be a reading where Max is sleeping at the Utterance Time but Mary is not or vice versa.

Vancouver at the Utterance Time. In (59), the matrix clause has the adverbial phrase: *since 1980*, which enforces the interpretation in (55), but the embedded clause does not have the adverbial phrase. The opposite is true in (60); namely, the embedded clause has the adverbial phrase but the matrix clause does not. Still, in both cases, there is no way for the verbs without the adverbial phrase to have an interpretation like (56) where the event has not stretched into the Utterance Time—namely, Mary (for (59)) or Max (for (60)) does not live in Vancouver any longer—so both (59b) and (60b) are not available for (59) and (60).

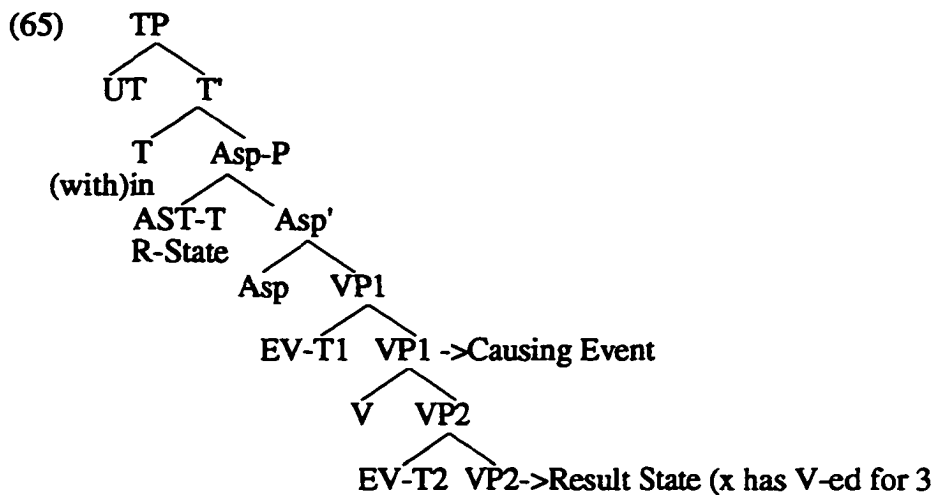
Unlike ACD constructions, other VP-ellipsis examples do not demonstrate the same kind of intolerance for Aspect mismatch, and a similar fact was previously pointed out with respect to Tense mismatch. Consider the following examples.

- (61) Max has lived in Vancouver and Mary has in Seattle since 1980.
(pseudo-gapping)
a. Max is not living in Vancouver but Mary is still living in Seattle
- (62) Max has lived in Vancouver and Mary has too, since 1980. (VP-ellipsis)
a. Max is not living in Vancouver but Mary is still living in Vancouver
- (63) Max has slept in this bed and Mary has in that bed since 9pm.
(pseudo-gapping)
a. Max is not sleeping in this bed but Mary is sleeping in that bed
- (64) Max has slept in this bed and Mary has too, since 9pm. (VP-ellipsis)
a. Max is not sleeping in this bed but Mary is sleeping.

In these examples, the second verb can have a different interpretation from the first verb, despite the fact that both are in the Present Perfect form. For (61) and (62), there is a reading where Max is not living in Vancouver any longer but Mary is still living in Seattle (for (61)) or Vancouver (for (62)). (63) and (64) are similar examples with a different

predicate. These contrast with the ACD examples that we looked at in (59) and (60), where 96 both first and second verbs in the Present Perfect form must exhibit the same interpretation—either the one where a state of affairs is stretched into the present or the one where a state of affairs has stopped sometime before the present. Then let us think about how we can account for this.

D&E propose that the continuative perfect as in (55) has a syntactic structure as follows:



VP2 plays a role in determining whether an event has been completed or is still continuing at the Utterance Time. With this structure in mind, let us return to the ACD Aspect mismatch case in (66):

(66) Max has lived in Vancouver for 3 years in the same house as Mary has.

(66) has a reading where Max and Mary have lived in the same house and they are still living there. If we assume that *lived* in the matrix clause has an AST-T that states that “Max has lived in the house and this state is stretched into the present” and if this

information in AST-T is copied in [e] after *has* in the relative clause, then there is no way 97
for AST-T to have the interpretation where Mary is not living there at the Utterance Time.

4.7.4. *LF-copying or PF-deletion?*

We have been looking at Tense and Aspect parallelism and we found that this parallelism is only observed in ACDs and not in non-ACD, VP-ellipsis and pseudo-gapping constructions. This indicates that there is something other than PF-deletion going on in ACD. If we return to a pseudo-gapping examples such as (67), we see that these allow different Aspectual interpretations for the first and the second verbs:

- (67) Max has [_{VP2} lived in Vancouver and Mary has [_{VP2} in Seattle for 3 years
R state-Max is not in Vancouver R state-Mary is in Seattle

Suppose that the first verb *lived* has a resultative AST-T that indicates that “Max is not in Vancouver any longer” and the second verb *lived* has a resultative AST-T that says that “Mary is still living in Seattle”. If pseudo-gapping is a PF-operation, as Lasnik argues, the second verb *lived* can be elided at PF even if AST-T of the second verb has a different resultative interpretation from that of the first verb. The different interpretations of the Present Perfect Tense are not reflected in phonology. The PF-interface does not distinguish this semantic difference, so the second VP can be elided under identity in the phonological component to the first VP, *lived t*, thus we know why different interpretations of the Present Perfect form in (67) are possible.

As we saw in 4.2.1, there is an infinite regress problem with ACDs and we need to move the object from a VP so that it will not be contained in the antecedent. There are two competing ideas about the point at which this movement occurs: whether object movement

is covert, as proposed in Agbayani (1995), Hornstein (1994), Kennedy (1997), and May 98 (1985), or whether it is overt, as Takahashi (1993) proposes. The former analysis is consistent only with an LF-copying treatment of ACDs, while the latter permits both LF-copying and PF-deletion. Based on the fact that it is the LF interface that is sensitive to semantic interpretation and it should be the LF interface that can see an operator-variable relationship, I claim that the ACD sentences, at least those shown above, are produced by an LF-copying operation of a VP that already has Tense and Aspect information in it. If we assume a covert movement approach to be correct, ACDs are made only with LF-copying; we do not need any extra explanation. However, if we assume overt movement, we will have to conclude that ACDs can be made by both PF-deletion and LF-copying, except for examples that call for Tense and Aspect Parallelism, which must be constructed by way of LF-copying. Here, we need to explain what forces ACDs that call for Tense and Aspect Parallelism to go to the LF-interface and what forces the others to go to the PF-interface. In the absence of such a explanation, and on grounds of parsimony, I conclude that ACDs must be made only with LF-copying.

4.8. Conclusion

In this chapter, I reviewed different accounts of ACD constructions (Takahashi (1993) and Agbayani (1995)) and showed that the three pieces of evidence that Agbayani (1995) raises to argue for the QR approach are not sufficient to conclude that QR is absolutely necessary to avoid the regress problem in ACD constructions. I addressed Agbayani's criticisms of the Case driven movement approach and raised an argument against Agbayani's theory. Since my analysis solves all the four problems discussed in this chapter, I conclude that QR to a Spec FP position without any morphological requirements is unnecessary.⁵⁵ Also, I

⁵⁵However, I must admit that there are remaining problems as pointed out in Kennedy (1997). For example, a Case driven movement approach cannot account for why (i) is grammatical:

(i) John put flowers on every table that Mary did.

demonstrated that certain requirements on Tense/Aspect parallelism which hold of ACDs 99 are not observed in VP-ellipsis and pseudo-gapping constructions. The data shown in this chapter thus argue for an LF-copying of ACD constructions following Hornstein (1994), Kennedy (1997) among others. Based on the data given here, I conclude that ACDs involve a different operation from VP-ellipsis or pseudo-gapping and I claim that the VP (including a temporal variable) copying approach is the most compatible with the examples provided in Section 4.

We have no account for why (i) is possible even though *every table* cannot possibly move to get Case. This example seems to support that a QR approach is on the right track. I will continue to investigate this matter in further research.

Chapter Five

Sloppy or Strict identity of Pronouns or Tenses?

5.1. Introduction

There have been two different analyses of the class of Ellipsis constructions known as Sluicing constructions, shown in (1a) and (1b). On the one hand, Ross (1969) argues it to be a deletion transformation; similarly, Lasnik (in press a,b), Saito and Murasugi (1991) among others argue that it is a deletion of an IP in the PF component that takes place after WH-movement. On the other hand, Levin (1979/86), Chung, Ladusaw and McCloskey (CLM) (1995), and Merchant (1996) have proposed that sluicing involves LF-copying of an IP. In this chapter, I support the hypothesis for Sluicing to be LF-copying proposal by looking at another LF phenomenon, the interaction of Tense operators under Sluicing. Supporting proposals made by Heim (1994) and Kratzer (1998), I draw attention to an interesting contrast between pronouns in VP-ellipsis and Tenses in Sluicing.

(1a) Somebody just left.

Guess [who [i]]

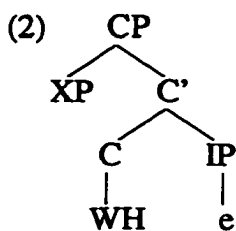
(Ross (1969))

(1b) 3 weeks ago Jones said that he would defend someone last week, but I don't know who IP[].

In Section Two, I present the LF analysis of Sluicing made by CLM (1995), which I will be adopting in my analysis. Section Three concerns strict vs. sloppy Tense readings. Section Four compares strict and sloppy interpretations of Tenses and pronoun indices, and Section Five includes a conclusion of this chapter as well as of the thesis.

CLM propose that Sluicing consists of four LF operations: copying of the content of IP (called “LF-recycling”), sprouting of empty categories (for certain cases), coindexation and the merger of indefinites. First, CLM assume that the Sluicing example in (1) has the structure in (2).

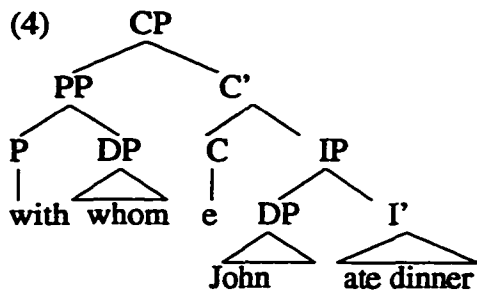
(1) He’s writing, but you can’t imagine where/why/how/how fast/with whom. (Ross 1969;252)



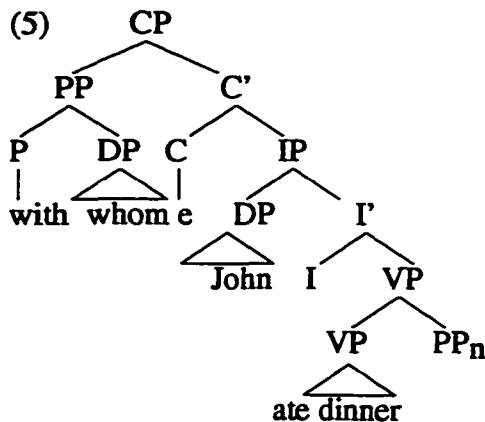
In (1), there is an empty IP after the WH-phrase; the IP in the antecedent clause gets recycled into this empty position. They call this LF copying operation “LF-recycling”. Second, sprouting of empty categories is necessary in an example like (3):

(3) John ate dinner but I don’t know with whom. (1995;9)

When we recycle an antecedent IP, the WH-operator in *with whom* has no appropriate position to bind. The structure after LF-recycling looks like (4):



Apparently, there is no position from which *with whom* originates in (4); CLM propose that we may remedy this by “sprouting an extra PP-position” (1995;10) as in (5):



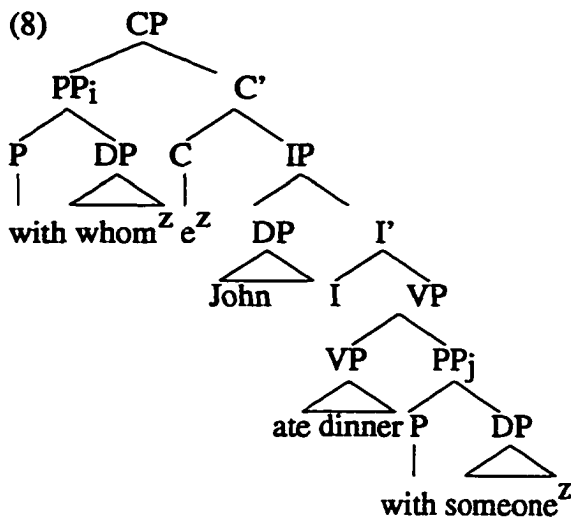
In (5), the WH-PP can be understood as if it is a sister of VP after IP-recycling and PP-sprouting. CLM argue that although this process of sprouting is open to different categories, it must obey argument structure. For example, (6) is not a possible sentence because eat does not subcategorize an additional DP.

(6) *John ate dinner but I don't know who(m). (1995;11)

Next, CLM examine an LF-operation called “merger” in a Sluicing construction as in (7).

(7) John ate dinner with someone but I don't know with whom.

Here, *with someone* and *with whom* must be associated and CLM propose “merger”. 103 They follow the proposal made by Nishigauchi (1986, 1990), Berman 1991 and others, who claim that indefinites or WH-pronouns are interpreted as “restricted free variables, available for discourse-level assignment of a referent or for binding by some other operator”(Nishigauchi (1990) cited in CLM (1995)) . So, the indefinite in (6), *someone*, and the WH-pronoun, *who*, can merge successfully. The same is true with *with* and *with*. As a consequence of merger, these merged phrases get coindexed as shown in (8):



The reason that the sentences in (9) are degraded is due to the fact that only indefinites (or weak DPs) and WH-pronouns can be merged successfully due to their similarity in interpretive procedure.

- (9) a. ?*I know that Meg's attracted to Harry but they don't know who.
 b. ?* Since Jill said Joe had invited Sue, we didn't have to ask who.
 c. *Because we suspected Joe had given it to Max, we then asked to whom/who to.

(1995;16)

Since the DPs in the antecedent IPs in (9) are all referential, *Harry. Sue, Max*, it is not possible for the WH-pronouns to undergo merger with them. These, then, are the four LF operations that CLM claim are involved in Sluicing; in the following section, I argue that Sluicing is indeed an LF phenomenon by considering the interactions between Sluicing and tense.

5.3. Tense Interpretations under Sluicing

Throughout the literature, the Sluicing examples that are used are very simple; a typical instance is given in (1b) (repeated here in (10)):

- (10) a. Somebody just left.
b. Guess [who [i]] (Ross (1969))

In (10), (10)a sets up the background where someone just left at the point that barely precedes the Utterance Time (as indicated by *just*) and (10)b asks who it is that just left by referring to the background that is already set up in (10)a. In this type of Sluicing example, there is no difficulty about which point Tense of the embedded predicate in (10b) refers to. However, when the Event Time is harder to refer to one point, as in (11) in which the Event Time of his defending someone does not refer to one point, there arise some peculiar effects regarding the tense of the predicate:

- (11) Jones said that he would defend someone but I don't know who.

In (11), the event time of the matrix predicate, *said*, precisely refers to some point in the past; however, the embedded event time has more flexibility regarding its point of

reference. It can refer to any point between the matrix event time and the Utterance Time. 105

(11) is at least three way ambiguous as shown in (12):

- (12) a. ...but I don't know who Jones said that he would defend
b. ...but I don't know who Jones will defend.
c. ... but I don't know who Jones defended.

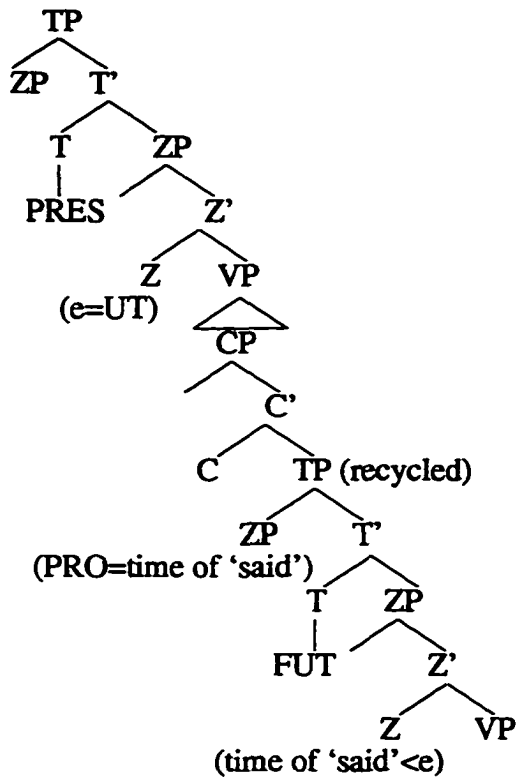
(11) exhibits several readings; first, there is an interpretation where the matrix IP is copied (or recycled in CLM's terms) (12a), as well two where only the embedded IP is copied (12b&c). What is interesting is that (12c) is a possible interpretation for some speakers. If PF-deletion of an IP under identity were the appropriate operation of Sluicing, (11) should mean: *I don't know who Jones would defend* but not (12c). I argue that the fact that (12c) is possible for some speakers is related to the issue of strict vs.sloppy identity discussed in Fiengo and May (1994), Otani and Whitman (1991), Ross (1969), Williams (1977) among others. Let us first examine how (12b) and (12c) are obtained.

I call (12c) the strict Tense interpretation because PRO-ZP does not change its control relation when the IP (or TP) is copied at LF onto an empty IP position following *who* in (11). The structure with 2ZPs looks like the one in (13), after LF-copying.

(13) Jones said that he would defend someone but I don't know who.

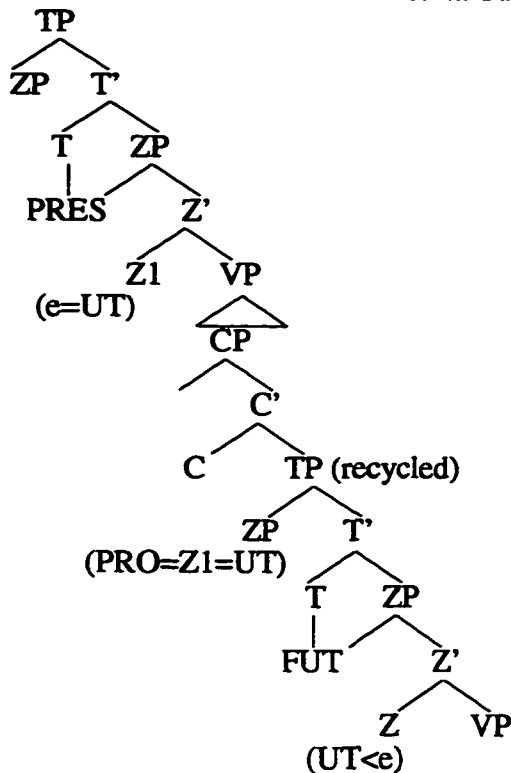
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c. ... but I don't know who Jones defended. (strict)



In (13), the external ZP within the recycled TP is still bound by the matrix event time and *would* refers to Future with respect to the matrix event time: that is, the time of Jones' saying so. Hence, the interpretation in (12c) where *defend* carries a Past Tense is possible. Since the control relationship has not changed before and after copying of TP, we call this strict identity. Let us next look at a sloppy tense interpretation for (12b). In this case, I argue that there is a new control relation created after TP-copying in (12b). The phrase structure looks like (14).

- (14) Jones said that he would defend someone but I don't know who.
 b. ... but I don't know who Jones will defend. (sloppy)



Unlike (13), the embedded PRO-ZP has a new control relation after being copied at LF. Before it is copied, this PRO-ZP is controlled by the matrix event time, the time of Jones' saying; however, after it is copied, it has a new antecedent. The local antecedent for this PRO-ZP is the matrix event time ZP within *I don't know who*, which is in Present Tense. Hence, *would* refers to Future with respect to the Utterance Time, yielding interpretation (12b).

Having claimed that there are sloppy/strict control relations for PRO-ZPs, the next question that arises is whether a similar conclusion can be drawn for referential PROs. Fiengo and May (1994) discuss referential PROs that are in VP-ellipsis, as illustrated in (15):

- (15) Johni [ti tried [PROi [to succeed]]] and Mary did [VP] too.

In (15), there is no reading where Mary tried so that John will succeed. The PRO within the copied VP is controlled by *Mary* and not by *John*. If both strict and sloppy interpretations are possible for PRO-ZP as we have just claimed, it should be possible for PRO in the second conjunct in (15) to be bound by *John* as well as *Mary*.⁵⁶ However, notice that there is one crucial difference between (11) and (15). In (15), there is a trace of the subject in the VP-Spec position, which obligatorily changes its antecedent after LF-copying. When a VP is copied, the subject trace of *John* changes its antecedent and becomes a trace of *Mary*. This happens even in the simplest VP-ellipsis example as in (16):

(16) Mary [ti slept]and Bill did [], too.

When the VP that includes the subject trace of *Mary* is copied after *Bill did*, this trace becomes a trace of *Bill*. Going back to (15), then, PRO in the copied VP has a trace of *Mary* as its most local controller; hence the strict reading of PRO, where the antecedent is *John*, is never possible in (15). On the other hand, there is no trace that can serve as an antecedent for PRO-ZP in (11) other than the matrix internal ZP; hence, there are two readings available in (11). Before going to Section 4 where I discuss the contrast between strict/sloppy readings of PRO-ZPs and reflexive pronouns, I would like to compare PRO-ZPs with the event variable within VP, which was discussed in Chapter 4.

In Chapter 4, I discussed the Tense/Aspect Parallelism that is observed in another VP-ellipsis construction, ACDs. There is a strict Tense Parallelism requirement in ACDs, by which the sentences are degraded if there is a mismatch in tenses. At first glance, it seems contradictory that a sloppy reading of PRO-ZP is possible in Sluicing despite the

⁵⁶Fiengo and May (1994) propose that this is because a control-PRO is \emptyset -occurrence, occurrence which “will give rise just to sloppy readings in elliptical contexts” (1994:217).

observation that the event variable allows only a strict reading; however, below I will 109
resolve this contradiction. Let us look at the ACD example with a Tense mismatch (39) in
Chapter 4, repeated here in (17):

(17) *?John read the same books that Mary will.

In (17), the VP, *read* plus a trace of an object NP, is copied after *will*; however, the event variable within the VP has past tense and this causes a mismatch with *will*, which requires its event variable to carry future tense. Here, the VP with the past tense variable is not allowed to be bound by future tense in spite of the fact that PRO-ZP can have a new control relationship in (12). This clearly demonstrates that PRO-ZPs and event variables are distinct and the difference between (12) and (17) is because (12) is an IP ellipsis while (17) involves VP-ellipsis. Tense Parallelism is observed in example (18), which is similar to (12) except that it is an instance of VP-ellipsis instead of IP:

(18) *? Jones said that he defended someone but I don't know who he will.

In (18), no PRO-ZP is involved; however, since it is VP-ellipsis, there is a Tense mismatch in *defended* and *will* and the sentence turns out to be degraded. As shown above, there is no contradiction between PRO-ZP and an event variable; (for some native speakers) it is possible for the former to have a sloppy identity but it is not the case for the latter. They are of a totally different nature.

The similarities between tenses and pronouns have long been noted (going back to Partee (1973)). This section provides supporting evidence for the arguments made by Partee (1973), Heim (1994) and Kratzer (1998).

Kratzer (1998) compares the sloppy readings of pronouns and Tenses appearing in Sequence of Tense (SOT) constructions. Ogihara (1989) and Abusch (1988) observe that English exhibits SOT, an example of which is shown in (19):

(19) John said he would buy a fish that was still alive. (Ogihara 1989)

Even though *was* has a past inflection in (19), it does not carry any semantics of past tense; *was* is simultaneous with the time when he buys a fish, which is future with respect to John's saying so. Ogihara (1989) proposes that there is past tense deletion under past tense; hence, the past tense within *was* is deleted. Kratzer (1998) investigates an analogy between Tenses in SOT as in (19) and the sloppy reading of pronouns, as in (20):

(20) Only I got a question that I understand. (sloppy)

Kratzer (1998) argues that the second *I* in (20) is a zero pronoun in the same way that *was* in (19) has zero Tense. Below, I will provide new evidence for Kratzer (1998)'s analogy.

Kitagawa (1991) investigates sloppy/strict identity in VP-ellipsis constructions and claims that, in examples like the one in (21), more speakers allow only a sloppy reading than allow both sloppy and strict readings:

(21) John considers himself to be intelligent and Bill does, too

(21a) John considers himself to be intelligent and Bill considers himself to be intelligent, too. (sloppy reading)

(21b) John considers himself to be intelligent and Bill considers John to be intelligent, too. (strict reading)

All speakers that Kitagawa (1991) consulted accepted the sloppy reading (21a) but fewer people accepted (21b). However, Kitagawa claims that (22) only exhibits sloppy identity compared to (21):

(22) John advertised himself and Bill did, too.

(22a) John advertised himself and Bill advertised himself, too (sloppy reading)

(22b) *John advertised himself and Bill advertised John, too. (strict reading)

The reason that (22) does not permit a strict reading is due to Condition A, according to Kitagawa (1991). If *himself* is coindexed with *John* in (22b), *himself* does not have an antecedent within its Binding Domain; hence, (22b) is degraded. However, I have found that some speakers allow a strict reading for (22) despite the fact that the resulting representation in (22b) violates Condition A. Moreover, what is intriguing is that we see a great similarity between judgments about tense and about pronouns. Those native speakers who allow (22b) also allow a strict reading regarding PRO-ZP indices, namely (12c).

Eleven native speakers were asked to fill in questionnaires (for further details of the questionnaire, refer to the Appendix to this chapter) on their interpretations of sloppy/strict identity of Tense in Sluicing and Pronouns in VP-ellipsis. For sloppy/strict identity of Tense in Sluicing, examples such as (12) were used and SOT constructions such as (23) were added:

(23) Mary knew that someone was sick but I don't know who.

(23a) I don't know who was sick (when Mary knew that) (strict)

(23b) I don't know who was sick (before Mary knew that) (strict)

(23c) I don't know who is sick (right now) (sloppy)

(23a) represents an SOT reading where the time of *Mary's knowing that* is simultaneous with the time when someone is sick. Stowell (1993) claims that sentences like (23) are ambiguous; the first reading called a simultaneous reading where the embedded clause in (23) contains Null Present Tense. In addition, (23) exhibits a shifted reading where the embedded Past Tense has a real past interpretation. The shifted reading is such that the time when someone was sick precedes the time when Mary knew that. I propose that (23a) and (23b) exhibit strong identity of Tense. (23a) is obtained when the embedded PRO-ZP refers to the time of Mary's knowing that and the embedded tense contains Null Present Tense. The same is true for the embedded PRO-ZP in (23b) but the embedded Tense in (23b) contains real Past Tense. On the other hand, (23c) is a case of sloppy identity and the embedded PRO-ZP changes its controller when the TP is copied after *I don't know who*; hence, the new antecedent results. The most local controller is the matrix ZP, namely, the time of my not knowing. In (23c), the embedded Tense is Null Present Tense, which coincides with the embedded PRO-ZP and the new antecedent; it yields the reading where the time of someone's being sick is simultaneous with the time of my not knowing.⁵⁷

The results of the questionnaires are as follows. 1 out of 11 people did not accept at all the cases where an embedded IP(TP) is copied after *I don't know who*. In other

⁵⁷There should be another sloppy reading available where the embedded PRO-ZP refers to the time of my not knowing and the T has real past Tense. This will produce a scenario where the time of someone's being sick follows the time of Mary's knowing. I argue, at this point, that this reading is avoided due to a pragmatic inconsistency. It is pragmatically strange to say that Mary knew that someone was sick if this person was not yet sick at the time of Mary's knowing that. If Mary assumes that someone will be sick, then we must use a Future Tense and not a Past Tense as in "Mary knew that someone would be sick".

words, for these speakers, (24) only has the interpretation in (24a) and not those in (24b- 113 d), in which the matrix TP is copied:

(24) Jones said that he would defend someone but I don't know who.

(24a) I don't know who Jones said that he would defend.

(24b) I don't know who Jones would defend.

(24c) I don't know who Jones will defend.

(24d) I don't know who Jones defended.

This informant precisely pointed out that the embedded TP cannot be copied after *I don't know who* because the resulting sentence: *I don't know who Jones would defend*, is ungrammatical. I assume for this subject, it is not possible to change the antecedent of PRO-ZP and there is a strict requirement for *would* to take PRO-ZP that is Past as argued in Uribe-Extebarria (1994).

However, the 10 other speakers accepted some of the embedded readings in (24b-d). 5 informants rejected the strict reading of Tense in (24d). These 5 people also rejected the strict reading of pronouns in (21b) and (22b). Besides these 5 speakers 1 informant put ?? in (24d), the strict reading of Tense, and in (22b), the strict reading of pronouns and accepted (21b).⁵⁸ 4 speakers accepted both sloppy/strict identity of Tense and Pronouns. There were no speakers who accepted a strict reading of Tense in (24b) but rejected a strict reading of Pronouns in (22b) or (21b), or vice versa.¹ There was a strong correlation between speakers in their acceptance of sloppy/strict identity of Tense and Pronouns.

On the other hand, the SOT constructions in (23), listed here again in (25), are not as clear as the other cases. There is a great variability in the responses by the 11 subjects.

⁵⁸ Lasnik(p.c) observes that it is easier for (21b), an ECM construction, to yield strict identity than it is for (22b).

(25) Mary knew that someone was sick but I don't know who.

(25a) I don't know who was sick (when Mary knew that) (strict)

(25b) I don't know who was sick (before Mary knew that) (strict)

(25c) I don't know who is sick (right now) (sloppy)

The results grossly diverged in four ways. First, the one subject who did not allow an embedded clause as an antecedent consistently ruled out all three. Second, there were 2 subjects who allowed (25a) and (25b), which are strict readings, but ruled out (25c). On the other hand, there was 1 subject who only allowed (25c) but rejected (25a) and (25b); this pattern was exactly opposite from the previous 2 subjects. This subject claims that for (25a) and (25b) to be obtained, we have to say *I didn't know who* instead of *I don't know who*. 6 subjects ruled in all three. I have no consistent account for these responses but what is true for 10 subjects is that they preferred (25a) to the other two interpretations. I assume this is because (25) creates a scenario where someone was sick at some point in the past and it is very difficult to change the antecedent of this PRO-ZP within *someone was sick* after LF-copying. Unlike (25), in sentence (24), the time when Jones defends someone is not exactly referential; it contains *would* rather than a past tense that obligatorily forces us to pick some point in the past. I conclude that this case is similar to the case where a pronoun is used referentially. Fiengo and May (1994) observe that "when the overt pronoun is understood with deictic reference, then the elided pronoun must be understood to have just this deictic reference as well and no other" (1994; 99). They claim that (26) has the coindexing shown in (27a) but not (27b):

(26) Max saw his mother, and Oscar did, too.

(27) a. Max₁ [saw his₃ mother] and Oscar₂ [saw his₃ mother]

b. *Max₁ [saw his₃ mother] and Oscar₂ [saw his₄ mother]

When the pronoun is used referentially, for example, when *his mother* in the first clause 115 refers to John's mother, the elided pronoun in the second clause has an antecedent: John's mother and it cannot mean Max saw John's mother and Oscar saw Bill's mother. I conclude that past tense in (25) is being used referentially; hence, it cannot denote anything other than this deictic reference previously set up in the first clause.⁵⁹

5.5. Conclusion

In this chapter, I have investigated contrasts between sloppy vs. strict identity of tense interpretations in sluicing constructions, such as (28):

(28) Jones said that he would defend someone but I don't know who.

I have observed, contra Kitagawa (1991), that some speakers allow both strict and sloppy readings for reflexive pronouns in examples such as (29):

(29) John hit himself and Bill did, too.

We have discovered that there are three types of judgments for the sentence in (28). One group of people allow only a sloppy tense interpretation and the other group of people allow both sloppy and strict interpretations of tense. Despite a certain degree of variability, there is a strong correlation in informants' judgments; those subjects who allow only a sloppy tense interpretation also only allow sloppy identity for a reflexive pronoun, whereas subjects who permit both sloppy and strict identity of tense, also permit sloppy and strict identity of a pronoun. The results in 5.4 ($p < .001$) support our hypothesis that sloppy vs. strict identity as it applies to tense is crucially related to sloppy vs. strict identity applying to pronouns.

⁵⁹This analysis of Tense to be deictic is consistent with Enç (1987)'s proposal of Tense.

Throughout this thesis, I investigated the interaction between Tense and Specificity 116 in English and Japanese. In doing so, I modified and extended Stowell's analysis of Tense. Chapter 2 and 3 focused on different interpretations associated with specific and non-specific NPs. Since Stowell's analysis failed to capture the different temporal interpretations associated with the two types of NPs, I argued for a modification of his QR-based approach, and proposed that specific NPs contain another ZP. My contribution to Stowell's syntactic theory of Tense, in Chapter 2, was to accommodate a distinction between specific vs. non-specific NPs with respect to temporal interpretations. Besides the temporal difference between specific and non-specific object NPs, Diesing (1991) proposes that specific and non-specific NPs occupy different syntactic positions in Dutch and German. In Chapter 3, I applied her theory to Japanese. I presented three pieces of evidence that support the idea that Japanese, like Dutch and German, has different syntactic positions for a specific and a non-specific object NPs. In Chapter 4, I considered constraints on temporal interpretation in so-called ACD constructions, which are generally only possible with specific object NPs. I argued for the existence of a temporal variable within VP, as proposed in Stowell (1993). Stowell argued for this solely on conceptual grounds; the arguments I presented from ACD constructions in Chapter 4 provide additional empirical support for this. Also, I explained why the ACD constructions with Tense mismatch is degraded compared to the non-ACD cases with Tense mismatch. The analysis introduced in Chapter 4, which makes appeal to a copying operation at the level of LF, has an advantage in explaining why there is the Tense and Aspect Parallelism in ACDs but not in non-ACDs. In Chapter 5, I investigated the nature of external PRO-ZPs and suggested that in Sluicing constructions, control relations involved in PRO-ZPs can be maintained or altered after LF-copying and finally, I showed the similarity between PRO-ZPs and reflexive pronouns.

In sentences (1,5,6), can “I wonder who” or “I don’t know who” mean any of the interpretations described in (I), (II), or (III)? Please put *, ??, ? or √ as appropriate. Also, please let me know whether other sentences (2,4,5) can have sloppy and/or strict readings.⁶⁰

(1) John said that someone would come. I wonder who.

(I) () I wonder who John said would come.

(II) () I wonder who will come.

(III) () I wonder who came.

(2) John hit himself and Bill did, too.

(I) () John hit himself and Bill hit himself, too.

(II) () John hit himself and Bill hit John.

(3) Mary considers herself to be intelligent and Sue does, too.

(I) () Mary considers herself to be intelligent and Sue considers herself to be intelligent, too.

(II) () Mary considers herself to be intelligent and Sue considers Mary to be intelligent, too.

(4) John blamed himself and Susan did, too.

(I) () John blamed himself and Susan blamed herself, too.

(II) () John hit himself and Susan blamed John.

(5) Mary said that someone was sick but I don’t know who.

(I) () I don’t know who was sick (when Mary knew that).

(II) () I don’t know who was sick (before Mary knew that).

(III) () I don’t know who is sick (right now).

⁶⁰Lasnik (p.c.) points out that it would have been better not to use technical terms such as sloppy/strict readings. I will revise this instruction when I redo my questionnaire from now on.

(6) 3 weeks ago, Jones said that he would defend someone last week but I wonder who. 118

(I) () I wonder who Jones defended.

(II) () I wonder who Jones said that he would defend.

Results

	#1	#2	#3	#4	#5	#6	#7	#8	#9	#10	#11
1(I)	√	√	√	√	√	√	√	√	√	√	√
1(II)	?	√	√	√	√	√	√	√	√	*	√
1(III)	*	*	√	√	??	*	√	*	?	*	*
2(I)	√	√	√	√	√	√	√	√	√	√	√
2(II)	*	*	√	?	√	*	?	*	√	?	*
3(I)	√	√	√	√	√	√	√	√	√	√	√
3(II)	??	??	√	√	√	*	??	??	√	?	??
4(I)	?	?	√	√	??	√	√	*	√	?	√
4(II)	?*	*	√	√	√	*	?	*	√	√	*
5(I)	√	√	*	√	√	√	√	√	√	*	√
5(II)	√	√	*	√	√	√	√	*	√	*	√
5(III)	*	√	?	√	√	√	√	?	√	*	*
6(I)	√	√	√	√	√	??	√	√	√	*	*
6(II)	√	√	√	√	√	√	√	√	√	√	√

Summary Table for Rows, Columns

Num. Missing	0
DF	1
Chi Square	11.000
Chi Square P-Value	.0009
G-Squared	•
G-Squared P-Value	•
Contingency Coef.	.707
Phi	1.000
Cty. Cor. Chi Square	7.336
Cty. Cor. P-Value	.0068
Fisher's Exact P-Value	.0022

Bibliography

- Agbayani, B. 1995. Interpretation of Noun Phrases and Feature Licensing. The Proceedings of ConSOLE 4. Paris.
- Abusch, D. 1988. 'Sequence of Tense, Intensionality and Scope', WCCFL 7, 1-14.
- Abusch, D. 1994. The Scope of Indefinites. *Natural Language Semantics* 2.2: 83-135.
- Abusch, D. 1997. 'Sequence of Tense and Temporal De Re', *Linguistics and Philosophy* 20, 1-50.
- Baltin, M. 1987. Do Antecedent Contained Deletions Exist? *Linguistic Inquiry* 18: 579-595.
- Barss, A. 1986. *Chains and Anaphoric Dependence: on Reconstruction and its Implications*. Doctoral Dissertation, MIT.
- Bobaljik, J and D.Jonas. 1996. Subject Positions and the Roles of TP. *Linguistic Inquiry* 27: 195-236.
- Bouton, M. 1970. Antecedent-Contained Pro-Forms. *Papers from the Sixth Regional Meeting of Chicago Linguistic Society*, 154-167.
- Boskovic, Z. 1997. Coordination, object shift and V-movement. *Linguistic Inquiry* 28: 357-365.
- Brugger, G. 1996. The Temporal Representation of Present Perfect Types. Ms., UCLA and University of Vienna.
- Carlson, G. 1995. Individual-level Predicates as Inherent Generics. G. Carlson and F.J.Pelletier (eds.), *The Generic Book*. The University of Chicago Press: Chicago.
- Chung, S, W. Ladusaw and J. McCloskey 1995. Sluicing and Logical Form. *Natural Language Semantics* 3:239-282.

- Chomsky, N. 1976. Conditions on Rules of Grammar, *Linguistic Analysis* 2: 303-351. 120
- Chomsky, N. 1981 *Lectures on Government and Binding*. Dordrecht: Foris.
- Chomsky, N. 1986. *Barriers*. MIT Press: Cambridge, Mass.
- Chomsky, N. 1991. Some Notes on Economy of Derivation and Representation. In R. Freidin, ed., *Principles and Parameters in Comparative Grammar*. MIT Press: Cambridge, Mass.
- Chomsky, N. 1995. *The Minimalist Program*. MIT Press: Cambridge, Mass.
- Collins, C. 1994. Economy of Derivation and the Generalized Proper Biding Condition. *Linguistic Inquiry* 25: 45-61.
- Comrie, B. 1985. *Tense*. Cambridge University Press, Cambridge.
- Demirdache H. & M. Uribe-Etxebarria. 1997. Towards a Unified Theory of Tense and Aspect, a talk given at the University of Connecticut.
- Diesing, M. 1992. *Indefinites*. MIT Press: Cambridge, Mass.
- Diesing, M. 1996. Semantic Variables and Object Shift, In H. Thrainsson, S. D. Epstein and S. Peter (Eds) *Studies in Comparative Germanic Syntax II*, 66-84. Kluwer Academic Publishers: Netherlands.
- Enç, M. 1981. *Tense without Scope: An Analysis of Nouns as Indexicals*, Doctoral Dissertation, University of Wisconsin-Madison.
- Enç, M. 1985. Temporal Interpretation, Ms., University of Southern California.
- Enç, M. 1986. Towards a Referential Analysis of Temporal Expressions. *Linguistics and Philosophy* 4: 405-426.
- Enç, M. 1987 Anchoring Conditions for Tense. *Linguistic Inquiry* 18: 633-669.
- Enç, M. 1991. The Semantics of Specificity. *Linguistics Inquiry* 22: 1-26.
- Enç, M. 1991. On the Absence of the Present Tense Morpheme in English. Ms., University of Wisconsin-Madison.
- Fox, D. 1995a. Economy and Scope. *Natural Language Semantics* 3: 283-341.

- Fox, D. 1995b. Condition C effects and ACD. In H. Ura and R. Pensalfini (eds.), *Papers 121 on Minimalist Syntax*. MITWPL 27.
- Fiengo, R. 1977. On Trace Theory. *Linguistics Inquiry* 8: 35-61.
- Fiengo, R. and R. May. 1994. *Indices and Identity*. MIT Press: Cambridge, Mass.
- Haik, I. 1987. Bound VPs that Need to Be. *Linguistics and Philosophy* 10: 503-530.
- Heim, I. 1994. Comments on Abusch's Theory of Tense. In H. Kamp (ed.), *Ellipsis, Tense and Questions*. Dyana 2 Deliverable, 143-170.
- Higginbotham, J. 1995. Tensed Thoughts. *Mind and Language*, 10:226-249.
- Hirschbühler, P. 1982. VP-Deletion and Across the Board Quantifier Scope. In J. Pustejovsky and P. Sells (eds.), *Proceedings of NELS 12*: 132-139. GLSA, UMass, Amherst.
- Hoji, H. 1985. *Logical Form Constraints and Configurational Structures*. Doctoral Dissertation, University of Washington.
- Hoji, H. 1990. Theories of Anaphora and Aspects of Japanese Syntax. Ms. University of Southern California.
- Hoji, H. 1995. Null Object and Sloppy Identity in Japanese. Ms. University of Southern California.
- Hollabrandse, B. 1996. The Acquisition of Embedded Past Tense, Ms. University of Massachusetts, Amherst.
- Holmberg, A. 1986. *Word order and syntactic features in the Scandinavian languages and English*. Doctoral dissertation, University of Stockholm.
- Hornstein, N. 1977. Towards a Theory of Tense. *Linguistic Inquiry* 8: 521-557.
- Hornstein, N. 1990. *As Time Goes By*. MIT Press: Cambridge, Mass.
- Hornstein, N. 1994. An Argument for Minimalism: The Case of Antecedent Contained Deletion. *Linguistic Inquiry* 25: 455-480.
- Hornstein, N. 1995. *Logical Form: From GB to Minimalism*. Basil Blackwell: Cambridge, Mass.

- Huang, J. 1984. On the Distribution and Reference of Empty Pronouns. *Linguistic Inquiry* 15: 531-574.
- Inoue, K. 1997. Researching and Verifying an Advanced Theory of Human Language. Grant-in-Aid for COE Research. Kanda University of International Studies.
- Johnson, K. 1985. *A Case for Movement*. Doctoral Dissertation. MIT.
- Johnson, K. 1991. Object Positions. *Natural Language and Linguistic Theory* 9: 287-313.
- Johnson, K. 1992. Bridging the Gap. Ms. University of Wisconsin, Madison.
- Johnson, K. 1997. When Verb Phrases Go Missing. Ms. University of Massachusetts.
- Katada, F. 1991. The LF Representation of Anaphors. *Linguistic Inquiry* 22: 531-574.
- Kennedy, C. 1997. Antecedent Contained Deletion and the Syntax of Quantification. *Linguistic Inquiry* 28-4: 662-688.
- Kitagawa, Y. 1991. Copying Identity. *Natural Language and Linguistic Theory* 9: 497-536.
- Klein, W. 1995. A Time Relational Analysis of Russian Aspect. *Language* vol. 71.4
- Koizumi, M. 1993. Object Agreement Phrases and the Split VP Hypothesis. In Jonathan Bobaljik and Colin Phillips (eds.) *Papers on Case and Agreement I*. MIT Press: Cambridge Mass.
- Koizumi, M. 1995. *Phrase Structure in Minimalist Syntax*. Doctoral Dissertation, MIT.
- Kratzer, A. 1981. Stage-Level and Individual-Level Predicates. In *Papers on Quantification*, University of Massachusetts, Amherst.
- Kratzer, A. 1998. More Structural Analogies Between Pronouns and Tenses. A talk given at SALT 8 at MIT.
- Kuno, S. 1973. *The Structure of Japanese Language*. MIT Press: Cambridge, Mass.
- Larson, R. 1988. On the Double Object Construction. *Linguistic Inquiry* 19: 335-392.

- Larson, R and R. May. 1990. Antecedent Contained Deletion or Vacuous Movement: 123
reply to Baltin. *Linguistic Inquiry* 21: 103-122.
- Lasnik, H. 1993. Lectures on Minimalist Syntax. *University of Connecticut Working
Papers Occasional Papers in Linguistics* 1, University of Connecticut, Storrs,
Conn.
- Lasnik, H. 1994. Verbal Morphology: *Syntactic Structures* Meets the Minimalist
Program. Ms., University of Connecticut.
- Lasnik, H. 1995a. A Note on Pseudogapping. The MIT Working Paper in Linguistics
27. MITWPL, Cambridge, Mass.
- Lasnik, H. 1995b. Last Resort. In Proceedings of the First Numazu Conference on
Formal Linguistics.
- Lasnik, H. 1996. Quantifier Lowering? Ms., University of Connecticut.
- Lasnik, H. In press a. On Feature Strength: Three Minimalist Approaches to Overt
Movement. *Linguistic Inquiry*.
- Lasnik, H. In press b. Pseudogapping Puzzles. To appear in E. Benamoun, H.Hoshi,
and S. Lappin (eds.) *Fragments: Studies in Ellipsis and Gapping*. Oxford
University Press: Oxford.
- Lasnik, Howard. To appear. Chains of Arguments. In S. Epstein and N. Hornstein
(eds.) *Working Minimalism*. MIT Press: Cambridge, Mass.
- Lasnik, H and M. Saito. 1991. On the Subject of Infinitives, CLS 27 Part 1: the General
Session.
- Lasnik, H and M. Saito. 1992. *Move Alpha*. MIT Press: Cambridge, Mass.
- Leder, H. 1991. *Tense and Temporal Order*, Doctoral Dissertation, MIT.
- Lee, R. 1992. Negative Polarity Items Licensing and the Nature of Neg Projection. Ms.,
University of Connecticut.
- Levin, L. 1979/86. Main Verb Ellipsis in Spoken English. (Ohio State Ph.D.
Dissertation.) Garland: New York.

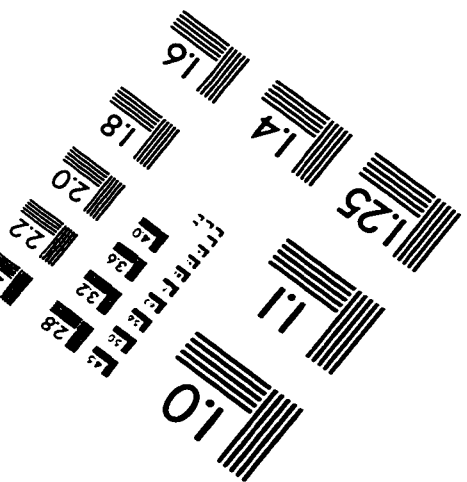
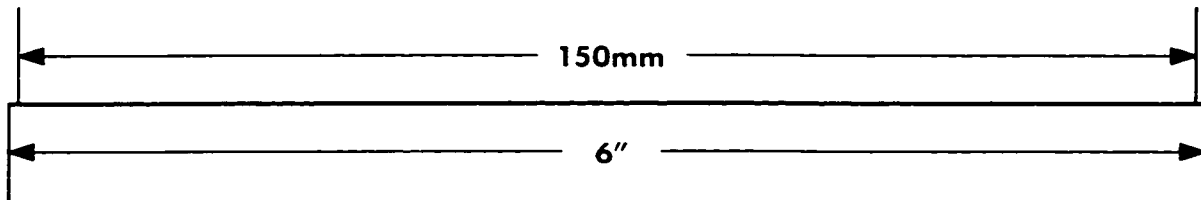
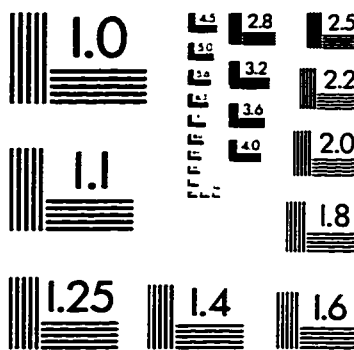
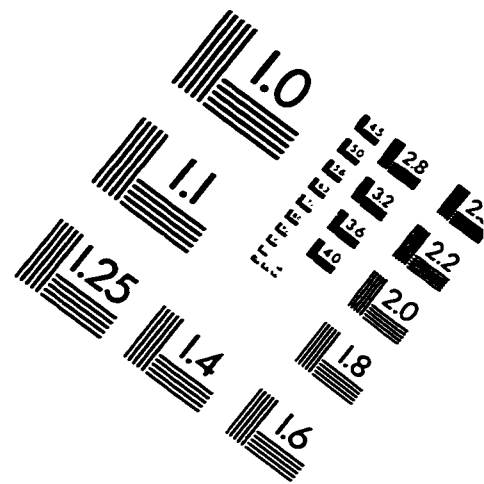
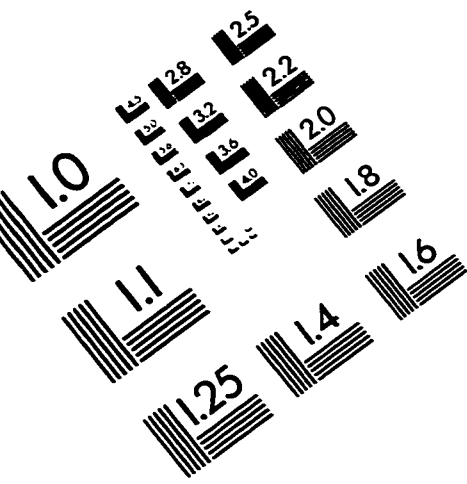
- Marchant, J. 1996. Guess what I found, and where: Pronominal wh-traces under sluicing 124
Presented at the 71st annual meeting of LSA, Chicago IL.
- Martin, R. 1993. Null Case and the Distribution of PRO. Ms., University of Connecticut.
- Martin, R. 1996. *A Minimalist Theory of PRO and Control*. Doctoral Dissertation, University of Connecticut.
- Matsuo, A. 1996. Tense Ambiguity and Specificity. ESCOL '96 Proceedings.
- Matsuo, A. 1998. Tense and Aspect Parallelism in Antecedent Contained Deletions. Proceedings of the Seventeenth West Coast Conference on Formal Linguistics, CSLI.
- May, R. 1985. *Logical Form*. MIT Press: Cambridge, Mass.
- McCawley, J. 1981. They Syntax and Semantics of English Relative Clauses. *Lingua* 53: 99-149.
- Miyagawa, S. 1986. *Structure and Case Marking in Japanese*. *Syntax and Semantics* 22. Academic Press: San Diego.
- Musan, R. 1995. *On the Temporal Interpretation of Noun Phrases*. Doctoral Dissertation, MIT.
- Nakamura, A. 1993. The Syntactic Analysis of Tense in Japanese. Ms., UCLA.
- Nakamura, A. 1994. On the Tense System of Japanese. Proceedings of Japanese/Korean Linguistics Conference Vol 4, CSLI.
- Nakamura, A. 1994. Some Aspects of Temporal Interpretation in Japanese. Will appear in the proceedings of Formal Approaches to Japanese Linguistics, the MIT working papers in Linguistics.
- Ogihara, T. 1989. *Temporal Reference in English and Japanese*. Doctoral dissertation. University of Texas at Austin.
- Ogihara, T. 1995a. Double-Access Sentences and Reference to States. *Natural Language Semantics* 3: 177-210.

- Ogihara, T. 1995b. The Semantics of Tense in Embedded Clauses. *Linguistic Inquiry* 125
26: 663-679.
- Ogihara, T. 1995c. *Tense, Attitudes and Scope*, Kluwer: Dordrecht.
- Oku, S. 1996. On Remnant Aux Structure. Ms. University of Connecticut.
- Otani, K. and J. Whitman. 1991. V-Raising and VP-Ellipsis. *Linguistic Inquiry* 22:
145-158.
- Partee, H.B. 1973. Some Structural Analogy between Tenses and Pronouns in English.
The Journal of Philosophy 7, 243-286.
- Partee, H.B. 1984. Nominal and Temporal Anaphora. *Linguistics and Philosophy* 7:
243-286.
- Pesetsky, D. 1987. Wh-in-Situ: Movement and Unselective Binding. *The
Representation of (In)definites*, (eds.) Reuland et al. MIT Press: Cambridge,
Mass.
- Pollock, J-Y. 1989. Verb Movement, UG and the Structure of IP. *Linguistics Inquiry*
20: 365-424.
- Ramchand, G. 1995. Aspect and Predication: The Semantics of Argument Structure.
- Reichenbach, H. 1947. *Elements of Symbolic Logic*. The Free Press: N.Y.
- Rizzi, L. 1990. *Relativized Minimality*, MIT Press: Cambridge, Mass.
- Ross, J. 1967. *Constraints on Variables in Syntax*. Doctoral Dissertation, MIT.
- Ross, J. 1969. Guess who? In R. Binnick et al. (eds.). CLS5;252-286.
- Saito, M. 1985. *Some Asymmetries in Japanese and their Theoretical Implications*.
Doctoral Dissertation, MIT.
- Saito, M. 1989. Scrambling as Semantically Vacuous A'-Movement, *Alternative
Conceptions of Phrase Structure*, (eds.) Baltin et al. University of Chicago Press:
Chicago.
- Saito, M. and K. Murasugi. 1993. Subject predication within IP and DP. ms. University
of Connecticut and Kinjo Gakuin University.

- Stepanovic, S. 1996. Is Inherent Case Structural? A talk given at FASL 5, University of Connecticut.
- Stowell, T. 1982. The Tense of Infinitives. *Linguistic Inquiry* 13: 561-570.
- Stowell, T. 1993. Syntax of Tense. Ms., UCLA
- Stowell, T. 1996. The Phrase Structure of Tense. In *Phrase Structure and the Lexicon*: 277-291. M. Simons and T. Galloway (eds.). Dordrecht: Kluwer.
- Tada, H. 1992. Nominative Objects in Japanese. *Journal of Japanese Linguistics* 14, 91-108.
- Takahashi, D. 1993. On Antecedent-Contained Deletion. Ms. University of Connecticut.
- Takahashi, D. 1994. *Minimality of Movement*. Doctoral Dissertation, University of Connecticut.
- Takahashi, D. 1996. Antecedent-Contained Deletion in Japanese. In Uchibori, A and K. Yatsushiro (eds.) *University of Connecticut Working Papers in Linguistics* 7. Distributed by MITWPL.
- Tancredi, C. 1992. *Deletion, Deaccenting and Presupposition*. Doctoral Dissertation, MIT.
- Taylor, B. 1977. Tense and Continuity. *Linguistics and Philosophy* 1.2 199-220.
- Tiedeman, R. 1995. Some Remarks on Antecedent Contained Deletion. In *Proceedings of the First Numazu Conference on Formal Linguistics*.
- Travis, L. 1991. Derived Objects, Inner Aspect, and the Structure of VP. presented at NELS, University of Delaware.
- Uribe-Etxebarria, M. 1994. *Interface Licensing Conditions on Negative Polarity Items: A Theory of Polarity and Tense Interactions*, Doctoral Dissertation. University of Connecticut.
- Yatsushiro, K. 1997. VP-Scrambling in Japanese. *University of Connecticut Working Papers in Linguistics* 8, 'Is the Logic Clear?': Papers in Honor of Howard Lasnik, 325-338.

- Williams, E. 1976. Discourse and Logical Form. *Linguistic Inquiry* 8: 101-139. 127
- Wyngaerd, G.V. and J.-W. Zwart. 1991. Reconstruction and Vehicle Change. in F. Dijkoningen and A. van Kemenade (eds,) *Linguistics in the Netherlands 1991*.
- Zagona, K. 1982. *Government and Proper Government of Verbal Projections*. Doctoral Dissertation, University of Washington.
- Zagona, K. 1988. *Verb Phrase Syntax: A Parametric Study of English and Spanish*, Dordrecht: Kluwer.
- Zagona, K. 1993. Perfectivity and Temporal Arguments. paper presented at the 23rd Linguistic Symposium on Romance Languages.

IMAGE EVALUATION TEST TARGET (QA-3)



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