

**JAPANESE *-TE IRU* AND *-TE ARU*:
THE ASPECTUAL IMPLICATIONS OF THE STAGE-LEVEL AND
INDIVIDUAL-LEVEL DISTINCTION**

by

MAMORI SUGITA

A dissertation submitted to the Graduate Faculty in Linguistics in partial fulfillment of
the requirements for the degree of Doctor of Philosophy,
The City University of New York

2009

© 2009

MAMORI SUGITA

All Rights Reserved

This manuscript has been read and accepted for the
Graduate Faculty in Linguistics in satisfaction of the
dissertation requirement for the degree of Doctor of Philosophy.

Date

Professor William McClure
Chair of Examining Committee

Date

Professor Gita Martohardjono
Executive Officer

Professor Marcel den Dikken

Professor Robert Fiengo

Supervision Committee

THE CITY UNIVERSITY OF NEW YORK

ABSTRACT

JAPANESE *-TE IRU* AND *-TE ARU*:
THE ASPECTUAL IMPLICATIONS OF THE STAGE-LEVEL AND
INDIVIDUAL-LEVEL DISTINCTION

by

MAMORI SUGITA

Adviser: Professor William McClure

This dissertation investigates semantic and syntactic properties of the forms *-te iru* and *-te aru* in Japanese, as well as pragmatic effects of statements with these forms.

With an activity verb in the *-te iru* form, progressive, experiential, and habitual readings are available. With an achievement verb in the *-te iru* form, perfective, experiential, and habitual readings are available. I address specifically the difference between perfective and experiential readings. After reviewing the literature, where it seems that the distinction is not clear, I give a series of empirical tests and argue that experiential sentences exhibit properties of individual-level predicates, while perfective (as well as progressive) sentences exhibit properties of stage-level predicates.

There are two types of *-te aru* sentences, intransitivizing and non-intransitivizing *-te aru*, both of which have been claimed to yield perfective readings. However, I argue that all *-te aru* sentences are experiential and exhibit properties that parallel individual-level predicates.

Formally, I propose that progressive and perfective *-te iru* are represented as sets of events with a requirement that the event be realized. In contrast, I propose that experiential *-te iru* and *-te aru* are represented as sets of individuals with a requirement that the event be realized. The relative scope difference of the event and individual variables in the semantic representation reflects the stage-level and individual-level distinction. Progressive and perfective *-te iru* denote properties of events, while experiential *-te iru* and *-te aru* denote properties of individuals.

The stage-level/individual-level distinction is also reflected in the proposed syntax. Progressive and perfective *-te iru* sentences have raising structures, while experiential *-te iru* and *-te aru* sentences have control structures. The scope of the event and individual arguments in the semantics of *-te iru* and *-te aru* is reflected in the position of their subjects in syntax.

Lastly, I argue that habitual *-te iru* sentences parallel experiential *-te iru* sentences in that they also exhibit properties of individual-level predicates.

ACKNOWLEDGMENTS

I could not have come this far without the guidance provided by Professor William McClure. He introduced me to the fantastic worlds of semantics, Japanese linguistics, Japanese language teaching, and most importantly the topic of this dissertation: *-te iru* and *-te aru*. It was such a privilege to have Professor McClure as my adviser. On this day, I only hope that he is happy with the results.

Professor Marcel den Dikken always made himself available whenever I needed to talk to him. His suggestion and comments always contained good lessons on how to analyze language. I am grateful to him for helping me realize substantive issues that would have escaped me without his guidance. His advice and feedback contributed greatly to the work in this dissertation.

Professor Robert Fiengo taught me how to think and talk about linguistic issues in such a way that it makes sense and is of value. I remember the first time I talked to him in his office, where the only positive comment I received was that I speak English well. Since then, with his guidance, I have learned to discuss linguistic issues with substance.

I wish to thank Professor Gita Martohardjono, the Executive Officer of the Program in Linguistics, for being very patient with my slow progress and providing tremendous support for me to complete this dissertation.

Thanks are also due to Nishi Bissoondial, the Assistant Program Officer, for making various administrative arrangements and facilitating my completion of requirements.

I am fortunate to have great friends at the CUNY Graduate Center. I especially thank the following current and past students at the linguistics program for their encouragement, sharing of ideas, and grammatical judgments: Charles Braver, Carrie Crowther, Mari Fujimoto, Alison Gabriele, Yukiko Koizumi, Miho Nagai, Tomonori Nagano, Ji Young Shim, Stephanie Solt, Rachel Szekeley, Erika Troseth, Christopher Warnasch, Tomoyuki Yabe, and Megumi Yoshida.

I have greatly benefited from feedback and input from Professors Seiki Ayano, Masanori Deguchi, Heidi Harley, Mamoru Saito, Yukinori Takubo, and Satoshi Tomioka.

Special thanks go to John Hughes, for lifting up my spirit every day for the past seven years, and for showing me the beauty of hard work and dedication.

My family has provided me an endless support. I am truly fortunate that my family has been very understanding and supportive of my passion. It is with my sincere gratitude that I dedicate this dissertation to Sakuzou, Shirou, Tomiko, Takashi, and Masako Sugita.

CONTENTS

ABSTRACT	iv
ACKNOWLEDGMENTS	vi
CONTENTS	viii
LIST OF TABLES	xiv
CHAPTER 1 INTRODUCTION	1
1. Aspect	1
2. The <i>-te iru</i> and <i>-te aru</i> forms	2
3. Stage-level and individual-level predicates	7
4. Overview	8
CHAPTER 2 INTERPRETATIONS OF <i>-TE IRU</i>	11
1. Introduction	11
2. Aspectual classification of verbs	12
2.1 Introduction	12
2.2 Classification of English verbs	12
2.3 Classification of Japanese verbs	14
2.4 Class of accomplishments	18
3. Progressive and perfective	23
4. Experiential	26
4.1 Introduction	26
4.2 Past events and present properties	28
4.3 The time when an event obtains	30

5. Accomplishments	32
5.1 Introduction	32
5.2 Perfective vs. experiential	32
5.3 Interpretations of accomplishments + <i>-te iru</i>	37
5.4 Aspectual properties of Japanese accomplishments	39
5.5 Event cancellation	48
6. Habitual	52
7. Summary	55
CHAPTER 3 PERFECTIVE VS. EXPERIENTIAL	57
1. Introduction	57
2. Necessary outcomes of events	60
2.1 Achievements	60
2.2 Activities	61
2.3 Accomplishments	62
3. Stage level vs. individual level	64
3.1 Introduction	64
3.2 Stage-level and individual-level predicates	65
3.3 <i>-wa</i> and <i>-ga</i> interpretations	66
3.4 Tense modifiers	72
3.5 The expression <i>tokoro-da</i>	74
3.6 Summary	79
4. Remarks on the adverbial <i>ima</i> (<i>now</i>)	81
5. Summary	85
CHAPTER 4 INTERPRETATIONS OF <i>-TE ARU</i>	87
1. Introduction	87

2. Formal properties of <i>-te aru</i>	89
2.1 Intransitivizing <i>-te aru</i>	89
2.2 Non-intransitivizing <i>-te aru</i>	90
3. Pragmatics of intransitivizing <i>-te aru</i>	92
3.1 Intention and evidence	92
3.2 Affected objects and location of evidence	94
3.3 Unaffected objects and location of evidence	98
3.4 When evidence is not necessary	100
4. Pragmatics of non-intransitivizing <i>-te aru</i>	101
5. Interpretations of non-intransitivizing <i>-te aru</i>	104
5.1 Introduction	104
5.2 Necessary outcomes of events	105
5.3 Grammatical tests	109
6. Interpretations of intransitivizing <i>-te aru</i>	113
6.1 Introduction	113
6.2 Necessary outcomes of events	114
6.3 Grammatical tests	117
6.4 Experience of an unspecified agent	119
7. Summary	126
CHAPTER 5 SEMANTICS OF <i>-TE IRU</i> AND <i>-TE ARU</i>	129
1. Introduction	129
2. Formal distinction between SLP and ILP	131
2.1 Carlson (1977)	131
2.2 Kratzer (1995)	134

3. Semantics of <i>-te iru</i>	139
3.1 Introduction	139
3.2 McClure (2007)	140
3.3 Semantics of progressive and perfective <i>-te iru</i> revised	144
3.4 Semantics of experiential <i>-te iru</i>	151
3.5 Scope of the event argument	159
3.6 Summary	162
4. Semantics of <i>-te aru</i>	163
4.1 Introduction	163
4.2 Non-intransitivizing <i>-te aru</i>	164
4.3 Intransitivizing <i>-te aru</i>	170
4.4 Scope of the event argument	174
4.5 Summary	177
5. Summary	178
CHAPTER 6 SYNTAX OF <i>-TE IRU</i> AND <i>-TE ARU</i>	182
1. Introduction	182
2. Complementations structures	183
2.1 Introduction	183
2.2 <i>-te iru</i> and <i>-te aru</i> as syntactic compounds	183
2.3 Raising and control	188
2.4 Complementations structures of <i>-te iru</i> and <i>-te aru</i>	193
2.5 Summary	201
3. The proposal	202
3.1 Introduction	202
3.2 <i>-te</i>	203
3.3 Mono-clausal vs. bi-clausal analysis	210
3.4 Interim summary	213
3.5 Progressive and perfective <i>-te iru</i>	214
3.6 Experiential <i>-te iru</i> and non-intransitivizing <i>-te aru</i>	215

3.7 Intransitivizing <i>-te aru</i>	217
3.8 Summary	223
4. Syntax-semantics mapping	224
4.1 Introduction	224
4.2 Stage-level and individual-level distinction	226
4.3 Variable identification	229
4.4 External argument and the projection of little <i>v</i>	230
4.5 Existential closure	231
4.6 Progressive and perfective <i>-te iru</i>	232
4.7 Experiential <i>-te iru</i> and non-intransitivizing <i>-te aru</i>	236
4.8 Intransitivizing <i>-te aru</i>	240
4.9 Summary	242
5. Summary	243
CHAPTER 7 HABITUAL <i>-TE IRU</i>	245
1. Introduction	245
2. Literature review	246
2.1 Definition of habitual sentences	246
2.2 Iterative and habitual <i>-te iru</i>	249
2.3 Existing analysis of habitual <i>-te iru</i>	253
2.4 Habitual <i>-te iru</i> vs. simple present	255
2.5 Summary	258
3. Habitual and experiential <i>-te iru</i>	259
3.1 Introduction	259
3.2 Individual-level properties of habitual <i>-te iru</i>	260
3.3 Habitual <i>-te iru</i> as a type of experiential <i>-te iru</i>	265
3.4 Summary	271
4. Animacy and <i>-te iru</i> interpretations	272
4.1 Introduction	272

4.2 <i>-te iru</i> with inanimate subjects	273
4.3 Summary	276
6. Summary	276
BIBLIOGRAPHY	278

LIST OF TABLES

Table 2.1: Vender/Dowty aspectual classification of English verbs	13
Table 2.2: Kindaichi's aspectual classification of verbs	14
Table 2.3: Available readings of the <i>-te iru</i> form	56

CHAPTER 1

INTRODUCTION

1. Aspect

This dissertation investigates semantic and syntactic properties of the forms *-te iru* and *-te aru* in Japanese, as well as pragmatic effects of statements with these forms. Both *-te iru* and *-te aru* are aspect markers that attach to verbs. As such, I start with the definition of aspect, and how it is distinct from tense. According to Comrie (1976), aspects are different ways of viewing the internal temporal constituency of a situation. In contrast, tense relates the time of a situation described to the time of speaking. Thus, an aspect marker looks into the particular realization of the situation (such as the beginning, the middle, or the ending) described by the predicate, while a tense marker locates the time of a situation at a designated point without altering the propositional content. For example, English *be + -ing* is an aspect marker that primarily yields a progressive interpretation; combined with the past tense marker, *was/were + V-ing* yields a past progressive interpretation.

Jacobsen (1992) points out that there are three factors that contribute to aspectual meanings: 1) the inherent meanings of verbs; 2) aspect markers; 3) further modifications based on the semantic contribution of nouns, adverbs, and other linguistic items present in the clause as a whole. Thus, when investigating interpretations of *-te iru* and *-te aru* sentences, it is essential to consider the interactions between these forms and the inherent meanings of the verbs, as well as

further modifications provided in the context. Before presenting formal semantic and syntactic definitions of *-te iru* and *-te aru*, this dissertation provides a careful examination of the possible interpretations of these constructions taking into account all three factors.

2. The *-te iru* and *-te aru* forms

The forms *-te iru* and *-te aru* attach to the gerund form (*renyookee*) of the main verb, as is shown in (1). Depending on the gerund form of the main verb, *-te* undergoes phonological assimilation and can be realized as *-de*, which is shown in (2). *Iru* and *aru* are by themselves in their present tense forms.¹ They can be marked past tense, in which case the verbs conjugate and take the forms *i-ta* and *at-ta*, which are shown in (3).

(1) a. *tabe-te iru*
 eat-te iru

b. *tabe-te aru*
 eat-te aru

(2) a. *non-de iru*
 drink-te iru

¹ Japanese present tense forms can also refer to future. Thus, Japanese present tense forms might be called non-past forms. In this dissertation, however, I use these forms only to refer to the time of speech. In order to avoid unnecessary confusion, I therefore use the term *present tense* instead of *non-past* in this dissertation.

- b. non-de aru
 drink-*te* *aru*
- (3) a. tabe-te i-ta
 eat-*te* *iru*-PAST
- b. tabe-te at-ta
 eat-*te* *aru*-PAST

When used independently, the verbs *iru* and *aru* mean ‘exist’; *iru* is used with animate subjects and *aru* is used with inanimate subjects, as shown in (4). Although the independent verbs *iru* and *aru* are often translated into English as ‘be’, they are considered to be distinct from the copula, which is *da*. Sentences with the copula *da* are exemplified in (5).

- (4) a. Mari-ga heya-ni iru
 Mari-NOM room-LOC exist
 ‘Mari is in the room’
- b. hon-ga tukue-no ue-ni aru
 book-NOM desk-GEN top-LOC exist
 ‘There is a book on the desk’ / ‘The book is on the desk’
- (5) a. Mari-wa gakusee-da
 Mari-TOP student-COP
 ‘Mari is a student’
- b. kono hon-wa zyuu doru-da
 this book-TOP ten dollar-COP
 ‘This book is ten dollars’

Iru and *aru* in *-te iru* and *-te aru* are usually taken to be auxiliary verbs and their semantic roles are normally considered distinct from their meaning as independent verbs. There are several possible interpretations of *V-te iru* and *V-te aru*. These various interpretations are the main data that I explore in this dissertation. A sketch of the possible range of meanings of *-te iru* is provided in (6) below.

(6) *-te iru*

- a. Mari-ga ima oyoi-de iru
 Mari-NOM now swim-*te iru*
 ‘Mari is swimming now’
 (Progressive)
- b. Mari-ga ima igirisu-ni it-te iru
 Mari-NOM ima England-LOC go-*te iru*
 ‘Mari (went to England and) is in England now’
 (Perfective)
- c. Mari-wa ima made-ni sankai kono kawa-de
 Mari-TOP now up.to-LOC three.times this river-LOC
 oyoi-de iru
 swim-*te iru*
 ‘Mari has swum in this river three times up to now’
 (Experiential)
- d. Mari-wa ima made-ni sankai igirisu-ni it-te iru
 Mari-TOP now up.to-LOC three.times England-LOC go-*te iru*
 ‘Mari has been to England three times up to now’
 (Experiential)

e. Mari-wa maiasa oyoide iru
 Mari-TOP every.morning swim-*te* *iru*
 ‘Mari swims every morning’
 (Habitual)

f. Mari-wa maitosi igirisu-ni it-te iru
 Mari-TOP every.year England-LOC go-*te* *iru*
 ‘Mari goes to England every year’
 (Habitual)

The examples in (6) show that *-te iru* can yield four different types of readings; progressive, perfective, experiential, and habitual. The progressive reading exemplified in (6a) is more or less equivalent in meaning of the English progressive *be swimming*. The perfective example in (6b) describes a situation where the result of going to England obtains. Thus, (6b) expresses the fact that Mari is in England as the result of her going to England. The experiential examples (6c&d) seem to refer to past events although the sentences are in the present tense. It should also be pointed out that the identical expression *oyoi-de iru* is used in the progressive example in (6a) and the experiential example in (6c). Likewise, the expression *it-te iru* is used in both the perfective example in (6b) and the experiential example in (6d). However, we see that different adverbials are used between (6a&b) and (6c&d); i.e. *ima (now)* is used in (6a&b) whereas *ima made-ni sankai (three times up to now)* is used in (6c&d). The habitual example in (6e) uses the expression *oyoi-de iru* just as in the progressive example in (6a) and the experiential example in (6c). Likewise, the habitual example in (6f) uses the expression *it-te iru* just as in the perfective example in (6b) and the

experiential example in (6d). The habitual readings seem to arise with modifiers of frequency such *maiasa* (*every morning*) and *maitosi* (*every year*).

Turning to *-te aru*, the examples in (7) show that there are two different types of *-te aru* sentences in terms of their surface structures.

(7) *-te aru*

a. keeki-ga tukut-te aru
 cake-NOM make-*te* *aru*
 ‘A cake has been made’

b. Mari-ga keeki-o tukut-te aru
 Mari-NOM cake-ACC make-*te* *aru*
 ‘Mari has made a cake’

The example in (7a) looks as though it is a passive sentence; i.e. the semantic object of the verb *tukuru* (*make*) is marked nominative, and the agent of making a cake is not expressed. However, (7a) is distinct from the passive as the expected passive morpheme *rare* is not used in (7a). Turning to (7b), this example exhibits standard case-marking, with the subject marked nominative and the object marked accusative. As for the interpretations of (7a&b), they seem to be either perfective or experiential. Without concrete definitions of what it means to be perfective or experiential, however, it is difficult to judge which interpretation (7a&b) should be associated with.

3. Stage-level and individual-level predicates

The terms *stage-level predicate* and *individual-level predicate* have become standard since first used by Carlson (1977). However, his classification of predicates is based on observations found in Milsark (1974). Milsark notes that some English adjectives are allowed in *there*-insertion while others are not, as exemplified below.

- (8) a. There were several students {*tired, drunk, hungry, awake...*}
 b. *There were several students {*intelligent, boring, tall, fat...*}

Milsark refers to adjectives which are allowed in *there*-insertion as *states* and those which are not allowed as *properties*. He describes states as transitory conditions of entities, while properties are permanent, unalterable, and assumed facts about entities. Removal of a state does not cause any change to the essential qualities of an entity, while removal of a property does.

Carlson (1977) generalizes Milsark's observation on adjectives into all types of predicates. Further, Carlson uses the terms *stage-level predicates* and *individual-level predicates*, which correspond to Milsark's *states* and *properties* respectively. Thus, under Carlson's classification, predicates such as *swim* and *go*, as well as the adjectives *tired* and *hungry*, are considered stage-level predicates. In contrast, predicates such as *know* and *have blue eyes*, as well as the adjectives *tall* and *intelligent*, are considered individual-level predicates.

4. Overview

The goal of this thesis is to provide a theoretical account of *-te iru* and *-te aru* that explains all of the possible forms and interpretations reviewed in (6) and (7). In addition, I argue that Japanese experiential sentences are a kind of individual-level predicate. In developing an account of this fact, I am lead to the broader claim that individual-level properties can be observed in certain types of propositions which do not even contain individual-level predicates.

The organization of this thesis is the following.

In Chapter 2, the different readings of *-te iru* sentences are discussed. As mentioned above, there are four available readings: progressive, perfective, experiential, and habitual. Among them, progressive and perfective readings are tied to the aspectual properties of verbs that *-te iru* attaches to. Thus, I review the literature on aspectual classification of verbs (Vendler, 1967; Kindaichi, 1976a; Dowty, 1979; Jacobsen, 1992) and discuss its interaction with the *-te iru* form in detail.

In Chapter 3, the distinctions between perfective and experiential readings are discussed. This is important because perfective and experiential readings of *-te iru* are sometimes confused in the literature. I first discuss their differences in terms of their truth conditions. Next, I proceed to propose that perfective and experiential *-te iru* have distinct formal properties. I further argue that the differences in these formal properties parallel the distinction between stage-level predicates and individual-level predicates. While it is not so surprising that perfective *-te iru* exhibits the properties

of a stage-level predicate, I show that experiential *-te iru*, on the other hand, exhibits the properties of an individual-level predicate.

In Chapter 4, the different forms and readings of *-te aru* sentences are discussed. Unlike *-te iru*, there are particular pragmatic conditions associated with *-te aru*. Thus, I review the existing literature describing the pragmatics of *-te aru* (Takahashi, 1976; Soga, 1983; Teramura, 1984; Matsumoto, 1990; Harasawa, 1994; Kageyama, 1996). Since the existing literature puts much focus on the pragmatics, the truth conditions of *-te aru* have not been carefully examined. It would seem that it is simply ‘assumed’ that all *-te aru* sentences are perfective. I examine the possible readings of *-te aru*, and suggest that all *-te aru* sentences actually yield experiential readings, and not perfective readings. Just as with experiential *-te iru*, all *-te aru* sentences have properties consistent with those of individual-level predicates.

In Chapter 5, semantic definitions of *-te iru* and *-te aru* are proposed. Since I suggest an association between progressive/perfective *-te iru* and stage-level predicates on the one hand, and between experiential *-te iru/aru* and individual-level predicates on the other hand, I first review semantic claims concerning the distinction between stage-level predicates and individual-level predicates (Carlson, 1977; Kratzer 1995). In this thesis, I choose to use Kratzer’s characterization of the distinction between stage-level and individual-level predicates. Kratzer’s claim is essentially that stage-level predicates have an extra argument position for events in the sense of Davidson (1967), while individual-level predicates lack this position. I extend her claim to the level of a proposition, where I propose that an event variable takes wide scope in the logical form of progressive/perfective *-te iru*, and an

individual variable takes wide scope in the logical form of experiential *-te iru* and *-te aru*.

In Chapter 6, the syntax of *-te iru* and *-te aru* are proposed. By applying various grammatical tests, I conclude that progressive and perfective *-te iru* have raising structures, while experiential *-te iru* and *-te aru* have control structures. It turns out that this structural distinction is consistent with the syntactic distinction between stage-level predicates and individual-level predicates proposed in Diesing (1992) and Kratzer (1995). The final part of Chapter 6 brings together the semantic and the syntactic claims made in this thesis. I present a step-by-step derivation of each *-te iru* and *-te aru* sentence type. This syntax-semantics mapping illustrates how the different semantic properties of the various *-te iru* and *-te aru* sentence types follow from the proposed syntax.

In Chapter 7, I discuss the habitual reading of *-te iru*. The discussion is placed in the final chapter of this thesis because having first established the formal properties of progressive, perfective, and experiential *-te iru* facilitates an understanding of habitual *-te iru*. Contrary to existing claims that habitual *-te iru* is a type of progressive *-te iru* (Yoshikawa, 1976; Teramura, 1984; Shirai, 2000), I propose that habitual *-te iru* is a type of experiential *-te iru*. Essentially, habitual *-te iru* shows properties that parallel those of individual-level predicates. Although I claim that habitual *-te iru* is a type of experiential *-te iru*, I maintain that there is still merit in using the term habitual *-te iru* separately from the term experiential *-te iru*, because habitual *-te iru* has some pragmatic restrictions that do not apply to the standard experiential *-te iru*.

CHAPTER 2

INTERPRETATIONS OF *-TE IRU*

1. Introduction

In this chapter, I discuss the different readings of the *-te iru* form. Essentially, there are four available readings: progressive, perfective, experiential, and habitual. Among them, progressive and perfective readings are tied to the aspectual properties of verbs used in the *-te iru* form. Therefore, I start my discussion in Section 2 with the aspectual properties of verbs. I discuss the progressive and perfective readings in Section 3, the experiential reading in Section 4, and the habitual reading in Section 6.

In addition to laying out observable facts about the four readings, I present a detailed discussion of the so-called accomplishment class. Since Vendler (1967), the accomplishment is an established aspectual class of verbs, at least in English. In contrast, the pioneering work of aspectual classification in Japanese, namely Kindaichi (1976a), does not posit a class of accomplishments. Examples of accomplishments in English are *draw a circle*, *paint a picture*, and *make a cake*. These are essentially activities with definite endpoints. While there are translation equivalents of such predicates in Japanese, it is a separate question as to whether or not these predicates behave aspectually like their English counterparts. This is precisely what I examine in Section 5, and it is important and relevant to the discussion of *-te iru* because *-te iru* is sensitive to the aspectual properties of verbs. If there is something unique about the reading of accomplishments in their *-te iru*

forms, positing a class of accomplishments make sense in Japanese. However, if the reading of accomplishments in their *-te iru* form is identical to the reading of another set of verbs in their *-te iru* form, we doubt the need to recognize a separate class, at least where the facts of *-te iru* are concerned. In fact, this is exactly the conclusion that I come to. I also enforce the arguments by discussing facts about accomplishments from other sources.

2. Aspectual classification of verbs

2.1 Introduction

Possible interpretations of the *-te iru* form of a verb are determined by aspectual properties of the given verb. Thus, I begin by discussing the aspectual classification of verbs. Aristotle is said to be the first to observe that verbs can be classified into distinct categories in terms of their internal temporal structures. In this section, I introduce the most frequently cited works of aspectual classification of verbs in English and Japanese, namely those of Vendler (1967) and Kindaichi (1976a).

2.2 Classification of English verbs

Vendler (1967) classifies English verbs into four categories using their interpretations with time adverbials, tenses, and logical entailments. Dowty (1979)

further develops this classification. The four categories are states, activities, accomplishments, and achievements.

Table 2.1 Vender/Dowty aspectual classification of English verbs

States	Activities	Accomplishments	Achievements
<i>know</i>	<i>run</i>	<i>paint a picture</i>	<i>recognize</i>
<i>love</i>	<i>walk</i>	<i>make a chair</i>	<i>find</i>
<i>have</i>	<i>swim</i>	<i>draw a circle</i>	<i>die</i>

States and activities are characterized by their open-endedness; i.e. they take place over a stretch of time. Because of their open-endedness, neither states nor activities have inherent endpoints. States and activities differ in that activities entail internal stages while states do not. Activities such as *walk* or *swim* seem to be composed of discrete steps that together define the events of walking or swimming, while states such as *know* or *love* do not have such internal parts.^{1, 2}

Accomplishments are activities with specific endpoints. For example, with *paint a picture*, the completion of a picture defines the endpoint of an event of painting, which is composed of discrete steps (or, in this case, brush strokes).

Achievements have inherent endpoints and occur instantaneously. For example, a

¹ There are activity predicates that do not seem to denote events that exhibit internal stages. For example, a predicate *ugoku* (*move*) is an activity but an event of moving does not seem to have “steps”, especially when the movement is very small and happens in a short period of time. However, we may be able to regard an activity event of moving as something that is composed of either a very small number of stages or dense stages.

² In this chapter, the expression *event* is used in an ordinary sense; i.e. not in the sense used in formal event semantics.

predicate such as *die* defines a discrete change of state; at one moment, somebody is alive but dead at the next. For accomplishments and achievements, if the endpoint is not reached, the event might be said not to have occurred. In later discussion, I refer to such an endpoint as a ‘necessary outcome’.

2.3 Classification of Japanese verbs

Independently of Vendler, Kindaichi (1976a) classifies Japanese verbs into aspectual classes as well. What is notable about this classification is that verbs are classified solely by the use and meaning of their *-te iru* forms. In Kindaichi’s classification, there are four verbal categories as in Vendler’s classification, but they are slightly different. One difference is that there are two different categories of states in Kindaichi’s classification; one is called stative I, and the other is called stative IV. Another difference is that there is no separate class of accomplishments.

Table 2.2 Kindaichi’s aspectual classification of verbs

Stative I	Activities	Achievements	Stative IV
<i>iru</i> (<i>be</i> , animate)	<i>hasiru</i> (<i>run</i>)	<i>iku</i> (<i>go</i>)	<i>niru</i> (<i>resemble</i> ³)
<i>aru</i> (<i>be</i> , inanimate)	<i>oyogu</i> (<i>swim</i>)	<i>sinu</i> (<i>die</i>)	<i>sobieru</i> (<i>tower over</i> ⁴)

³ This is the meaning of the verb *niru* in its *-te iru* form.

⁴ This is the meaning of the verb *sobieru* in its *-te iru* form.

Verbs that belong to the stative I class (*jootai dooshi*) cannot appear in the *-te iru* form. Just like verbs that belong to the category of states in English, verbs that belong to the stative I class are characterized by their open-endedness with no internal stages. However, there are very few stative I verbs in Japanese, such as *iru* (*be*, animate), *aru* (*be*, inanimate), and *iru* (*be in need*). Based on their interpretation under *-te iru*, most Japanese equivalents of English stative verbs are classified into other categories (e.g. *know* and *understand* are achievements; *love* is an activity).

All verbs that belong to the activity (*keezoku dooshi*), achievement (*shunkan dooshi*), or stative IV (*dai yonshu*) classes can appear in the *-te iru* form. Verbs that belong to the category of activities have the same aspectual properties as English activities; i.e. they are characterized by their open-endedness with internal stages. When Japanese activity verbs are used in their *-te iru* forms, they yield progressive readings (*shinkoo*). For example, an activity verb *oyogu* (*swim*) in the *-te iru* form is *oyoi-de iru*, and it has an interpretation equivalent to the English progressive *be swimming*.

Verbs that belong to the category of achievements have the same aspectual properties as English achievements. In English or Japanese, achievements have inherent endpoints and occur instantaneously. When Japanese achievement verbs are used in their *-te iru* forms, however, they yield perfective readings (*kekka-no zanzon*).⁵ The *-te iru* form of an achievement verb *sinu* (*die*), which is *sin-de iru*,

⁵ I use the label *perfective* to refer to the kind of reading that the *-te iru* form of an achievement verb yields. This reading has been alternatively labeled *resultative*. However, I avoid using the label *resultative* because there is a separate type of construction called the resultative construction (Washio 1997) such as the following.

does not have an interpretation equivalent to English *be dying*. In fact, it means something like *be dead*. In other words, when we use an achievement verb in the *-te iru* form, whatever change of state that is referred to by the verb has to have taken place and the resulting state must obtain. I will discuss perfective readings of *-te iru* as well as progressive readings in detail in Section 3.

For verbs that belong to stative IV, Kindaichi claims that the use of the *-te iru* form is actually mandatory. Given that an activity verb + *-te iru* has a progressive reading and an achievement verb + *-te iru* has a perfective reading, the question arises as to what the interpretation of a stative IV verb in the *-te iru* form could be. If we take the verb *niru*, its *-te iru* form *ni-te iru* means *resemble* and indicates a state of resemblance. The change that leads to the concluding state of resemblance is what is referred to by the verb *niru*. Therefore, we should regard *ni-te iru* as the resulting state of the event *niru*, which parallels the *-te iru* form of achievement verbs.

Unlike standard achievement verbs such as *iku* (*go*) or *sinu* (*die*), the exact point of change that leads to the state of resemblance is hard to observe. The reason that Kindaichi claims that *niru* must occur in the *-te iru* form is probably due to our cognitive difficulty in recognizing the exact point of change that leads to the state of resemblance. Moreover, contrary to what Kindaichi claims, *niru* can in fact occur without *-te iru*, such as in embedded positions and in matrix positions that refer to

-
- (1) Mari-ga kabe-o akaku nut-ta
 Mari-NOM wall-ACC red paint-PAST
 ‘Mari painted the wall read’

In order to avoid confusion with the resultative construction, I call the reading unique to an achievement verb + *-te iru* *perfective* throughout this thesis.

future events, as shown in (1). The expression *niru* by itself means something like ‘come to resemble’.

- (1) a. oya-ni niru koto-wa ii koto-da
 parent-DAT *niru* thing-TOP good thing-COP
 ‘Coming to resemble one’s parents is a good thing’
- b. kimi-wa syoorai oya-ni niru daroo
 you-TOP future parent-DAT *niru* might
 ‘You might come to resemble your parents in the future’

In (1a), the stative IV verb *niru* is embedded under *koto* (*thing*), forming an NP which corresponds to an English gerund *coming to resemble*. In (1b), *niru* is in the matrix position and is used to indicate a possible future event.

Furthermore, Moriyama (1988) confirms that verbs in the stative IV category show the same results as verbs in the achievement category by applying various aspectual tests using adverbials and verb compounds. Some of the test results are shown in the following.

- (2) *aru* (be, inanimate) – stative I
- a. ari-tudukeru ‘continue to be’
 b. *nizikan kakat-te aru ‘take two hours to be’
 c. nizikan aru ‘be for two hours’
- (3) *hasiru* (run) - activity
- a. hasiri-tudukeru ‘continue to run’
 b. nizikan kakat-te hasiru ‘take two hours to run’
 c. nizikan hasiru ‘run for two hours’

- (4) *sinu (die) - achievement*
- a. **sini-tudukeru* ‘continue to die’
 - b. *nizikan kakat-te sinu* ‘take two hours to die’
 - c. **nizikan sinu* ‘die for two hours’

- (5) *niru (come to resemble)*
- a. **ni-tudukeru* ‘continue to come to resemble’
 - b. *nizikan kakat-te niru* ‘take two hours to come to resemble’
 - c. **nizikan niru* ‘come to resemble for two hours’

As indicated in the above examples, the test results for *niru* in (5) parallel the test results for the achievement verb *sinu* in (4). We also see that these results distinguish themselves from the test results for the stative I verb *aru* in (2) and the activity verb *hasiru* in (3) respectively. Thus, I regard the verbs that are in Kindaichi’s stative IV as achievement verbs, which is the same conclusion argued for in McClure (1995) and Ogihara (1998). Consequently, only one category of stative verbs should be recognized in Japanese, just as in English. Earlier I stated that stative I verbs cannot appear in the *-te iru* form, while verbs that belong to the activity, achievement, and stative IV classes can. Now we need to restate that all stative verbs cannot occur in the *-te iru* form, while all activity and achievement verbs can.

2.4 Class of accomplishments

Kindaichi’s Japanese verb classification does not have an accomplishment category. This is not to say that Japanese does not have expressions equivalent to

those that are categorized as accomplishments in the Vendler classification. Typically, accomplishment predicates are composed of an activity predicate with an optional direct object. For example, *maru-o kaku* (*draw a circle*) seems to refer to the same kind of event as its English counterpart, *draw a circle*; it is an activity of drawing with a specific endpoint, which is a circle coming to existence. This is the type of argument that Jacobsen (1992) presents in order to claim that the class of accomplishments exists in Japanese as it does in English.

There are a number of grammatical tests that can be used to distinguish between activities and achievements. However, at least in English, accomplishments show an activity/achievement ambiguity with these tests. For example, accomplishments exhibit the same entailment patterns as achievements in the *be + -ing* forms, but they exhibit the same results as activities in the *for an hour* test. In addition, accomplishments exhibit ambiguous results in the *take an hour to* test. These three test results are illustrated below.

- (6) *be + -ing* entailment
- a. Activity
Mari is running now → Mari has already run
 - b. Achievement
Mari is arriving at the airport now → *Mari has already arrived at the airport
 - c. Accomplishment
Mari is making a cake now → *Mari has already made a cake

- (7) *for an hour* test
- a. Activity
Mari ran for an hour
 - b. Achievement
#Mari arrived at the airport for an hour⁶
 - c. Accomplishment
Mari made a cake for an hour
- (8) *take an hour to* test
- a. Activity
It took an hour for Mari to run
→ It took an hour for Mari to start running
→ *It took an hour for Mari to finish running
 - b. Achievement
It took an hour for Mari to arrive at the airport
→ *It took an hour for Mari to leave for the airport
→ It took an hour for Mari to get to the airport
 - c. Accomplishment
It took an hour for Mari to make a cake
→ It took an hour for Mari to start making a cake
→ It took an hour for Mari to finish making a cake

In Dowty (1979), the class of accomplishments is posited, although they are formally defined as a combination of activities and achievements. In his

⁶ The notation “#” is used to indicate that the sentence is syntactically well-formed but semantically anomalous. The most natural way to interpret the example in (7b) is that an event of arriving at the airport iterates for the duration of one hour. In other words, there are multiple *arriving at the airport* events.

decompositional analysis, Dowty proposes that the different aspectual properties of the four Vendler verb classes can be explained by assuming that there are primitive stative predicates that combine with a finite set of semantic operators: DO, BECOME, and CAUSE.

- (9) a. State: primitive unit
 Mary exists = $\hat{\text{exist}}(\text{M})$
- b. Activity: consists of the stative predicate and the DO operator.
 ‘Mary looks at a picture’ = $\text{DO}(\text{M}, \hat{\text{see}}(\text{M}, \text{a picture}))$, where:
 $[\text{DO}(x, \phi(x))]$ is true iff ϕ is true under the unmediated control of x .
- c. Achievement: consists of the stative predicate and the BECOME operator.
 ‘Mary dies’ = $\text{BECOME}(\hat{\text{dead}}(\text{M}))$, where:
 $[\text{BECOME } \phi]$ is true at t iff ϕ is true at t and false at $t-1$.
- d. Accomplishment: consists of the two sentences connected by the CAUSE operator; the first part is identical to the representation for the activities and the second part is identical to the representation for achievements.
 ‘Mary draws a picture’ = $[[\text{DO}(\text{M}, \hat{\text{draw}}(\text{M}))] \text{CAUSE} [\text{BECOME}(\hat{\text{exist}}(\text{P}))]]$

A state is an unstructured situation, and there is no aspectual operator incorporated into its representation. An activity has the DO operator which represents the volitionality of the subject. As the example in (9b) shows, *Mary looks at a picture* is analyzed as something like, ‘Mary does/controls her seeing of a picture’. An achievement has the BECOME operator. With the BECOME operator, an achievement is defined by a pair of situations in terms of interval semantics; i.e. one

situation before the change of state and another situation after the change of state. An accomplishment is a conjunction of an activity and achievement by means of the CAUSE operator.⁷ CAUSE is treated as a two-place sentential connective operator. As the example in (9d) shows, *Mary draws a picture* is roughly translated as *Mary's doing of drawing causes a picture to become existent*. By defining an accomplishment this way, Dowty formally recognizes the hybrid nature of accomplishments.

Following Vendler and Dowty, researchers assume that the class of accomplishments exists universally. However, given that accomplishments are defined as having the hybrid characteristics of activities and achievements, in Japanese at least, the aspectual class of accomplishments does not seem to exist. As I have already indicated, Japanese does have verb phrases that refer to the same events as their English counterparts. For example, *maru-o kaku* (*draw a circle*) refers to an activity of drawing with a specific endpoint, which is a circle coming to an existence. However, we should not assume that *maru-o kaku* has the same aspectual properties as *draw a circle*. This is precisely the point that I make as I show that the class of accomplishments does not exist in Japanese. In fact, expressions that belong to the class of accomplishments in English are activities in Japanese. I discuss this in detail in Section 5.

⁷ Although researchers generally accept Dowty's characterization of an accomplishment as a conjunction of an activity and an achievement, his proposal of CAUSE operator bonding the two parts is not without controversy. For example, Levin (2000) points out that accomplishments are not necessarily causative. In *John ate the sandwich*, it is counterintuitive to say that John caused something to happen to the sandwich by eating it. Rothstein (2004) suggests an alternative representation by taking out the CAUSE relation.

3. Progressive and perfective

As discussed in the previous section, different classes of verbs yield different readings of the *-te iru* form. States cannot occur in the *-te iru* form but activities and achievements can. The *-te iru* form of an activity verb yields a progressive reading, which is roughly equivalent in meaning to the English progressive. On the other hand, the *-te iru* form of an achievement verb yields a perfective reading; it expresses the resulting state that obtains from the change of state indicated by the verb. The examples in (10) shows activity verbs in the *-te iru* form, and the examples in (11) show achievement verbs in the *-te iru* form.

(10) Activities

a. Mari-ga ima hasit-te iru
 Mari-NOM now run-*te* *iru*
 ‘Mari is running now’

b. Mari-ga ima oyoi-de iru
 Mari-NOM now swim-*te* *iru*
 ‘Mari is swimming now’

(11) Achievements

a. Mari-ga ima sin-de iru
 Mari-NOM now die-*te* *iru*
 ‘Mari is dead now’

b. Mari-ga ima igirisu-ni it-te iru
 Mari-NOM now England-LOC go-*te* *iru*
 ‘Mari (went to England and) is in England now’

The examples in (10) are fairly straightforward; activity verbs in the *-te iru* form are equivalent in meaning to their English progressive counterparts.⁸ However, it should be noted that unlike English, Japanese progressive sentences do not have a futurate usage. For example, it is possible in English to say, *Mary is running (a race) in a few minutes*, which is roughly the same as *Mary will start running in a few minutes*. Such a usage is not possible in Japanese with *-te iru*. The Japanese progressive can be used only when an activity is actually on-going.⁹

The examples in (11) show that achievement verbs in their *-te iru* forms have perfective readings. The state resulting from the change of state indicated by the verb obtains in a perfective reading. In (11a), as a result of the change of state indicated by the verb *sinu* (*die*), Mari is dead. The state of Mari being dead is what is expressed by the *-te iru* form of *sinu*. The *-te iru* form of *iku* in (11b) refers to a state of Mari being in England as a result of her going to England. Therefore, in order for (11b) to be legitimately used, Mari has to be in England at the time of utterance. In other words,

⁸ This is not to say that the semantics of the two constructions are exactly the same. Rather, the expression ‘meaning’ here is used as a general sense; in other words, Japanese activity + *-te iru* can be translated into English by using *be* + *-ing*.

⁹ In contrast, all Japanese present tense sentences can be used to refer to the future. In other words, the basic verb forms in Japanese would seem to have a past vs. non-past tense distinction. Therefore, a progressive sentence such as (2a) can have a future reference, but in that case it means, *Mari will be running*; i.e. a running event will be on-going at a certain point in the future. This is different from the futurate usage of English progressive such as in (2b), with which we indicate that an event will *start* at some point in the future.

(2) a. Mari-ga hasit-te iru
 Mari-NOM run- *te* *iru*
 ‘Mari {is/will be} running’

b. Mari is running (a race) in a few minutes

Mari's being in England is part of the truth conditions of (11b). In comparison, the simple past tense version of (11b), *Mari-ga igirisu-ni it-ta* (*Mari went to England*) can be legitimately uttered even when Mari is no longer in England at the time of utterance.

As indicated in the examples in (10) and (11), both progressive and perfective *-te iru* sentences are compatible with the adverbial *ima* (*now*). If the expression *ima* is used with a progressive sentence, it indicates that the denoted activity event is actually on-going at the moment of speech; with a perfective sentence, it indicates that the resulting state of the denoted achievement event obtains at the moment of speech.

Progressive and perfective are the two most often discussed readings of *-te iru* in the literature (Ogihara, 1998; Shirai, 2000; Kusumoto, 2003; McClure, 2007 to name a few from recent years). However, given the right circumstances, both activity and achievement verbs in the *-te iru* form can yield two additional readings. One is *experiential*, and the other is *habitual*. Therefore, progressive, experiential, and habitual readings are possible for an activity verb in the *-te iru* form; perfective, experiential, and habitual readings are possible for an achievement verb in the *-te iru* form. I discuss experiential in the next section, and discuss habitual in Section 6.

4. Experiential

4.1 Introduction

The experiential reading (*keeken*) of *-te iru* is first discussed in Fujii (1966). It has been discussed descriptively in the literature (Soga, 1983; Machida, 1989; Ogihara, 1999 among others) but not formally analyzed. While progressive readings are unique to activity verbs and perfective readings are unique to achievement verbs, the experiential reading is available to both activities and achievements given the appropriate contexts. For example, using the same activity verb from (10b), i.e. *oyogu* (*swim*), it is possible to create an experiential sentence such as the one in (12a). Likewise, using the same achievement verb from (11b), i.e. *iku* (*go*), it is possible to create an experiential sentence such as the one in (12b).

- (12) a. Experiential *-te iru* with an activity verb
 Mari-wa¹⁰ ima made-ni sankai kono kawa-de
 Mari-TOP now up.to-LOC three.times this river-LOC
 oyoide iru
 swim-te iru
 ‘Mari has swum in this river three times up to now’

¹⁰ The subject here is marked with the particle *-wa* and it receives a topic reading. The reason that the subject is not marked by the particle *-ga* is because it will yield a marked reading. Essentially, the use of *-ga* in an experiential *-te iru* sentence forces the subject to receive an exhaustive reading; something like *Mari is the one that has swum in this river three times up to now*. Since marking the subject of an experiential *-te iru* with *-ga* is a marked usage, I choose to use *-wa* as the default particle to mark subjects of experiential *-te iru*. I return to the marked interpretation of *-ga* in Chapter 3 Section 3.3.

b. Experiential *-te iru* with an achievement verb

Mari-wa ima made-ni sankai igirisu-ni it-te iru
 Mari-TOP now up.to-LOC three.times England-LOC go-te iru
 ‘Mari has been to England three times up to now’

Both examples above include the adverbial phrase *ima made-ni sankai* (*three times up to now*). A modifier phrase like this one creates a context that accommodates an experiential reading; otherwise, *oyoi-de iru* by itself is ambiguous.¹¹ It could be progressive, experiential, or even habitual.¹² Likewise, *it-te iru* by itself is ambiguous among perfective, experiential, and habitual.

Following Fujii (1966), I use the label *experiential* as a taxonomical term. It should not be confused with the thematic role of *experiencer* (Fillmore, 1968; Jackendoff, 1972; Gruber, 1976). Intuitively, an experiential *-te iru* sentence is thought to express some experience of a given individual or an entity. However, the thematic role of that individual or entity is not necessarily that of experiencer. Moreover, there is oddness in saying that some *entity* has an experience, compared to saying that some *individual* has an experience. I will suggest an alternative characterization of experiential *-te iru* in Chapter 3. In the mean time, it should be noted that the term *experiential* is used as a taxonomical label throughout this thesis.

¹¹ Of course, pragmatic contexts can also signal the intended usage of *-te iru*, in which case overt adverbials may not be necessary.

¹² The habitual reading of *-te iru* will be discussed briefly in Section 6, and in detail in Chapter 7.

4.2 Past events and present properties

Why does an adverbial phrase such as *ima made-ni sankai* (*three times up to now*) accommodate an experiential reading? Soga (1983) argues that the experiential reading focuses attention on a span of time, while perfective and progressive readings focus on a point of time. In other words, the former is concerned with the state of affairs prevailing up to the moment of speech, whereas the latter is concerned with the state of affairs at the moment of speech. Thus, with the former, typical co-occurring adverbs are *ima made-ni* (*up to now*), *kore made-ni* (*up to this time*), and *kyoo made-ni* (*up to today*), etc., but with the latter, a typical co-occurring adverb is *ima* (*now*).

However, it is not clear exactly what *the state of affairs prevailing up to the reference point of time* means. Given present tense sentences such as the ones in (12), there must be some things that are true of now. What are they? Furthermore, adverbials that are compatible with experiential sentences such as *ima made-ni* (*up to now*), *kore made-ni* (*up to this time*), and *kyoo made-ni* (*up to today*) are certainly compatible with simple past non-*te iru* sentences as well. In the following examples, we see that both a present tense experiential *-te iru* sentence and a simple past non-*te iru* sentence are compatible with *ima made-ni* (*up to now*).

(13) a. Present tense experiential –te iru (= 12a)

Mari-wa ima made-ni sankai kono kawa-de
 Mari-TOP now up.to-LOC three.times this river-LOC
 oyoide iru
 swim-te iru
 ‘Mari has swum in this river three times up to now’

b. Simple past non-te iru

Mari-wa ima made-ni sankai kono kawa-de
 Mari-TOP now up.to-LOC three.times this river-LOC
 oyoida
 swim-PAST
 ‘Mari swam in this river three times up to now’

What is it about a present tense experiential *–te iru* sentence that makes it compatible with adverbials that can also be used with a simple past non-*te iru* sentence? In a present tense experiential sentence, what is true of now is the fact that an individual has an experience. Although the fact of having an experience is a property of an individual that obtains at the present moment, what constitutes the experience is a set of past events. In (12a), Mari has some experience as of now, which is swimming in a particular river three times in the past. In (12b), Mari has some experience as of now, which is going to England three times in the past. Present tense experiential sentences make reference to past events; these events constitute the experience of the individual. As such, adverbial phrases such as *ima made-ni* (*up to now*) and *kyoo made-ni* (*up to today*) are compatible. Even with these adverbials, present tense experiential sentences indicate what is true of the present moment; i.e. the fact of having an experience obtains in the present. The experiences are gained by

participating in events in the past. Those events can be activity or achievement events. Experiential *-te iru* can be in the present tense and at the same time be compatible with adverbials that refer to the past because experiential *-te iru* refers to an experience of a given individual *at the present moment*, which is gained by participating in events *in the past*.

4.3 The time when an event obtains

When we talk about experiences, we talk about events that happened in the past. Indeed, events that are referred to in experiential sentences obtained in the past, even if the sentences are in the present tense. Below, I discuss a contrast between experiential on the one hand and progressive and perfective on the other hand in terms of the time when events (or the resultant states of events) obtain.

A progressive sentence such as *Mari-ga ima oyoide iru* (*Mari is swimming now*), asserts that a swimming event obtains right now. In contrast, when we consider an experiential sentence such as (12a), it is likely that Mari is not swimming at the current moment. It is technically not impossible to say, for example, that somebody has an experience of swimming while she is swimming for the first time. However, it seems that our convention is such that we do not normally consider events as experiences unless they are completely over. Therefore, when somebody utters an experiential sentence such as (12a), it is normally the case that Mari is not swimming at the speech moment.

Turning to a perfective sentence such as *Mari-ga ima igirisu-ni it-te iru* (*Mari is in England now*), it asserts that the resultant state of the event of Mari's going to England obtains now. Thus, in order for the sentence to be true, Mari must be in England now. In contrast, if we take an experiential sentence such as (12b), it does not entail anything about Mari's current location. In fact, it is more likely that Mari is not in England now.

In order to distinguish experiential from progressive and perfective, it is helpful to consider whether or not an event or the result of an event obtains at the speech moment. An activity predicate used in *-te iru* which entails that the event obtains at the speech moment is consistent with the progressive reading of the *-te iru* form. An achievement predicate used in *-te iru* which entails that the result of the event obtains at the speech moment is consistent with the perfective reading of the *-te iru* form of an achievement. In contrast, experiential *-te iru* does not entail that events or results of events obtain at the speech moment. I use this interpretive difference as one diagnostic throughout this thesis when I need to examine possible interpretations of particular *-te iru* and also *-te aru* sentences.

Lastly, it is certainly the case that when we say *Mari-ga oyo-da* (*Mari swam*), which is a simple past sentence, we can also say that Mari experienced an event of swimming by virtue of her being an agent of such an event. In fact, almost any simple past sentence with an activity or achievement predicate seems to indicate that a certain event was experienced by some individual in one way or another. What then is special about experiential *-te iru*? I will address this question in Chapter 3. For the moment, I conclude this introductory section of experiential *-te iru*.

5. Accomplishments

5.1 Introduction

The primary purpose of this section is to discuss the class of accomplishments introduced in Section 2. I will show that accomplishment predicates (typically entire VPs) behave exactly like activity verbs with respect to *-te iru* interpretations. As discussed in Section 2.4, positing a separate class of accomplishments seems legitimate in English because accomplishments show hybrid characteristics of activities and achievements. In Japanese, however, the facts of accomplishment *-te iru* interpretations reveal no distinction between activities and accomplishments. I also show that there are facts independent of *-te iru* interpretations that suggest the distinction between activities and accomplishments cannot be made in Japanese. Considering all, this confirms the correctness of Kindaichi's classification of Japanese verbs in that he does not posit a class of accomplishments.

5.2 Perfective vs. experiential

I start by discussing the distinction between perfective and experiential. This is because the distinction is essential when considering possible interpretations of accomplishments in the *-te iru* form. Ultimately, I show that accomplishments in the *-te iru* form have progressive and experiential readings just like activities in the *-te iru* form. The *-te iru* forms of both accomplishments and activities do not have

perfective readings. In order to see this, it is essential to be able to distinguish between perfective and experiential readings.

So far I have presented three readings of *-te iru*: progressive, perfective, and experiential. A progressive reading is unique to the *-te iru* form of activities and a perfective reading is unique to the *-te iru* form of achievements, while an experiential reading is available to the *-te iru* form of both activities and achievements. However, the problem is that there is some confusion between perfective and experiential readings in the literature. Specifically, the term *perfective* has been often misused to describe what I refer to as an experiential reading of the *-te iru* form of activity verbs such as (12a) repeated below as (14).

- (14) Mari-wa ima made-ni sankai kono kawa-de
 Mari-TOP now up.to-LOC three.times this river-LOC
 oyoide iru
 swim-*te iru*
 ‘Mari has swum in this river three times up to now’

A sentence such as (14) is sometimes mistakenly said to have a perfective reading to make a contrast with a progressive reading (Jacobsen, 1992; McClure, 1995; Kusumoto, 2003). It is true that a sentence such as (14) refers to events in the past. This is precisely why perfective and experiential readings can be hard to distinguish from each other; experiential *-te iru* also refers to events that have occurred in the past.

In Section 4.3, I discussed that whereas perfective *-te iru* entails that the resultant state of an event obtains at the reference point of time (if the sentence is in the present tense, the reference point of time is the moment of speech), the experiential reading does not have such an entailment. For example, consider example (11b) repeated below as (15).

- (15) Mari-ga ima igirisu-ni it-te iru
 Mari-NOM now England-LOC go-te iru
 ‘Mari (went to England and) is in England now’

The resultant state of Mari’s going to England is Mari being in England. The example in (15) as a perfective sentence expresses the fact that Mari is in England right now. This sentence is unambiguously perfective because there is an adverbial expression *ima (now)*. Without this expression, (15) is ambiguous between perfective and experiential as indicated in (16a). Furthermore, if an adverbial expression such as *ima made-ni sankai (three times up to now)* is used as exemplified in (16b), the sentence is unambiguously experiential.

- (16) a. Mari-wa igirisu-ni it-te iru
 Mari-TOP England-LOC go-te iru
 ‘Mari is in England’ / ‘Mari has been to England’
- b. Mari-wa ima made-ni sankai igirisu-ni it-te iru
 Mari-TOP now up.to-LOC three.times England-LOC go-te iru
 ‘Mari has been to England three times up to now’

While the perfective example in (15) asserts that Mari is in England right now, the experiential example in (16b) does not. In fact, it is more likely that Mari is not in England any longer. There is an oddity in saying that Mari has been to England when she is still in England, although it is not impossible to say such a thing. Nevertheless, because the example in (16b) is unambiguously experiential, it is more likely that Mari is not in England at the speech time.

The perfective reading of *-te iru* is essentially linked to the nature of achievement verbs. All events denoted by achievement verbs have what might be called necessary outcomes. If Mari goes to England, the necessary outcome of the event is Mari's being in England. If Mari dies, the necessary outcome of the event is Mari's being dead. The perfective *-te iru* expresses that those necessary outcomes denoted by achievement verbs obtain at the reference point of time.

In contrast, there are no necessary outcomes associated with activity verbs. If Mari swims, she can continue to swim as long as she wants or she can stop swimming at any point; i.e. an activity event either continues or stops. Activity events do not have outcomes as achievement events have outcomes. As such, a perfective reading of activity *-te iru* is not possible; there is no outcome which must obtain necessarily for the event to have occurred. Consider an experiential *-te iru* with an activity verb in (14) again below.

- (14) Mari-wa ima made-ni sankai kono kawa-de
 Mari-TOP now up.to-LOC three.times this river-LOC
 oyoide iru
 swim-*te* *iru*
 ‘Mari has swum in this river three times up to now’

Since there is no natural or necessary outcome for a swimming event, a perfective reading for (14) is impossible. Because of the adverbial, it is also the case that the denoted swimming events are over at the current moment, which excludes a progressive reading as well. The reading of (14) is therefore experiential.

Perfective *-te iru* entails that the resultant state of an event obtains at the reference point of time, while experiential *-te iru* does not have such entailment. Resultant states are essentially the natural and necessary outcomes of events. In this sense, only achievements have resultant states. Activities do not have natural and necessary outcomes. As such, it is impossible for activities to have perfective readings in the *-te iru* form. To the extent that a *-te iru* sentence with an activity verb refers to an event that is over at the reference point of time, the reading must be experiential, where the experience of having participated in the past event is treated as a fact which is true of a given individual. With this as background, I turn now to the interpretations of accomplishments in Japanese.

5.3 Interpretations of accomplishments + *-te iru*

In English, verb phrases such as *paint a picture* and *draw a circle* have been categorized as accomplishments in Vendler's term. However, Kindaichi's Japanese verbal classification does not have a separate category of accomplishments. What is the nature of Japanese 'accomplishments' and what kind of reading does their *-te iru* form provide? Do they show characteristics of activity verbs, achievement verbs, or something hybrid in nature? The example below shows the *-te iru* form of an activity verb with a direct object, and its readings.

- (17) keeki-o tukuru (*make a cake*)
 Mari-ga keeki-o tukut-te iru
 Mari-NOM cake-ACC make-*te iru*
 'Mari is making a cake' / 'Mari has made a cake'

The example in (17) has two possible readings. One is clearly progressive, but what is the second reading? Is it perfective or experiential? If the second reading is perfective, then we are able to say that the Japanese equivalents of English accomplishment verb phrases have the hybrid characteristics of activities and achievements, at least as far as *-te iru* interpretations are concerned. Recall that a perfective *-te iru* entails that the resultant state of an event obtains. Therefore, if (17) has a perfective reading, it should necessarily refer to a state where a cake has been made and therefore exists at the reference point of time. If we add an adverbial *ima* (*now*) to the sentence in (17), this interpretation should be even clearer. If there is a

perfective reading in (17), it will mean that Mari has made a cake and the cake exists now. Consider the example below.

- (18) Mari-ga ima keeki-o tukut-te iru
 Mari-NOM now cake-ACC make-*te* *iru*
 ‘Mari is making a cake now’
 *‘Mari has made a cake and the cake exists now’

In fact, (18) has only a progressive reading. A perfective reading is not available at all, and (18) cannot entail the existence of a cake. This suggests that the second reading of (18) is actually experiential. To confirm this, we can add the phrase *ima made-ni sankai* (*three times up to now*). This adverbial phrase provides a clear context for an experiential statement. The example in (19) is unambiguously experiential.

- (19) Mari-wa ima made-ni sankai keeki-o tukut-te iru
 Mari-TOP now up.to-LOC three.times cake-ACC make-*te* *iru*
 ‘Mari has made a cake three times up to now’

What do these facts suggest? They suggest that Japanese activity verb phrases with direct objects show the same characteristics as those of simple activity verbs; i.e. the *-te iru* form of them allows a progressive and an experiential reading, but not a perfective reading. This in turn suggests that Japanese activity verbs will retain their aspectual properties (i.e. of being unbounded) regardless of (potential) boundaries set out by direct objects.

In the following section, I show further that Japanese ‘accomplishments’ behave just like activities even outside the domain of *-te iru* interpretations. Therefore, there is no justification to resort to a separate category of accomplishments in Japanese.

5.4 Aspectual properties of Japanese accomplishments

In English, direct objects, among other things, are believed to interact with the aspectual properties of activity verbs (Dowty, 1979, 1991; Krifka, 1989, 1992; Tenny, 1994; Verkuyl, 1993, 1999). The aspectual tests that I discussed in Section 2.4 confirm that *activity verbs + direct objects* in English (i.e. accomplishments in Vendler’s classification) are ambiguous between activities and achievements. Some prepositional phrases also set boundaries for activity events and add achievement properties to them as a result. For example, *run* is an activity but *run to the store* shows the hybrid characteristics of activities and achievements. To confirm this, consider the aspectual tests illustrated in (20)-(22), where the tests used in (6)-(8) in Section 2.4 are applied to the expression *run to the store*. All the test results illustrated in (6)-(8) are also repeated for comparison.

- (20) *be + -ing* entailment
 a. Activity
 Mari is running now → Mari has already run

b. Achievement

Mari is arriving at the airport now → *Mari has already arrived at the airport

c. Activity + direct object

Mari is making a cake now → *Mari has already made a cake

d. Activity + to-phrase

Mari is running to the store now → *Mari has already run to the store

(21) *for an hour* testa. Activity

Mari ran for an hour

b. Achievement

#Mari arrived at the airport for an hour

c. Activity + direct object

Mari made a cake for an hour

d. Activity + to-phrase

#Mari ran to the store for an hour

(22) *take an hour to* testa. Activity

It took an hour for Mari to run

→ It took an hour for Mari to start running

→ *It took an hour for Mari to finish running

b. Achievement

It took an hour for Mari to arrive at the airport

→ *It took an hour for Mari to leave for the airport

→ It took an hour for Mari to get to the airport

c. Activity + direct object

It took an hour for Mari to make a cake

→ It took an hour for Mari to start making a cake

→ It took an hour for Mari to finish making a cake

d. Activity + to-phrase

It took an hour for Mari to run to the store

→ It took an hour for Mari to start running to the store

→ It took an hour for Mari to get to the store

In the aspectual test results illustrated above, we see that *activity + to-phrase* sometimes behaves like an activity and other times behaves like an achievement. In other words, it shows the hybrid characteristics of activity and achievement just as *activity + direct object* does. Although *activity + to-phrase* is not considered in Vendler's classification, we can regard expressions such as *run to the store* and *swim to the shore* as accomplishments in English, just like *make a cake* and *draw a circle*.¹³ In other words, direct objects and *to*-phrases affect activity verbs in such a way that they add achievement properties to them. In Japanese, however, direct objects or postpositional phrases do not affect the aspectual properties of activity verbs. In (23)-(25) below, *activity + direct object*, and *activity + 'made' phrase (location + 'made' denotes a goal of an activity event)* in Japanese are tested for their aspectual

¹³ In the examples shown in (21), we do not see a uniform behavior of accomplishments; i.e. (21c) parallels the activity example in (21a), while (21d) parallels the achievement example in (21b). Although this does not go against my claim that accomplishments exhibit hybrid characteristics of activities and achievements, it does show that English accomplishments may not constitute a homogeneous class.

properties and compared with the test results of a simple activity and an achievement.¹⁴

(23) Interpretation with the modifier *nizi-ni* (at two o'clock)

a. Activity

Mari-ga nizi-ni oyogu

Mari-NOM two.hour-LOC swim

'Mari will swim at two o'clock'

→ Mari will start swimming at two o'clock

¹⁴ In languages such as English and Dutch, activity verbs as well as achievement verbs can appear with a directional PP (*to* in English, *naar* in Dutch). In languages such as Japanese, French, and Spanish, however, activity verbs cannot appear with a directional PP (*-ni* in Japanese, *à* in French, *a* in Spanish) (Talmy 1985, 1991). Instead, these languages use an expression equivalent to *up to* with activity verbs. Japanese and French examples are shown below.

(3) Japanese

a. *Mari-ga kooen-ni arui-ta
 Mari-NOM park-to walk-PAST
 Attempted meaning: 'Mari walked to the park'

b. Mari-ga kooen made arui-ta
 Mari-NOM park up.to walk-PAST
 'Mari walked to the park'

(4) French

a. *Marie a marché au parc
 Marie have walked to.the park
 Attempted meaning: 'Marie walked to the park'

b. Marie a marché jusqu'au parc
 Marie have walked up.to.the park
 'Marie walked to the park'

b. Achievement

Mari-ga nizi-ni kuukoo-ni tuku
 Mari-NOM two.hour-LOC airport-LOC arrive
 'Mari will arrive at the airport at two o'clock'
 → Mari will be at the airport at two o'clock

c. Activity + direct object

Mari-ga nizi-ni keeki-o tukuru
 Mari-NOM two.hour-LOC cake-ACC make
 'Mari will make a cake at two o'clock'
 → Mari will start making a cake at two o'clock

d. Activity + *made* phrase

Mari-ga nizi-ni mise made hasiru
 Mari-NOM two.hour-LOC store up.to run
 'Mari will run to the store at two o'clock'
 → Mari will start running to the store at two o'clock

(24) *itizikan* (for an hour) testa. Activity

Mari-ga itizikan oyoi-da
 Mari-NOM one.hour.duration swim-PAST
 'Mari swam for an hour'

b. Achievement

#Mari-ga itizikan kuukoo-ni tui-ta
 Mari-NOM one.hour.duration airport-LOC arrive-PAST
 'Mari arrived at the airport for an hour'

c. Activity + direct object

Mari-ga itizikan keeki-o tukut-ta
 Mari-NOM one.hour.duration cake-ACC make-PAST
 'Mari made a cake for an hour'

d. Activity + *made* phrase

Mari-ga itizikan mise made hasit-ta
 Mari-NOM one.hour.duration store up.to run-PAST

‘Mari ran to the store for an hour’ (implying, for example, that, in addition to running for an hour, she walked for half an hour and she reached the store at the end of the whole process)

(25) Interpretation in the *-te iru* form with *ima* (*now*)a. Activity

Mari-ga ima oyoi-de iru
 Mari-NOM now swim-*te iru*

‘Mari is swimming now’ (progressive)

b. Achievement

Mari-ga ima kuukoo-ni tui-te iru
 Mari-NOM now airport-LOC arrive-*te iru*

‘Mari (arrived at the airport and) is at the airport now’ (perfective)

c. Activity + direct object

Mari-ga ima keeki-o tukut-te iru
 Mari-NOM now cake- ACC make-*te iru*

‘Mari is making a cake now’ (progressive)

d. Activity + *made* phrase

Mari-ga ima mise made hasit-te iru
 Mari-NOM now store up.to run-*te iru*

‘Mari is running to the store now’ (progressive)

In (23), with an activity event, the sentence entails that the event starts at two o’clock. However, with an achievement event, the sentence entails that the event finishes at two o’clock. The interpretation of *activity + direct object* or ‘*made*’ phrase

in (23c) and (23d) parallels the interpretation of a simple activity in (23a). Turning to (24), the modifier *itizikan* (*for an hour*) is compatible with an activity event, but when it is used with an achievement event it results in an odd interpretation that the event iterates for a duration of one hour. These results parallel the English examples shown in (21a) and (21b). The example in (24c) shows that *activity verb + direct object* behaves exactly the same way as a simple activity verb. The example in (24d) has the particular interpretation that Mari ran part of the time on her way to the store. For example, she ran for an hour and walked for half an hour before arriving at the store. Note that it does not have an iterative interpretation as observed in the achievement example (24b). This shows that a ‘*made*’ phrase delimits an activity event (just like *for an hour* does), but it does not change the aspectual properties of the activity verb per se. If it did, it would have resulted in an iterative interpretation such as the one observed in the English example in (21d). In (25), the *-te iru* forms with *ima* (*now*) indicate progressive events in (25a), (25c), and (25d), categorizing *activity + direct object* and *activity + ‘made’ phrase* on par with a simple activity. These test results show that *activity + direct object* or ‘*made*’ phrase remains an activity. Therefore, unlike in English, NPs and PPs do not affect the aspectual properties of activity verbs in Japanese.

Since Japanese noun phrases typically appear without determiners, it is reasonable to suspect that direct object noun phrases do not affect the aspectual properties of activity verbs as far as we have bare noun phrases with a ‘mass’ interpretation (Krifka, 1995; Chierchia, 1998). However, quantifying direct object noun phrases do not shift the aspectual properties of activity verbs either. In (26b)

below, a numeral classifier *mit-tu* (*three small objects of*) quantifies *keeki* (*cake*), but the same entailment patterns as (26a) (without a quantifier) obtain.

- (26) a. Mari-ga nizi-ni keeki-o tukuru
 Mari-NOM two.hour-LOC cake-ACC make
 ‘Mari will make a cake at two o’clock’
 → Mari will start making a cake at two o’clock
- b. Mari-ga nizi-ni keeki-o mit-tu
 Mari- NOM two.hour-LOC cake-ACC three-CL.SMALLOBJ
 tukuru
 make
 ‘Mari will make three cakes at two o’clock’
 → Mari will start making three cakes at two o’clock

(26b) refers to an activity of making three cakes, or three-cake-making. This activity will begin at two o’clock. Adding a numeral classifier *mit-tu* (*three small objects of*) to *keeki* (*cake*) does not shift the activity event into an achievement event. Just as PPs do not set boundaries for activity events, quantized nouns (classifier + NP) do not set boundaries for activity events either.¹⁵

¹⁵ In Japanese, there are five possible configurations of *classifier + direct object* (Downing 1996). In none of these configurations does the quantized noun set a boundary for the activity. The five possible configurations are illustrated below.

- (5) a. NP internal (i)
 [_{NP} keeki mit-tu-o]
 cake three-CL.SMALLOBJ-ACC
- b. NP internal (ii)
 [_{NP} keeki-no mit-tu-o]
 cake-GEN three-CL.SMALLOBJ-ACC

Since quantized nouns do not shift an activity event into an achievement event, the *-te iru* form of *keeki-o mit-tu tukuru* (*make three cakes*) has an activity reading or an experiential reading; but not a perfective reading. With an adverbial *ima*, it is unambiguously an activity sentence, but with an adverbial phrase *ima made-ni* (*up to now*), it is unambiguously an experiential sentence as shown in (27) below.

- (27) a. Mari-ga ima keeki-o mit-tu
 Mari-NOM now cake-ACC three-CL.SMALLOBJ
 tukut-te iru
 make-*te* *iru*
 ‘Mari is making three cakes now’
- b. Mari-wa ima made-ni keeki-o
 Mari-TOP now up.to-LOC cake-ACC
 mit-tu tukut-te iru
 three-CL.SMALLOBJ make-*te* *iru*
 ‘Mari has made three cakes up to now’

The fact that direct object noun phrases do not shift activity events into achievement events does not have anything to do with the mass/count distinction (or

- c. NP internal (iii)
 [_{NP} mit-tu-no keeki-o]
 three-CL.SMALLOBJ-GEN cake-ACC
- d. Preposed
 [mit-tu [_{NP} keeki-o]]
 three-CL.SMALLOBJ cake-ACC
- e. Floated
 [[_{NP} keeki-o]... .. mit-tu]
 cake-ACC three-CL.SMALLOBJ

possible lack thereof) of nouns. Whether Japanese bare nouns are inherently mass or count, we do not have to be concerned with this question when we consider the effects of noun phrases over activity verbs.

5.5 Event cancellation

Lastly, there is a phenomenon called *event cancellation* in Japanese (Ikegami, 1985; Kageyama, 1996; Tsujimura, 2003) that further supports the idea that in Japanese direct objects do not set boundaries for activity events. In sentences with event cancellation, the intended goals of events are cancelled even after they are asserted.¹⁶ Although native judgments vary, event cancellation in Japanese is common with transitive and intransitive verb pairs which share morphologically identical roots. Examples of event cancellation are illustrated below.

- (28) a. otiba-o moyasi-ta-kedo moe-nakat-ta
 fallen.leaves-ACC burn(TR)-PAST-but burn(INTR)-NEG-PAST
 ‘I burned the leaves, but they didn’t burn’
 (Tsujimura 2003)
- b. suika-o hiyasi-ta-kedo hie-nakat-ta
 watermelon-ACC cool(TR)-PAST-but cool(INTR)-NEG-PAST
 ‘I cooled the watermelon, but it didn’t cool.’
 (Tsujimura 2003)

¹⁶ The label *event cancellation* is therefore misleading because it sounds as though the occurrence of an event is cancelled. It is in fact the implicature that an event has reached its outcome that is cancelled.

- c. imooto-o okosi-ta-kedo oki-nakat-ta
 sister-ACC wake.up(TR)-PAST-but wake.up(INTR)-NEG-PAST
 ‘I woke up my sister, but she didn’t wake up’
- d. kit-te-mo kire-nai en
 cut(TR)-even.when cut(INTR)-NEG relation
 ‘A relation that does not cut even when somebody cuts it’
 (Idiomatic expression referring to strong relationships)
 (Kageyama 1996)

The first clause in each of the examples in (28) contains the past tense form of *activity verb + direct object*. The second clause in each example contains the intransitive activity verb whose subject is the direct object of the first clause. Notice that the English translations in (28) are apparently contradictory and infelicitous. However in Japanese, they are acceptable.

The event cancellation phenomenon implies that asserting an activity event with a goal that took place in the past does not require that the event reached the goals. This in turn suggests that direct objects do not turn activity events into achievement events. However, it is not the case that *activity verb + direct object* can never express a telic event. As the examples in (29) below indicate, the temporal modifier *itizikan-de (in an hour)* is compatible with *activity verb + direct object*, and the default interpretation of the past tense form of *activity verb + direct object* is that the event has actually completed.

- (29) a. itizikan-de otiba-o moyasi-ta
 one.hour.duration-LOC fallen.leaves-ACC burn-PAST
 ‘I burned the leaves in an hour’

- b. otiba-o moyasi-ta
 fallen.leaves-ACC burn-PAST
 ‘I burned the leaves’
 Default reading: ‘I finished burning the leaves’

The examples in (29) may seem to contradict the claim that direct objects do not set boundaries for activity events. However, Tsujimura (2003) suggests that telicity of activity events with goals come from a conversational implicature, and not from the semantics.

Discussion of event cancellation in the Japanese literature does not go beyond transitive and intransitive verb pairs that share morphologically identical roots. If event cancellation is considered to be one consequence of Japanese activity verbs retaining their properties even when possible endpoints are indicated, we expect the event cancellation phenomenon to be observed elsewhere as well. In other words, we would expect any *activity + direct object* or *activity + location- ‘made’ phrase* to be cancellable. Examples are shown in (30) below.

- (30) a. hon-o yon-da-kedo yomi owara-nakat-ta
 book-ACC read-PAST-but read finish-NEG-PAST
 ‘I read a book but I did not finish reading it’
- b. kisi made oyoi-da-kedo tuka-nakat-ta
 shore up.to swim-PAST-but reach-NEG-PAST
 ‘I swam to the shore but I did not reach there’
- c. keeki-o tukut-ta-kedo dekiagara-nakat-ta
 cake-ACC make-PAST-but complete-NEG-PAST
 ‘I made a cake but it did not complete’

Native speakers that I have consulted find the sentences in (30) acceptable, although the degree of acceptability ranges from ‘somewhat acceptable’ to ‘perfectly acceptable’. Most people found (30a) perfectly acceptable. These judgments suggest that event cancellation is a more generally observed phenomenon than has been previously discussed. Moreover, it is completely consistent with the earlier conclusion that an activity, with or without a direct object, is still just an activity, i.e. an unbounded predicate.

It is not clear why native judgments vary for different sentences, or among different speakers. However, if Tsujimura (2003) is correct that the interpretation of telicity of an activity event with a goal is an implicature (and not an entailment), we might say that native judgments vary on event cancellation because there are different degrees of implicature at work for different speakers or for different types of events.

To conclude, I have shown that so-called accomplishments in Japanese have exactly the same aspectual properties as activities in Japanese. As a result, positing a class of accomplishments for Japanese does not seem justified. In English at least, one might argue for a separate class of accomplishments because such predicates show the hybrid properties of activities and achievements. In Japanese, however, since the aspectual properties of accomplishments are identical to those of activities, there is no point in positing a class of accomplishments distinct from activities.

6. Habitual

The fourth available reading of the *-te iru* form is habitual (*shuukan*).¹⁷

Habitual and experiential readings share one property. That is, they are both available to the *-te iru* form of any type of predicate. The examples below show the habitual usage of different types of predicates in their *-te iru* forms.

- (31) a. Activity
 Mari-wa¹⁸ mainiti kono puuru-de oyoide iru
 Mari-TOP every.day this pool-LOC swim-*te iru*
 ‘Mari swims in this pool every day’
- b. Activity + direct object
 Mari-wa maisyuu keeki-o tukut-te iru
 Mari-TOP every.week cake-ACC make-*te iru*
 ‘Mari makes a cake every week’

¹⁷ In early literature such as Fujii (1966), Kindaichi (1976b), Yoshikawa (1976), where the interpretations of *-te iru* are carefully described, the kinds of sentences that I call *habitual* here are called *iterative*. In more recent literature on *-te iru*, including Japanese language textbooks, *habitual* is the prevailing label. The labeling issue aside, intuitively, *habitual* and *iterative* do not seem to refer to identical set of sentences. I discuss this issue in detail in Chapter 7.

¹⁸ I use the particle *-wa* to mark the subject of habitual *-te iru* for the same reason that I use *-wa* to mark the subject of experiential *-te iru*; i.e. marking the subject of habitual *-te iru* with the particle *-ga* would yield a marked exhaustive interpretation. I will discuss the interpretations of *-wa* and *-ga* in Chapter 3 Section 3.3. A discussion of the interpretations of *-ga* in the environment of habitual *-te iru* in particular is found in Chapter 7 Section 3.2.

c. Activity + PP

Mari-wa maisyuu doyoobi-ni kooen made hasit-te iru
 Mari-TOP every.week Saturday-LOC park up.to run-te iru
 ‘Mari runs to the park every Saturday’

d. Achievement

Mari-wa maitosi igirisu-ni it-te iru
 Mari-TOP every.year England-LOC go-te iru
 ‘Mari goes to England every year’

In the examples above, adverbial modifiers that typically create habitual contexts are used; namely, *mainiti* (*every day*), *maisyuu* (*every week*), *maisyuu doyoobi* (*every Saturday*), and *maitosi* (*every year*). It is possible, however, to use these modifiers with experiential *-te iru* as well. Precisely speaking, the examples in (31) are actually ambiguous between habitual and experiential readings. If we take (31a), for example, an experiential interpretation will be that Mari has an experience of swimming in the pool every day. Essentially, it refers to an experience of a habit in the past. Experiential interpretations of (31) are given in the translations in (32) below.

(32) a. Activity

Mari-wa mainiti kono puuru-de oyoide iru
 Mari-TOP every.day this pool-LOC swim-te iru
 ‘Mari has swum in this pool every day’

b. Activity + direct object

Mari-wa maisyuu keeki-o tukut-te iru
 Mari-TOP every.week cake-ACC make-te iru
 ‘Mari has made a cake every week’

c. Activity + PP

Mari-wa maisyuu doyoobi-ni kooen made hasit-te iru
 Mari-TOP every.week Saturday-LOC park up.to run-te iru
 ‘Mari has run to the park every Saturday’

d. Achievement

Mari-wa maitosi igirisu-ni it-te iru
 Mari-TOP every.year England-LOC go-te iru
 ‘Mari has gone to England every year’

To make the examples in (31) unambiguously habitual, we need an additional modifier such as *konogoro (lately)* as shown in (33). This additional modifier suggests that Mari is still in the habit of doing things that are mentioned, which excludes an experiential reading.

(33) a. Activity

Mari-wa konogoro mainiti kono puuru-de oyoide iru
 Mari-TOP lately every.day this pool-LOC swim-te iru
 ‘Lately, Mari swims in this pool every day’

b. Activity + direct object

Mari-wa konogoro maisyuu keeki-o tukut-te iru
 Mari-TOP lately every.week cake-ACC make-te iru
 ‘Lately, Mari makes a cake every week’

c. Activity + PP

Mari-wa konogoro maisyuu doyoobi-ni kooen made
 Mari-TOP lately every.week Saturday-LOC park up.to
 hasit-te iru
 run-te iru
 ‘Lately, Mari runs to the park every Saturday’

d. Achievement

Mari-wa konogoro maitosi igirisu-ni it-te iru
 Mari-TOP lately every.year England-LOC go-*te* *iru*
 ‘Lately, Mari goes to England every year’

While brief, this concludes the introductory section on habitual *-te iru*. I return to this topic of habitual in Chapter 7 where I discuss it in much greater detail. The intervening chapters are organized in such a way that they lay the foundation for the claims made in Chapter 7.

7. Summary

The table below summarizes the available readings of the *-te iru* form with different types of verbs. Progressive readings are available to the *-te iru* forms of activities, but not achievements; perfective readings are available to the *-te iru* forms of achievements but not activities; experiential and habitual readings are available to all *-te iru* forms. In addition, activity verb phrases with direct objects (quantified or not) and PPs (*location* + ‘*made*’) behave the same way as activities.

Table 2.3 Available readings of the *-te iru* form

Category	Example	Progressive	Perfective	Experiential	Habitual
Activity	<i>oyoi-de iru</i> (swim- <i>te iru</i>)	√	×	√	√
Activity + direct object	<i>keeki-o tukut-te iru</i> (cake-ACC make- <i>te iru</i>)	√	×	√	√
Activity + PP	<i>mise made hasit-te iru</i> (store up.to run- <i>te iru</i>)	√	×	√	√
Achievement	<i>it-te iru</i> (go- <i>te iru</i>)	×	√	√	√

I present formal analyses of *-te iru* in Chapters 5, 6, and 7. My goal is to explain how the four different interpretations come from the single expression *-te iru*. Whereas many formal analyses of progressive and perfective readings can be found in the literature, there has been no attempt to formally explain all four readings of *-te iru*. Experiential and habitual readings have been discussed only descriptively. As such, the formal analysis of experiential and habitual *-te iru* presented in the subsequent chapters is completely novel.

CHAPTER 3

PERFECTIVE VS. EXPERIENTIAL

1. Introduction

This chapter is devoted to an understanding of perfective and experiential readings. As discussed in Chapter 2, perfective and experiential readings of *-te iru* are sometimes confused in the literature. Since I ultimately propose a distinct semantics and syntax for perfective and experiential sentences, it is important to have a clear understanding of the differences between the two readings.

In Section 2, I discuss the distinction between perfective and experiential in terms of necessary outcomes of events. The outcome of an event obtains for a perfective reading, while it may or it may not for an experiential reading. I will argue that only a specific set of predicates, namely achievements, denote events that entail outcomes in the Japanese language. As such, a perfective reading of *-te iru* is possible if and only if the basic predicate is an achievement. In contrast, an experiential reading is possible with any type of predicate.

In Section 3, I discuss the distinction between perfective and experiential in terms of stage-level and individual-level properties (Carlson 1977). I show that perfective *-te iru* sentences (as well as progressive *-te iru* sentences) exhibit properties of stage-level predicates, while experiential *-te iru* sentences exhibit properties of individual-level predicates. I present a series of grammatical arguments to support this claim. To consider the perfective *-te iru* versus experiential *-te iru*

distinction in terms of the stage-level versus individual-level distinction provides a new and powerful tool to distinguish between the two readings, and it ultimately provides a pathway to their formal characterizations.

Lastly in Section 4, I discuss the adverbial *ima* (*now*). In Soga (1983), it is observed that the adverbial *ima* is typically used with perfective (as well as progressive) sentences, while adverbials such as *ima made-ni* (*up to now*) and *kyoo made-ni* (*up to today*) are typically used with experiential sentences. Therefore, we may expect that the adverbials *ima* and *ima/kyoo made-ni* can be used as tests to distinguish between perfective and experiential sentences. Although it is true that *ima/kyoo made-ni* can be used only with experiential sentences, it is not easy to use the adverbial *ima* as a test for the distinction. I discuss why that is the case.

The definition and the properties of perfective and experiential that I develop come directly from observations of *-te iru*. Although *-te iru* is specific to the Japanese language, the notion of perfective and experiential are presumably universal. In the literature on English, sentences with the auxiliary *have* are given a single label *perfect* (McCawley, 1971; Comrie, 1976; Michaelis, 1994; Pancheva, 2003). Comrie (1976) defines perfect as a type of aspect that expresses a relation between two time-points. Thus the present perfect, for example, partakes of both the present and the past. The class of perfect is further subcategorized into *resultative perfect* and *experiential perfect*. These correspond to what I call *perfective* and *experiential* respectively. Comrie provides the contrasting examples *Bill has gone to America* and *Bill has been to America*, the former being resultative perfect and the latter being

experiential perfect.¹ The distinction between the two that Comrie describes (cited in (1) below) basically parallels the distinction that I have been making between the perfective *Mari-wa ima igirisu-ni it-te iru* (*Mari (went to England and) is in England now*) and the experiential *Mari-wa ima made-ni sankai igirisu-ni it-te iru* (*Mari has been to England three times up to now*).

- (1) Bill has gone to America *is perfect of result, and implies that Bill is now in America, or is on his way there, this being the present result of his past action of going to (setting out for) America. In* Bill has been to America, *however, there is no such implication; this sentence says that on at least one occasion (though possibly on more than one) Bill did in fact go to America.*
(Comrie 1976: p.59)

Although the labeling conventions are different, we see that what I call perfective and experiential are recognized in English as well. The reason that I think it is important to make a distinction between perfective and experiential is that as presented in this chapter, they have distinct formal properties, at least in Japanese. Although the formal properties of the English auxiliary *have* and Japanese *-te iru* cannot be identical (one obvious fact is that *have* cannot be used in the progressive), the distinct syntax and semantics of perfective and experiential that I present in the later chapters may also apply to English to some extent. However, this is beyond the scope of this thesis, and I leave it to future investigation.

¹ There is another subcategory of perfect recognized in English, which is *universal perfect*. This is said to describe a situation that started in the past but persists into the present. Examples are *We have lived there for ten years* and *I have been waiting for hours*. However, Comrie states that this type of perfect is particularly characteristic of English, and it is typical for other languages not to employ such a use of the perfect.

2. Necessary outcomes of events

2.1 Achievements

When we examine Japanese *-te iru*, we see that perfectivity is connected to a specific type of predicates, namely achievement predicates. An achievement predicate entails a specific conclusion. A perfective obtains when the entailed outcome of an achievement event obtains. If the event is one of going to England, the resultant state that necessarily obtains is being in England; if the event is one of turning the television on, the resultant state that necessarily obtains is that the television is turned on.

In contrast, an experiential reading obtains whether or not the entailed outcome of an achievement event obtains. Once somebody goes to England, that individual has the experience of going to England; she can leave England and be anywhere but she will always have the experience of going to England. Once somebody turns on a television, that individual will always have the experience of turning on a television even after it is turned off. Importantly, *go to England + -te iru* is necessarily experiential when the given individual is no longer in England; *turn on the television + -te iru* is necessarily experiential when the television is turned off.

Could a single situation be compatible with both perfective and experiential readings? For example, when somebody goes to England and she is in England at the moment of speech, we know that we can produce a perfective statement by using *go to England + -te iru*. The question is, can we also produce an experiential statement

in the given situation? In other words, does *go to England* + *-te iru* have an experiential reading when the given individual is still in England? I suggest that there is nothing in the semantics that prohibits such a usage. The moment somebody hits the ground of England, she has the experience of going to England. However, it seems that our convention of language use leads us to avoid such a usage. It sounds a little odd to say that Mari has the experience of going to England when she is actually in England right now, for reasons I will not pursue here.

2.2 Activities

Recall that there is no perfective reading of activity verbs + *-te iru*. This is due to the fact that activity events do not entail necessary outcomes. While an achievement event such as dying entails the natural outcome of being dead, there is no natural outcome to an activity event such as swimming. A swimming event can stop without coming to a conclusion. In contrast, a dying event cannot stop; it has to conclude. If it does not conclude, then it did not actually occur. Since a perfective reading obtains when the necessary outcome of a specified event obtains, it is impossible to have a perfective reading with an activity verb + *-te iru*.

Once an activity event of swimming is over, the only reading that *swim* + *-te iru* can have is experiential. Given that the sentence is in the present tense, there must be something about an experiential reading that is true of now. Since there is no entailed resultant state of a swimming event, the only thing that can possibly obtain

when the event is over is the fact that the given individual has an experience of a certain kind.²

When a swimming event is on-going, *swim* + *-te iru* provides a progressive reading. Could we use *swim* + *-te iru* to make an experiential statement when a swimming event is still on-going? I suggest again that there is nothing in the grammar that prevents us from saying that somebody has the experience of swimming while that person is actually swimming, just as it is possible to say somebody has an experience of going to England while she is still in England. As soon as somebody starts to swim, it is technically possible to say that she has an experience of swimming. However, we tend to avoid such a usage.

2.3 Accomplishments

In Chapter 2, I argued that so-called accomplishment predicates in Japanese behave just like activity predicates. This suggests that accomplishment events in Japanese do not entail necessary outcomes. This may be contrary to the facts of the world, since if we think of an event such as baking a cake, we generally imagine that the entailed outcome is a baked cake. However, as discussed in Section 5.5 of Chapter 2, Japanese has a phenomenon called ‘event cancellation’, and asserting that somebody baked a cake does not necessarily entail that a baked cake ever existed.

² The fact that the event has occurred also obtains when the swimming event is over. However, this fact is expressed by using a simple past tense sentence.

Bake a cake + -te iru does not have a perfective reading; it has progressive and experiential readings. This is a fact of the grammar of *-te iru*. In addition, asserting that somebody baked a cake in Japanese does not entail that there ever was a baked cake. In Japanese, accomplishment events such as baking a cake or building a house do not entail necessary outcomes. The events can stop before a cake or a house comes to exist, and we can still say that somebody baked a cake, or somebody built a house.

When the events are over, the only possible reading of accomplishments + *-te iru* is experiential. Since accomplishment events do not entail necessary outcomes, the experiential reading of *make a cake + -te iru* does not entail that the given individual actually finished making a cake. Therefore, (2) is acceptable.

- (2) Mari-wa ima made-ni keeki-o sankai tukut-te iru ga
 Mari-TOP now up.to-LOC cake-ACC three.times make-*te* *iru* but
 sankai tomo sippai si-ta
 three.times all failure do-PAST
 ‘Mari has made a cake three times, but she failed in all three times’

As Tsujimura (2003) suggests, the outcome of an accomplishment event is only implied in Japanese. Although the judgment is not as strong as an entailment, native speakers usually expect that if somebody made a cake, then a cake came into existence. (2) may therefore appear as a surprising story. Nevertheless, it is still an acceptable statement.

3. Stage level vs. individual level

3.1 Introduction

So far I have described an experiential *-te iru* sentence as something that refers to an experience of a given individual. This is a somewhat circular definition. We need to have a clear understanding of what the experience of an experiential reading is. I suggest that the experiences that experiential *-te iru* sentences represent are best understood as *properties* of a given individual. Such properties consist of sets of past events. By participating in events, an individual obtains experiences. These experiences are permanent properties of that individual. The fact of having this property is what is expressed with experiential *-te iru*.

To push this idea further, it is essential to understand the concepts of *stage level* and *individual level* (Carlson 1977). It turns out that experiential *-te iru* sentences have properties that parallel individual-level predicates, while perfective *-te iru* sentences have properties that parallel stage-level predicates. In the following section, I introduce the concepts of stage level and individual level. In the subsequent sections, I provide several pieces of evidence that support the parallel between individual-level predicates and experiential *-te iru* sentences, as well as the parallel between stage-level predicates and perfective *-te iru* sentences.

3.2 Stage-level and individual-level predicates

The terms stage-level predicate (henceforth, SLP) and individual-level predicate (henceforth, ILP) have become standard since first used by Carlson (1977). However the concepts of SLP and ILP are recognized and discussed in earlier works such as Kuroda (1965) and Milsark (1974). ILPs are predicates that denote permanent properties of individuals. Examples of ILPs are *be tall* and *be smart* (*se-ga takai* and *atama-ga ii* in Japanese). Most stative predicates are ILPs. ILPs are contrasted with SLPs. SLPs denote temporal or transitory properties. Non-stative predicates, such as *swim* (*oyogu* in Japanese), *make a cake* (*keeki-o tukuru* in Japanese), and *go* (*iku* in Japanese) are considered SLPs. However, there are several stative predicates that are considered SLPs, such as *be sick* (*guai-ga warui* in Japanese) and *be in need* (*iru* in Japanese). When we consider predicates that *-te iru* (and also *-te aru*) attaches to, they are all SLPs because *-te iru* never attaches to a stative predicate.

Present tense experiential *-te iru* sentences make reference to experiences of individuals gained by participating in events in the past. While an event is transitory, the fact of having the experience of an event is not. The fact of having an experience is a permanent property of a given individual. Intuitively, experiential *-te iru* sentences seem to parallel ILPs. Ogiwara (1999) also points this out and presents one piece of supporting evidence, which comes from the interpretations of *-wa* and *-ga* marked subjects, which I discuss below. Ultimately, I pursue the idea even further. That is, the contrast between progressive and perfective *-te iru* on the one hand and

experiential *-te iru* on the other hand paralleling the contrast between SLPs and ILPs is reflected in the semantics and syntax that I propose in the later chapters.

In the immediately following sections, I present three pieces of evidence that support a parallel between ILPs and experiential *-te iru*. Along the way, I also confirm that perfective *-te iru* (as well as progressive *-te iru*) is linked to an SLP interpretation, although this is generally taken for granted and is therefore of less significance.

3.3 *-wa* and *-ga* interpretations

The first parallel between an ILP and an experiential *-te iru* concerns the interpretation of the particles *-wa* and *-ga*. This observation is also found in Ogihara (1999).

There are two readings of *-wa* and *-ga* respectively. For *-wa*, the topic reading is the default, and the contrastive reading is the marked reading; for *-ga*, the descriptive reading is the default, and the exhaustive list reading is marked (Kuno 1973). The marked readings of *-wa* and *-ga* are licensed in a few different ways. One way is to use an emphatic intonation. By doing so, the contrastive reading of *-wa* and exhaustive reading of *-ga* can be conveyed. The marked readings can also be obtained by placing *-wa* and *-ga* in specific environments. For example, the particle *-wa* receives the contrastive reading when it replaces the accusative case marker *-o*. In this case, no emphatic intonation is necessary to obtain the contrastive reading, as shown in the example below.

- (3) a. Mari-**ga** susi-**o** tabe-ta
 Mari-NOM sushi-ACC eat-PAST
 ‘Mari ate sushi’
- b. Mari-**ga** susi-**wa** tabe-ta
 Mari-NOM sushi-CONTR eat-PAST
 ‘Mari ate sushi (as opposed to something else)’

As pointed out by Kuroda (1965), the exhaustive *-ga* reading is forced in a sentence with an ILP. When *-ga* is attached to the subject of an ILP, the exhaustive list reading of the subject necessarily obtains. In contrast, the use of *-wa* results in the topic reading, which is the default reading and therefore of less significance.

Examples are shown in (4).

- (4) ILP
- a. Mari-**wa** se-ga takai
 Mari-**wa** height-NOM tall
 ‘Mari is tall’
 (topic *-wa* reading)
- b. Mari-**ga** se-ga takai
 Mari-**ga** height-NOM tall
 ‘Mari is the one that is tall’
 (exhaustive *-ga* reading)

The topic *-wa* reading exemplified in (4a) is the unmarked reading. In contrast, in the exhaustive *-ga* reading exemplified in (4b), a focus is put on the subject *Mari*. The important point here is that the exhaustive *-ga* reading is forced

when *-ga* marks the subject of an ILP. The exhaustive reading obtains necessarily without any context such as a special intonation or a conversational background.

The same interpretation pattern obtains with experiential *-te iru* statements as shown in (5) and (6).

(5) Experiential *-te iru* (with an activity verb)

a. Mari-**wa** ima made-ni kono kawa-de oyoide iru
 Mari-**wa** now up.to-LOC this river-LOC swim-*te iru*
 ‘Mari has swum in this river up to now’
 (topic *-wa* reading)

b. Mari-**ga** ima made-ni kono kawa-de oyoide iru
 Mari-**ga** now up.to-LOC this river-LOC swim-*te iru*
 ‘Mari is the one that has swum in this river up to now’
 (exhaustive *-ga* reading)

(6) Experiential *-te iru* (with an achievement verb)

a. Mari-**wa** ima made-ni igirisu-ni it-te iru
 Mari-**wa** now up.to-LOC England-LOC go-*te iru*
 ‘Mari has been to England up to now’
 (topic *-wa* reading)

b. Mari-**ga** ima made-ni igirisu-ni it-te iru
 Mari-**ga** now up.to-LOC England-LOC go-*te iru*
 ‘Mari is the one that has been to England up to now’
 (exhaustive *-ga* reading)

Just as in the ILP examples, the use of *-wa* in experiential statements results in the topic *-wa* reading, while the use of *-ga* requires the exhaustive *-ga* reading.

Again, the exhaustive *-ga* reading obtains without any special context.

In contrast, the topic *-wa* and exhaustive *-ga* pattern does not obtain with a perfective *-te iru* statement as shown in (7).³

(7) Perfective *-te iru*⁴

a. Mari-**wa** ima igirisu-ni it-te iru
 Mari-**wa** now England-LOC go-*te iru*
 ‘Mari is in England now’
 (topic *-wa* reading)

b. Mari-**ga** ima igirisu-ni it-te iru
 Mari-**ga** now England-LOC go-*te iru*
 ‘Mari is in England now’
 (descriptive *-ga* reading)

Although the topic *-wa* reading obtains for perfective *-te iru* (just as with an ILP and an experiential statement), the use of *-ga* results in the descriptive reading. It

³ Just like perfective *-te iru*, progressive *-te iru* exhibits properties of SLPs, which is expected. The exhaustive *-ga* reading does not obtain with progressive *-te iru*, as illustrated below.

(1) Progressive *-te iru*

a. Mari-**wa** ima oyoi-de iru
 Mari-**wa** now swim-*te iru*
 ‘Mari is swimming now’ (topic *-wa* reading)

b. Mari-**ga** ima oyoi-de iru
 Mari-**ga** now swim-*te iru*
 ‘Mari is swimming now’ (descriptive *-ga* reading)

⁴ The distinction between the topic *-wa* reading and the descriptive *-ga* reading is not reflected in the English translations in (7). See Kuno (1973) for the pragmatic distinction between the two. Also, in Fiengo & McClure (2002), the speech acts of *-wa* and *-ga* are discussed.

is of course possible to put a focus on *Mari* in (7b), but to do so, an extra context such as a special intonation or a conversational background is required. Unlike an ILP and an experiential *-te iru* statement, the exhaustive *-ga* reading does not obtain without a special context.

The interpretations of *-wa* and *-ga* confirms the parallel between experiential *-te iru* and ILP, and between perfective *-te iru* and SLP. Furthermore, the interpretations of *-ga* can be used as a diagnostic to see if a particular *-te iru* sentence has a perfective or an experiential reading.

One point needs to be mentioned as a caution when *-ga* interpretations are used as a test to distinguish between perfective and experiential sentences as well as between SLPs and ILPs. That is, exhaustive interpretations of *-ga* can only be forced in matrix clauses. When *-ga* is used in a non-matrix clause, it loses the exhaustive reading, even when it marks the subject of an ILP (Kuno 1973). The exhaustive reading of *-ga* is lost also when the subject of an experiential *-te iru* is in a non-matrix clause. The following illustrates these points.

- (8) a. ILP
 John-wa Mari-**ga** se-ga takai-no-o
 John-wa Mari-**ga** height-NOM tall-GEN-ACC
 sit-te iru
 come.to.know-*te iru*
 ‘John knows that Mari is tall’
 (descriptive *-ga* reading)

b. Experiential (with an activity verb)

Mari-**ga** moo kono kawa-de oyoide iru kara
 Mari-**ga** already this river-LOC swim-*te* *iru* since
 hoka-no kawa-ni oyogi-ni iku yotee-da
 another-GEN river-LOC swim-LOC go plan-COP

‘Since Mari has swum in this river up to now, we plan to go swimming in another river’

(descriptive *-ga* reading)

c. Experiential (with an achievement verb)

Mari-**ga** nandoka igirisu-ni it-te iru to kii-te
 Mari-**ga** several.times England-LOC go-*te* *iru* that hear-*te*
 Taro-mo irigiru-ni iki-taku-nat-ta
 Taro-also England-LOC go-want-become-PAST

‘Hearing that Mari has been to England several times, Taro came to feel like going to England, too’

(descriptive *-ga* reading)

In the above examples, the particle *-ga* is used in embedded or subordinate clauses. Even when *-ga* marks the subject of an ILP or an experiential sentence, it loses the exhaustive reading when it is used in a non-matrix clause. Therefore, when *-ga* interpretations are used as a test to distinguish between perfective and experiential, it is important to make sure that only matrix clauses are compared. Note, moreover, that *-ga* loses the exhaustive reading whether it marks the subject of an embedded ILP or experiential *-te iru*. The parallel between ILP and experiential *-te iru* stays intact; in fact, the argument for their parallel is made even stronger.

3.4 Tense modifiers

The second piece of evidence that experiential *-te iru* parallels an ILP is related to a claim found in Kratzer (1995), which is that ILPs cannot be modified by temporal adverbials.⁵ For example, the use of a temporal adverbial such as *kyonen* (*last year*) with an ILP such as *se-ga takai* (*be tall*) yields oddity.

(9) ILP

#Mari-wa	kyonen	se-ga	takakat-ta
Mari-TOP	last.year	height-NOM	tall-PAST

‘Mari was tall last year’

What we find in Japanese is that if a past adverbial is used with an experiential *-te iru*, there is no tense agreement as shown in (10). The *-te iru* form remains in the present tense even with the presence of the past adverbial, *kyonen* (*last year*).

(10) a. Experiential *-te iru* (with an activity verb)

Mari-wa	kyonen	kono	kawa-de	oyoi-de	iru
Mari-TOP	last.year	this	river-LOC	swim-te	<i>iru</i> .PRESENT

Lit: ‘Mari has swum in this river last year’⁶

⁵ The grounds on which Kratzer makes this claim will be explored in Chapter 5 Section 2.2.

⁶ In English, the tense mismatch between the auxiliary *have* and the past tense modifier yields an ungrammatical result. However, other Germanic languages allow the same type of tense mismatch as Japanese.

b. Experiential –te iru (with an achievement verb)

Mari-wa kyonen igirisu-ni it-te iru
 Mari-TOP last.year England-LOC go-te iru.PRESENT
 Lit: ‘Mari has gone to England last year’

Although the adverbial *kyonen* (*last year*) is used in the above examples, the sentences refer to facts which obtain at the speech moment. The adverbial modifies the events of swimming and going, which make up the experience of Mari at the speech moment. It does not modify the fact of the experience, which obtains at the speech moment. Unlike a simple ILP, an experiential sentence contains an embedded SLP; *swim* and *go* are SLPs. A temporal modifier can therefore be used, although the scope of such a modifier must be narrow. The modifier needs to have scope over just the SLP in the experiential sentence; it cannot be used as a sentential modifier. This further reveals the complex nature of an experiential –te iru sentence. That is, such a sentence contains an SLP, but the sentence as a whole exhibits the properties of an ILP.

Interestingly, if there is tense agreement in (10), the sentence must be progressive or perfective as shown in (11).⁷

⁷ It is in fact possible to produce an experiential –te iru sentence in the past tense. In such a case, an experience of an individual *as of some point in the past* is expressed. An explicit modifier such as *kyonen-no ziten-de* (*as of last year*) is probably preferred in a past tense experiential sentence. Therefore, the examples in (11) are unambiguously progressive and perfective because the simple modifier *kyonen* (*last year*) is used.

- (11) a. Progressive –te iru
 Mari-wa kyonen kono kawa-de oyoide i-ta
 Mari-TOP last.year this river-LOC swim-te iru-PAST
 ‘Mari was swimming in this river last year’
- b. Perfective –te iru
 Mari-wa kyonen igirisu-ni it-te i-ta
 Mari-TOP last.year England-LOC go-te iru-PAST
 ‘Mari was in England last year’

We see that (10a) and (11a) are identical except for the tense of *iru*.

Likewise, the only difference between (10b) and (11b) is the tense of *iru*. The past-tense marking makes (11a) unambiguously progressive and (11b) unambiguously perfective. Unlike experiential *–te iru*, progressive and perfective *–te iru* have standard SLP properties.

3.5 The expression *tokoro-da*

The expression *tokoro-da* consists of the noun *tokoro* (*place*) and the copula *da*, but it has little lexical content. *Tokoro-da* attaches to a clause and has two different functions. One is to signify immediacy of an action, and the other is to force counterfactual interpretations when used in the consequent of conditionals (Takubo 2003, 2008). With the former usage, *tokoro-da* can only attach to SLPs.⁸ The

⁸ In Takubo (2008), it is suggested that *non-stative predicate + tokoro-da* yields either an immediate reading or a counterfactual reading, whereas *stative predicate + tokoro-da* yields only a counterfactual reading. In other words, Takubo makes a distinction between stative and non-stative, rather than ILP and SLP. Although the

following examples illustrate how *tokoro-da* is used in non-conditional sentences.

- (12) a. Mari-ga hon-o yomu tokoro-da
 Mari-NOM book-ACC read place-COP
 ‘Mari is just about to read a book’
- b. Mari-ga hon-o yon-da tokoro-da
 Mari-NOM book-ACC read-PAST place-COP
 ‘Mari just read the book (now)’

stative/non-stative distinction and the ILP/SLP distinction overlap a great deal, they yield different predictions with regards to stative SLPs. I suggest that the ILP/SLP distinction is the accurate generalization, since the following examples with stative SLPs do have immediate readings.

- (2) ima tyoodo okane-ga iru tokoro-dat-ta
 now exactly money-NOM be.in.need place-COP-PAST
 ‘I needed the money right now’
- (3) ima okane-o setuyakusi-tai tokoro-da ga
 now money-ACC save-want.to place-COP but
 kono syuppi-wa sikata-ga nai
 this expense-TOP means-NOM none
 ‘I wanted to save money right now, but there is nothing to be done about this expense’
- (4) gakuhi-ga agaru-no-wa atama-ga itai tokoro-da ga
 tuition-NOM rise-GEN-TOP head-NOM be.in.pain place-COP but
 musuko-no kyooiku-no tame-da kara sikata-ga nai
 son-GEN education-GEN purpose-COP since means-NOM none
 ‘The tuition increase has just given me such a headache, but there is nothing to be done because it is for my son’s education’

In fact, Takubo (p.c.) acknowledges that the above examples have immediate readings, and further agrees that it is accurate to say that SLP + *tokoro-da* has an immediate reading. Thus, I conclude that ILP/SLP distinction is relevant to *tokoro-da*.

- c. Mari-ga ima hon-o yon-de iru tokoro-da
 Mari-NOM now book-ACC read-*te iru* place-COP
 ‘Mari is just in the middle of reading a book now’

In (12a), *tokoro-da* is attached to a non-past clause. In such an environment, it expresses an immediate future. In (12b), *tokoro-da* is attached to a past clause. As a result, it expresses an immediate past. In (12c), *tokoro-da* is attached to a present progressive clause. Here it has the effect of emphasizing that the event is on-going. Essentially, *tokoro-da* interacts with temporal properties of an event. Martin (1975) points out that the meaning of the noun *tokoro* (*place*) in *tokoro-da* seems to have been extended to something like ‘stage’, ‘point (in time)’, or ‘moment’. With a simple non-past sentence, *tokoro-da* places the speech time at a moment immediately before the beginning point of an event; with a simple past sentence, it places the speech time a moment immediately after the end point of an event; with a progressive sentence, it emphasize that the speech time is placed somewhere between the beginning point and the end point.

The immediacy effect of *tokoro-da* is possible only when temporal or transitory properties are available. As such, *tokoro-da* can be used only with an SLP. In contrast, *tokoro-da* cannot be used with an ILP because it lacks temporal or transitory properties. The following examples show the ungrammaticality of *tokoro-da* sentences with ILPs.

- (13) a. *Mari-ga se-ga takai tokoro-da
 Mari-NOM height-NOM tall place-COP
 Attempted meaning: ‘Mari is tall right at this moment’

- b. *hon-ga aru tokoro-da
 book-NOM exist place-COP
 Attempted meaning: ‘There is a book right at this moment’

Just as with SLPs, perfective sentences are compatible with the non-conditional usage of *tokoro-da*.⁹ Since perfective sentences entail that the resultant state of an event obtains at the speech moment, the possible type of immediacy effect that *tokoro-da* brings about is an emphasis that the resultant state obtains right at the speech moment. In contrast, experiential sentences are not compatible with the non-conditional usage of *tokoro-da*. The following illustrate the

⁹ In Takubo (2008), it is stated that perfective *-te iru + tokoro-da* does not have an immediate reading. He provides the following example:

- (5) *watasi-wa ima kekkonsi-te iru tokoro-da
 I-TOP now marry-*te* *iru* place-COP
 Attempted meaning: ‘I (got married and) am married right at this moment’

It is true that (5) sounds odd. This is because it sounds like the speaker assumes that she will eventually get divorced. In contrast, the following examples as well as (14a) of the main text are perfectly acceptable.

- (6) a. Mari-ga ima uti-ni ki-te iru tokoro-da
 Mari-NOM now house-LOC come-*te* *iru* place-COP
 ‘Mari (came to my house and) is in my house right at this moment’
- b. mise-ga ima simat-te iru tokoro-da
 store-NOM now close-*te* *iru* place-COP
 ‘The store (closed and) is closed right at this moment’

Consulting with Takubo, he notes that the resultant states expressed in the acceptable examples above are considered to have endpoints, whereas the resulting state of the unacceptable example in (5) is considered more or less ‘permanent’. In other words, the compatibility with *tokoro-da* depends to some extent on lexical choice. As long as we avoid testing with predicates whose resultant states are normally considered ‘permanent’ such as *get married*, perfective sentences are always compatible with *tokoro-da*.

contrast in grammaticality when *tokoro-da* is used with perfective and experiential sentences.¹⁰

(14) a. Perfective + *tokoro-da*

Mari-ga ima igirisu-ni it-te iru tokoro-da
 Mari-NOM now England-LOC go-*te* *iru* place-COP
 ‘Mari (went to England and) is in England right at this moment’

b. Experiential + *tokoro-da* (with an activity verb)

*Mari-ga ima made-ni kono kawa-de oyoi-de iru
 Mari-NOM now up.to-LOC this river-LOC swim-*te* *iru*
 tokoro-da
 place-COP
 Attempted meaning: ‘Mari has swum in this river up to now right at this moment’

c. Experiential + *tokoro-da* (with an achievement verb)

*Mari-ga ima made-ni igirisu-ni it-te iru tokoro-da
 Mari-NOM now up.to-LOC Englnd-LOC go-*te* *iru* place-COP
 Attempted meaning: ‘Mari has been to England up to now right at this moment’

The above contrast provides another piece of evidence for the parallel between experiential sentences and ILPs, as well as for the parallel between perfective sentences and SLPs. Note that the expression *tokoro-da* immediately follows *iru*, which by itself is an ILP. Therefore, one might think that the ungrammaticality of (14b) and (14c) is due to the predicate *iru*, rather than the whole

¹⁰ As shown in example in (12c), the non-conditional usage of *tokoro-da* is compatible with progressive *-te iru*.

experiential statement. However, *iru* immediately precedes *tokoro-da* in (14a) as well. Nevertheless, (14a) is grammatical. Therefore, we can conclude that the ungrammaticality of (14b) and (14c) is due to the ILP property of experiential *-te iru* as a whole.

3.6 Summary

I have presented three pieces of evidence that show the parallel between ILPs and experiential *-te iru* sentences. Properties of ILPs are: 1) the topic *-wa* and the exhaustive *-ga* interpretations; 2) an inability to be modified by temporal adverbials; and 3) incompatibility with the non-conditional usage of *tokoro-da*. Experiential *-te iru* sentences share these same properties. Note, however, that experiential *-te iru* exhibits an unexpected tense mismatch when modified by temporal adverbials rather than being completely resistant to such modifiers. In contrast, perfective (and progressive) *-te iru* shows properties of an SLP, which is expected.

One final point that I need to emphasize is that *-te iru* never attaches to an ILP. As already discussed in Chapter 2, only activity and achievement predicates can be used in the *-te iru* form, but not stative predicates. Since all activity and achievement predicates are SLPs, every experiential *-te iru* form contains an SLP. Nevertheless, an experiential sentence always has the properties of an ILP. For example, predicates such as *oyogu* (*swim*) and *iku* (*go*) are SLPs, but when they are used with experiential *-te iru*, the resulting whole sentences have the properties of ILPs.

Since experiential sentences parallel ILPs, we can now think of experiences that are denoted by experiential *-te iru* as *properties* of individuals. Just like *Mari-wa se-ga takai* (*Mari is tall*) denotes a specific property of Mari (i.e. being tall), an experiential sentence such as *Mari-wa igirisu-ni sankai it-te iru* (*Mari has been to England three times*) denotes a specific property of Mari (i.e. having been to England three times). Properties can be possessed by an inanimate entity, as well. For example, we can say that an experiential sentence such as *kono terebi-wa sankai koware-te iru* (*this TV has broken three times*) refers to a property of the TV, which is having broken three times. In contrast, it sounds odd to say that the sentence refers to *an experience* of the TV. I will keep using the label *experiential*, but it should be understood that experiential sentences can refer to properties of either animate individuals or inanimate entities.

While the distinction between perfective and experiential has never been clear in the literature, the SLP/ILP distinction is generally quite well understood, at least conceptually. Therefore, in order to understand the difference between perfective and experiential, it helps to consider how SLPs and ILPs have been characterized. In this chapter, I have compared the grammatical behavior of both kinds of constructions. In Chapter 5, I review the formal semantic literature on the SLP and ILP distinction. This discussion will serve as the background for the formal semantics of *-te iru* that I will present.

4. Remarks on the adverbial *ima* (*now*)

Soga (1983) observes that the adverbial *ima* is typically used with perfective (as well as progressive) sentences, while adverbials such as *ima made-ni* (*up to now*) and *kyoo made-ni* (*up to today*) are typically used with experiential sentences.

Although it is true that *ima/kyoo made-ni* can be used only with experiential sentences, the adverbial *ima* cannot be easily used as a test to distinguish perfective and experiential readings. There are two reasons for this. First, there are perfective sentences that sound odd with *ima*. Second, some experiential sentences are compatible with *ima*. I exemplify and discuss each of these cases in the following.

I first examine cases where perfective sentences sound odd with *ima*.

Examples are shown in (15) below.

- (15) a. (?*ima*) sinbun-ga ki-te iru
 (?*ima*) newspaper-NOM come-*te* *iru*
 ‘A newspaper (came and) is here now’
- b. (?*ima*) tegami-ga tui-te iru
 (?*ima*) letter-NOM arrive-*te* *iru*
 ‘A letter (arrived and) is here now’
- c. (?*ima*) Mari-ga sin-de iru
 (?*ima*) Mari-NOM die-*te* *iru*
 ‘Mari (died and) is dead now’
- d. (?*ima*) Mari-ga kekkonsi-te iru
 (?*ima*) Mari-NOM marry-*te* *iru*
 ‘Mari (got married and) is married now’

- e. (?*ima*) Mari-ga rikaisi-te iru
 (?*ima*) Mari-NOM understand-*te iru*
 ‘Mari has understood now’

Why do the above perfective sentences sound odd with *ima*? I suggest that it is because *ima* presupposes a change. Furthermore, when it is used with a non-past perfective *-te iru* sentence, it presupposes a change at some future time (as opposed to a change in the past).¹¹ All examples in (15) refer to events where no more changes are expected: once a newspaper or a letter has been delivered, we cannot un-deriver it; once Mari is dead, she cannot be restored to life; once Mari gets married, we do not normally expect her to “undo” the marriage, or to divorce; once Mari understands something, that understanding is expected to be there forever. Notice that English translations in (15) do not sound odd. I assume that this is because English *now* has different properties from Japanese *ima*, but I will not pursue the semantics/pragmatics of English *now* here.

¹¹ It seems that *ima* is sensitive to the tense of a sentence, i.e. *ima* presupposes a change in the future with non-past tense whereas it presupposes a change in the past with past tense. All examples given in (15)-(17) are non-past, and *ima* in these cases presupposes a change in the future.

With a past tense sentence, *ima* is used as something like, *just now*, and it presupposes a change in the past. See the example below.

- (7) *ima* Mari-ga uti-ni ki-te ita
 now Mari-NOM house-LOC come-*te iru*.PAST
 ‘Mari was in my house just now’

What is compatible with the expression *ima* is a set of events where further changes are expected, as shown in (16) below.¹²

- (16) a. *ima* Mari-ga uti-ni ki-te iru
ima Mari-NOM house-LOC come-*te* *iru*
 ‘Mari (came to my house and) is in my house now’
- b. *ima* Mari-ga mise-ni it-te iru
ima Mari-NOM store-LOC go-*te* *iru*
 ‘Mari (went to the store and) is at the store now’
- c. *ima* densya-ga tui-te iru
ima train-NOM arrive-*te* *iru*
 ‘The train (arrived and) is here now’

Mari’s being at some place is not expected to be permanent. Mari may come to my house but she will leave at some point; Mari may be at a store now but she should come back. A train arrives at a station but it will leave again. With these events, adding the expression *ima* makes perfect sense, given that *ima* presupposes some change in the future. Notice that the same verb *kuru* (*come*) is used in (15a) and

¹² The contrast between (15) and (16) with regard to the compatibility with *ima* parallels the contrast between (5) and (6) in Footnote 9 with regard to the compatibility with *tokoro-da*. In other words, the examples in (15) sound odd for the same reason as (5) sounds odd. In both cases, the sense of permanency that arises from the context resists its compatibility with *ima* and *tokoro-da*. Nevertheless, I maintain that *tokoro-da* can be used as a good test to distinguish between perfective and experiential, as long as we are careful with the choice of predicates. In contrast, *ima* involves further complication because not only are there perfective statements that sound odd with *ima*, but there are experiential statements that are compatible with *ima* as I discuss below in the main text. Thus, I suggest that it is not easy to use *ima* as a test to distinguish between perfective and experiential.

(16a); the same verb *toku* (*arrive*) is used in (15b) and (16c). For (15a) and (15b), adding *ima* is odd but for (16a) and (16c) it is fine. This suggests that the difference between (15) and (16) does not come from the properties of the verbs or the grammar. Rather, it comes from our normal expectations about particular events.

Now I turn to cases where experiential sentences are compatible with *ima* (*now*). Consider the examples below, where the use of adverbials *kore made-ni* (*up to this time*) and *ima* (*now*) with experiential sentences are contrasted.

- (17) a. kore made-ni hyaku-nin-no hito-ga kono
kore made-ni hundred-CL.PERSON-GEN person-NOM this
 byooki-de sin-de iru
 disease-LOC die-*te iru*
 ‘Up to this time, a hundred people have died from this disease’
- b. ima hyaku-nin-no hito-ga kono
ima hundred-CL.PERSON-GEN person-NOM this
 byooki-de sin-de iru
 disease-LOC die-*te iru*
 ‘At this moment, a hundred people have died from this disease’

The example in (17a) indicates that during a span of time up to the current moment, a hundred people have died. There is no problem with the sentence’s compatibility with *kore made-ni*. In contrast, why is (17b) fine although it has the expression *now*, which is not expected to occur with an experiential sentence? The particular reading (17b) has is: *At this moment, a hundred people have died from this disease*. Importantly, the sentence also presupposes that *the number may increase in*

the future. The adverbial *ima* is actually modifying *the number of people* who have died, not the fact that people are dead. Once people die, they will remain dead. Thus, it does not make sense to interpret *ima* as modifying *sin-de iru*. The only sensible reading here is to interpret *ima* as modifying the number, which may change in the future.

We have seen that testing compatibility with *ima* to see a particular interpretation of a token of sentence does not always work; perfective sentences sometimes sound odd with *ima*, and experiential sentences sometimes sound fine with *ima*. Therefore, it may not be easy to use *ima* as a test to distinguish between perfective and experiential sentences.

5. Summary

In this chapter, I discussed perfective and experiential meanings and how these meanings are linked to *-te iru*. First, I underlined the fact that perfective *-te iru* obtains when the entailed outcomes of the denoted events obtain, whereas experiential *-te iru* does not have such a condition. Since achievement predicates are really the only type of predicates in Japanese that denote events with necessary outcomes, I argued that the *-te iru* form of an achievement is the only type of *-te iru* that yields a perfective reading. The other types of *-te iru* forms, namely, activity + *-te iru* and accomplishment + *-te iru* can never yield perfective readings. In contrast to all of this, experiential readings are available to any *-te iru* form types.

Second, I claimed that experiential *-te iru* sentences share properties with ILPs, whereas perfective *-te iru* sentences share properties with SLPs. While the parallel between perfective *-te iru* and SLPs was expected, the parallel between experiential *-te iru* and ILPs is significant because experiential *-te iru* sentences never contain an ILP. In fact, such a sentence always contains an SLP. Nevertheless, an experiential *-te iru* sentence as a whole behaves like an ILP. This is consistent with the intuition that the experiences denoted by experiential *-te iru* are *properties* of a given individual. The facts about Japanese *-te iru* presented in this chapter provide new evidence that individual-level sentences exist. In Chapter 5, claims about the formal structure of SLPs and ILPs are taken into consideration. These structures play an important role in defining the formal properties of perfective and experiential.

Third, I discussed why the adverbial *ima (now)* can be used with both perfective and experiential sentences. As there are pragmatic facts to be considered for the usage, I argued that compatibility with *ima (now)* is not the best test to distinguish between perfective and experiential, contrary to Soga's (1983) suggestion.

Although I have only considered *-te iru* sentences to discuss perfective and experiential in this chapter, I will use the same definitions and distinctions when I discuss *-te aru* sentences in Chapter 4. The most important goal of Chapter 4 is to identify the possible interpretations that *-te aru* yields. Therefore, I use the criteria and diagnostics that I presented in this chapter to achieve that goal.

CHAPTER 4

INTERPRETATIONS OF *-TE ARU*

1. Introduction

Interpretations of *-te iru* are partially affected by the aspectual properties of the verbs that *-te iru* attaches to. That is, the progressive reading is available only to the *-te iru* form of activity verbs, while the perfective reading is available only to the *-te iru* form of achievement verbs. In contrast, *-te aru* is not sensitive to the aspectual properties of verbs. It is generally believed that *-te aru* forms uniformly yield *resultative* readings. *Resultative* is an alternative term to *perfective*. However, I choose to use the term *perfective*. My primary motivation to do so is to make a distinction with a true resultative construction such as *kabe-o akaku nuru* (*to paint the wall red*).

Even though it is believed that there is only one reading of *-te aru*, there are two different *-te aru* sentence forms. One is called intransitivizing *-te aru*, and the other is called non-intransitivizing *-te aru* (Martin 1975). The terminology reflect the fact that intransitivizing *-te aru* is considered to be the default type of *-te aru*, while non-intransitivizing *-te aru* is considered to be rather a marked variety of *-te aru*. In terms of the syntax, however, intransitivizing *-te aru* is a marked form in the sense that the underlying or semantic object of a transitive verb is marked nominative. It resembles the passive construction in this respect, but intransitivizing *-te aru* has other properties that are distinct from passive. Non-intransitivizing *-te aru*, on the

other hand, shows standard case-markings. The following exemplifies intransitivizing *-te aru* and non-intransitivizing *-te aru*.

- (1) a. Intransitivizing *-te aru*
 keeki-ga tukut-te aru
 cake-NOM make-*te* *aru*
 ‘A cake has been made’
- b. Non-intransitivizing *-te aru*
 Mari-ga keeki-o tukut-te aru
 Mari-NOM cake-ACC make-*te* *aru*
 ‘Mari has made a cake’

As the examples in (1) indicate, the syntactic properties are apparently different between intransitivizing and non-intransitivizing *-te aru*. However, it has been claimed that both share perfective readings. (1a) is said to denote the resultant state of a cake-making event; (1b) is said to denote the resultant state of Mari’s cake-making event. In fact, it seems that the perfective reading of *-te aru* is simply assumed, and one cannot find any semantic literature on *-te aru*. Instead, discussion has focused on pragmatics. Both intransitivizing and non-intransitivizing *-te aru* have specific pragmatic requirements.

In Section 2, I discuss the formal properties of the two types of *-te aru*. In Sections 3 and 4, I present a literature review. Since the present literature on *-te aru* focuses on pragmatics, the discussion found in these sections is limited to pragmatics. In Sections 5 and 6, I re-evaluate the readings of *-te aru*, and argue against the assumption that *-te aru* yields perfective readings.

2. Formal properties of *-te aru*

2.1 Intransitivizing *-te aru*

Intransitivizing *-te aru* is formed only from transitive verbs. What is most notable about intransitivizing *-te aru* is that the underlying or semantic object of the transitive verb is marked nominative. It looks similar to the passive construction, but the two constructions are distinct in several important points. The examples in (2) show the contrasts among simple past tense, intransitivizing *-te aru*, and passive sentences.

- (2)
- a. Mari-ga keeki-o tukut-ta
 Mari-NOM cake-ACC make-PAST
 ‘Mari made a cake’
- b. keeki-ga tukut-te aru
 cake-NOM make-*te* *aru*
 ‘A cake has been made’
- c. keeki-ga Mari-ni (yotte) tuku-rare-ta
 cake-NOM Mari-DAT by make-PASS-PAST
 ‘A cake was made by Mari’
- d. *keeki-ga Mari-ni (yotte) tukut-te aru
 cake-NOM Mari-DAT by make-*te* *aru*
 Attempted meaning: ‘A cake has been made by Mari’

In (2a), *keeki* (*cake*) is assigned accusative case, but in (2b) it is assigned nominative case. In other words, the object that undergoes the change referred to by the main transitive verb *tukuru* (*make*) is realized as the subject in the intransitivizing *-te aru* sentence. The passive sentence in (2c) has *keeki* (*cake*) as the surface subject just like (2b), and the agent of the event is expressed by *Mari-ni* or *Mari-ni yotte* (*by Mari*). The passive sentence has the passive morphological element ‘*rare*’, which the *-te aru* sentence lacks. As shown in (2d), unlike passive, an attempt to express the agent of the event with *Mari-ni* or *Mari-ni yotte* (*by Mari*) returns an ungrammatical result (Kageyama 1996).

2.2 Non-intransitivizing *-te aru*

Non-intransitivizing *-te aru* normally refers to a sentence with the *-te aru* form of a transitive verb with standard case-markings such as the examples in (3a). For purpose of comparison, I repeat the intransitive *-te aru* example in (2b) as (3b).

- (3) a. Non-intransitivizing *-te aru*
 Mari-ga keeki-o tukut-te aru
 Mari-NOM cake-ACC make-*te* *aru*
 ‘Mari has made a cake’
- b. Intransitivizing *-te aru*
 keeki-ga tukut-te aru
 cake-NOM make-*te* *aru*
 ‘A cake has been made’

Unlike the intransitivizing *-te aru* example in (3b), the non-intransitivizing *-te aru* example in (3a) shows standard case-markings; i.e. *keeki* (*cake*), which is the object of the transitive verb *tukuru* (*make*) is marked accusative; the agent of the verb, *Mari*, is expressed as the subject and marked nominative.

In the literature, one can also find *-te aru* sentence examples with intransitive verbs, although they are rare. Such examples have not been clearly labeled or categorized, but since they show standard case-markings (i.e. the agent of the intransitive verb is expressed and marked nominative), and there is nothing “intransitivizing” about the form (after all, the verb is intransitive to begin with), I choose to categorize *-te aru* sentences with intransitive verbs as non-intransitivizing *-te aru*. An example of a *-te aru* sentence with an intransitive verb is shown in (4).

- (4) John-ga yasun-de aru
 John-NOM rest-*te* aru
 ‘John has rested’
 (Harasawa 1994)

As it turns out, *-te aru* sentences with intransitive verbs such as (4) share the same pragmatic requirement as *-te aru* sentences with transitive verbs with standard case marking properties such as (3a). Therefore, it makes sense to group these two types of *-te aru* together and make a distinction with intransitivizing *-te aru*.

Non-intransitivizing *-te aru* imposes a pragmatic requirement which intransitivizing *-te aru* does not. The pragmatics of intransitivizing *-te aru* and non-intransitivizing *-te aru* will be discussed in the following two sections.

3. Pragmatics of intransitivizing *-te aru*

3.1 Intention and evidence

In the literature, two specific restrictions on intransitivizing *-te aru* have been observed, neither of which applies to the passive construction. First, the agent of the event needs to be a human with an intention or a purpose (Takahashi, 1976; Soga, 1983; Matsumoto, 1990; Harasawa, 1994; Kageyama, 1996). Second, it must be evident that the state described in a *-te aru* sentence has resulted from a previous action of that agent (Matsumoto, 1990; Harasawa, 1994).

As a result of the first condition, that the agent of the event needs to be a human with an intention or a purpose, the following sentences necessarily have specific interpretations.

- (5) a. ki-ga taosi-te aru
 tree-NOM topple-*te* *aru*
 ‘A tree has been toppled’
- b. mado-ga wat-te aru
 window-NOM break(TR)-*te* *aru*
 ‘A window has been broken’

A speaker of the sentence in (5a) necessarily implies that the tree was toppled by human force. It is possible, for example, for a strong wind to topple a tree, but a speaker of (5a) can never imply such a scenario. The sentence in (5b) necessarily

implies that the window was broken by a human, and furthermore, that it was done intentionally. Therefore, a speaker can never suggest that the window was broken by some natural force, or that it was accidentally broken by a human.

The second condition on the *-te aru* construction is explicitly stated in Matsumoto (1990) in the form of *the describability condition*, which states that “it must be evident that the state being described in the *-te aru* construction have [sic] resulted from a previous action of an agent” (p.275). A *previous action* refers to an event denoted by a verb in the *-te aru* form. The describability condition predicts the difficulty for native speakers to accept the following sentences.

- (6) a. ?koo-ri-ga tokasi-te aru
 ice-NOM melt-*te* aru
 ‘The ice has been melted’
 (Miyagawa 1989)
- b. ?keeki-ga tabe-te aru
 cake-NOM eat-*te* aru
 ‘The cake has been eaten’
 (Hamano 1988)
- c. ?doa-ga tatai-te aru
 door-NOM beat-*te* aru
 ‘The door has been knocked upon’
 (Matsumoto 1990)
- d. ?kodomo-ga donat-te aru
 child-NOM yell-*te* aru
 ‘A child has been yelled at’
 (Matsumoto 1990)

The sentences in (6) exemplify cases where it is difficult to observe evidence that an event has taken place. Before evaluating the examples in (6), however, we need to know what exactly counts as *evidence* as stated in the describability condition. The following two subsections examine the nature of the evidence that is required for intransitivizing *-te aru*. Each of the examples in (6) will be re-addressed and discussed along the way.

3.2 Affected objects and location of evidence

As stated in the describability condition (Matsumoto 1990), in order for intransitive *-te aru* to be legitimately used, a speaker needs to find some evidence that an event expressed by the *-te aru* form has taken place. In other words, there needs to be some visual cue that indicates that an event has happened. What is the range of visual cues and where can we find them?

Intransitivizing *-te aru* is formed exclusively from transitive verbs, and the underlying or semantic object of a transitive verb is always expressed as the surface subject. In many but not all cases, transitive verbs take affected objects. Thus, we expect that often times, the surface subjects of intransitivizing *-te aru* sentences refer to entities that undergo some change through the event denoted by transitive verbs. We therefore expect to see evidence of an event having taken place by observing the entity expressed by the surface subject. The sentences in (7) exemplify such cases.

- (7) a. ki-ga taosi-te aru (= 5a)
 tree-NOM topple-*te* *aru*
 ‘A tree has been toppled’
- b. mado-ga wat-te aru (= 5b)
 window-NOM break(TR)-*te* *aru*
 ‘A window has been broken’
- c. keeki-ga tukut-te aru (= 2b)
 cake-NOM make-*te* *aru*
 ‘A cake has been made’

The surface subjects in (7) are all affected objects of the transitive verbs. As such, evidence that the events have occurred is visible in the entities denoted by the surface subjects. A toppled tree, a broken window, and a baked cake serve as visual cues that indicate a tree-toppling event, a window-breaking event, and a cake-making event have occurred.

However, it is not the case that evidence is always found in an affected object. For example, verbs of destruction and consumption select for affected objects, but once the event takes place, the affected objects no longer exist. Therefore, the destroyed or consumed objects themselves cannot serve as evidence that the events have taken place. That is the case with examples in (6a) and (6b), repeated below in (8).

- (8) a. ?koo-ri-ga tokasi-te aru (= 6a)
 ice-NOM melt-*te* *aru*
 ‘The ice has been melted’
 (Miyagawa 1989)

- b. ?keeki-ga tabe-te aru (= 6b)
 cake-NOM eat-*te* *aru*
 ‘The cake has been eaten’
 (Matsumoto 1990)

The difficulty in accepting the examples in (8) is due to the fact that the ice or cake no longer exists in the described states. On the other hand, Matsumoto (1990) suggests that if part of the ice is melted, or part of the cake is eaten, it is much easier to express the situations using intransitivizing *-te aru* as illustrated below.

- (9) a. koori-ga hanbun tokasi-te aru
 ice-NOM half melt-*te* *aru*
 ‘The ice has been half-way melted’
 (Matsumoto 1990)
- b. keeki-ga hitokuti tabe-te aru
 cake-NOM one.bite eat-*te* *aru*
 ‘The cake has been eaten a bit’
 (Matsumoto 1990)

The examples in (9) are easily accepted by native speakers because the affected objects are still visible and able to serve as evidence that melting or eating has taken place.

Do we always have to find evidence in the affected objects in order to legitimately use intransitivizing *-te aru*? In fact, that is not the case. Evidence of events can be found anywhere, as the examples in (10) illustrate.

- (10) a. kara-no hako-o mi-te keeki-ga tabe-te aru
 empty-GEN box-ACC see-*te* cake-NOM eat-*te* *aru*
 koto-ni kigatui-ta
 thing-LOC notice-PAST
 ‘I saw an empty box and I realized that the cake has been eaten’
- b. ie-ni kaet-ta toki ii nioi-ga si-ta
 house-LOC return-PAST when good smell-NOM do-PAST
 node keeki-ga yai-te aru koto-ni kigatui-ta
 because cake-NOM bake-*te* *aru* thing-LOC notice-PAST
 ‘I realized that a cake has been baked because it smelled good when I came home’

Given that the speaker of (10a) knows that the box used to contain a cake, it is sensible for her to assume that somebody has eaten the cake by observing an empty box. As for (10b), although observing an actual baked cake is considered the primary evidence that the cake has been baked, it is not necessarily the only possible source of evidence. The aroma of a baked cake is not a visual cue, but it can still serve as evidence.

In theory, the possible range of evidence is unlimited. For example, if I know for a fact that my mother bakes a cake every Sunday by two o’clock, then I can assert that a cake has been baked using *-te aru* just by checking that it is past two o’clock on Sunday. The describability condition is a pragmatic constraint; evidence can be of any kind and can be found anywhere.

3.3 Unaffected objects and location of evidence

When a transitive verb does not take an affected object, the object itself does not normally provide evidence that the event has taken place. The earlier examples in (6c) and (6d) repeated in (11) below are such cases.

- (11) a. ?doa-ga tatai-te aru (= 6c)
 door-NOM beat-*te* *aru*
 ‘The door has been knocked upon’
 (Matsumoto 1990)
- b. ?kodomo-ga donat-te aru (= 6d)
 child-NOM yell-*te* *aru*
 ‘A child has been yelled at’
 (Matsumoto 1990)

The example in (11a) is difficult for native speakers to accept because it is not usually evident from the state of a door that an activity of knocking on the door took place. However, in a particular situation where a trace of knocking on the door is observed, (11a) can be legitimately uttered. For example, the door can be damaged as a result of being knocked upon intensively. As discussed in the previous section, evidence can also be found elsewhere. Evidence does not even have to be visible on the door itself. For example, a scenario can be as strange as the following: somebody knocks on this particular door every day at two o’clock; it’s three o’clock now, so I know for a fact that the door has been knocked upon today. In this particular situation, asserting (11a) is acceptable.

The verb *donaru* (*yell*) in (11b) is a transitive verb, unlike its English counterpart. Since we do not normally expect to observe evidence of a child having been yelled at, (11b) is difficult for native speakers to accept. However, in a particular situation where it is possible to observe evidence, (11b) can be legitimately used. Matsumoto (1990) provides an example such as the following: suppose there is a child next door who stops being noisy if and only if somebody yells at him. In such a case, something like (12) can be legitimately uttered.

- (12) sono sizukesa-wa tonari-no kodomo-ga itinido
 that silence-TOP next.door-GEN child-NOM one.two.times
 donat-te aru koto-o simesi-te i-ta
 yell.at-*te* *aru* thing-ACC show-*te* *iru*-PAST
 ‘The silence showed that the child next door was in the state of having been yelled at once or twice’
 (Matsumoto 1990)

When transitive verbs that take unaffected objects are used in intransitivizing *-te aru*, particular contexts are required for them to be legitimately used. Therefore, if such sentences are used in grammatical judgment tests in isolation, it is likely that native speakers react to them negatively. Some have claimed that intransitivizing *-te aru* is used only to describe states of affected objects (Miyagawa, 1989; Kageyama, 1996), but that is a misunderstanding. Given the correct context, almost any transitive verb can appear in intransitivizing *-te aru*.

3.4 When evidence is not necessary

Although I agree with Matsumoto that the describability condition holds for intransitivizing *-te aru* as a pragmatic constraint, there is something basic and simple that is left unmentioned. When Matsumoto states the describability condition, he seems to assume that the speaker of a *-te aru* sentence does not observe the denoted event as it takes place. If what the speaker observes is only the result of what has happened, of course she needs to have certain information in order to assert what actually has taken place. However, if the speaker observes the entire event as it happens, evidence is no longer necessary. Or better yet, if the speaker is the agent of the event, there is no need at all to even look for evidence.

Observing an event as it happens or being the agent of an event enables us to assert a *-te aru* sentence without any additional evidence. We might be able to say that observing an event as it happens or being the agent of an event vacuously satisfies the describability condition.

A question arises as to why somebody would use intransitivizing *-te aru* when she knows who the agent is or when she actually is the agent. One possible reason for using intransitivizing *-te aru* in such a situation is when the speaker wants to keep the agent anonymous. For example, when somebody fixes tea for her guest, she may want to sound humble and would not want to mention the fact that *she* fixed the tea. Although it may be obvious that she fixed the tea for the guest, to deliberately not mention it is considered a valued and respected gesture, especially in the Japanese culture. A passive sentence can also serve this purpose, but passive sentences are used

rarely in Japanese, and they tend to be used in negative contexts (Martin 1975).

Therefore, when somebody wants to keep the agent anonymous, intransitivizing *-te aru* is more likely to be used than passive sentences.

4. Pragmatics of non-intransitivizing *-te aru*

It has been claimed that a speaker of non-intransitivizing *-te aru* implies that the agent has taken an action for some preparatory purpose (Teramura, 1984; Harasawa, 1994). Such an implication is absent when intransitivizing *-te aru* is used. One of the reasons that non-intransitivizing *-te aru* is considered to be a marked variety of *-te aru* may be that it imposes this extra pragmatic requirement. Since non-intransitivizing *-te aru* has very specific pragmatics, situations where non-intransitivizing *-te aru* can be used are naturally very limited. The examples in (13) illustrate how non-intransitivizing *-te aru* is used.

- (13) a. *itu dekake-te mo ii yoo-ni John-wa moo*
 when go.out-*te* also good way-LOC John-TOP already
syawaa-o abi-te aru
 shower-ACC take-*te aru*
 ‘John has already taken a shower so that he can go out any time’
 (Harasawa 1994)

b. asu-no siai-ni sonae-te John-wa zyuubun-ni
 tomorrow-GEN game-DAT prepare-*te* John-TOP enough-LOC
 yasun-de aru
 rest-*te* *aru*

‘John has rested enough in preparation for tomorrow’s game’
 (Harasawa 1994)

c. John-wa kadai-no hon-o nandomo yon-de aru
 John-TOP assignment-GEN book-ACC many.times read-*te* *aru*
 kara nandemo situmon-ni kotae-rareru
 because whatever question-DAT answer-POTENTIAL

‘John has read the assigned book many times, so he can answer any questions’

The examples in (13) clearly indicate contexts where the actions taken by the agents serve as preparations for something else. This in turn suggests that the action has been taken by the agents intentionally. Recall that intransitivizing *-te aru* requires that the denoted action be taken with intention. The same requirement applies to non-transitivizing *-te aru* as well. The following example is difficult to accept because the action is not normally taken intentionally.

(14) ?Mari-wa kega-o si-te aru
 Mari-TOP injury-ACC do-*te* *aru*
 ‘Mari has injured herself’

The above example implies that Mari has intentionally injured herself, in order for her to be ready for something else. Since nobody injures herself

intentionally under normal circumstances (and certainly not in preparation for something else), (14) sounds odd.

Since intention is required, the subject of non-intransitivizing *-te aru* cannot be non-human, just as is required for intransitivizing *-te aru*. Soga (1983) provides unacceptable examples with non-human subjects such as the following.

- (15) a. **taiyoo-ga yama-no tyoozyoo-o terasi-te aru*
 sun-NOM mountain-GEN top-ACC illuminate-*te aru*
 Attempted meaning: ‘The sun has illuminated the top of the mountain’
- b. **tunami-ga sono mati-o osot-te aru*
 tsunami-NOM that town-ACC hit-*te aru*
 Attempted meaning: ‘The tsunami has hit that town’

In summary, in order to properly use non-intransitivizing *-te aru*, the agent has to be human with intention. The same requirement is observed in intransitivizing *-te aru* as well.¹ However, a speaker of non-intransitivizing *-te aru* also implies something else in addition; i.e. the agent has taken the specified action for some preparatory purpose.

¹ Note that the descriptibility condition that applies to intransitivizing *-te aru* is not an issue for non-intransitivizing *-te aru*. The descriptibility condition is necessary for intransitivizing *-te aru* because speakers are normally required to deduce the outcome. This requirement is absent from other types of sentences including those with non-intransitivizing *-te aru*.

5. Interpretations of non-intransitivizing *-te aru*

5.1 Introduction

In the next two sections, I will argue against the assumption that *-te aru* yields a perfective reading (Martin, 1975; Takahashi, 1976; Soga, 1983; Teramura, 1984; Miyagawa, 1989; Matsumoto, 1990; Harasawa, 1994; Hasegawa, 1996; Kageyama, 1996; Miyagawa & Babyonyshev, 2004). Rather, I will show that all *-te aru* sentences are experiential sentences. I begin in this section with discussion of non-intransitivizing *-te aru*; in Section 6, I discuss intransitivizing *-te aru*. I discuss intransitivizing *-te aru* later due to its relatively complex nature.

As I discussed in Chapter 3, since a perfective reading requires the necessary outcome of a specified event to obtain, it is impossible to have a perfective sentence with an activity verb + *-te iru*. This alone casts doubt on the idea that *-te aru* sentences are perfective. It is believed that the interpretation of *-te aru* is not affected by the aspectual properties of particular verbs; *-te aru* is claimed to uniformly yield perfective readings regardless of the aspectual type of the verb. At least where an activity verb + *-te aru* is concerned, it is doubtful that such a construction can ever yield a perfective reading. It is contradictory that a perfective reading entails a necessary outcome while an activity event bears no necessary outcome.

I will examine the readings of *-te aru* with the discussion presented in Chapter 3 in mind. Specifically, I will first examine the interpretations from the perspective of the necessary outcomes of events. Second, I will repeat the

grammatical tests to distinguish between SLPs and ILPs. If *-te aru* sentences show properties of SLPs, then we can say that *-te aru* is perfective. If, however, *-te aru* sentences show properties of ILPs, then we will have to conclude that *-te aru* is experiential.

5.2 Necessary outcomes of events

Non-intransitivizing *-te aru* can be formed with any type of verb; transitive, intransitive, activity, achievement are all possible with non-intransitivizing *-te aru*. The only type of restriction non-intransitivizing *-te aru* imposes is a pragmatic one. As discussed in Section 4, a speaker of a non-intransitivizing *-te aru* sentence necessarily implies that the agent has taken the specified action as preparation for something else. Non-intransitivizing *-te aru* cannot be used unless a speaker intends such an implication. As long as the pragmatic requirement is satisfied, there is no restriction as to the type of verb used in non-intransitivizing *-te aru*. The following exemplify non-intransitivizing *-te aru* with various types of predicates.

- (16) a. Transitive achievement verb
 Mari-wa hon-o kari-te aru kara
 Mari-TOP book-ACC borrow-*te aru* since
 syukudai-ga kantan-ni dekiru
 homework-NOM ease-LOC do.POTENTIAL
 ‘Mari has borrowed the book, so she can do her homework easily’

b. Transitive activity verb

Mari-wa syawaa-o abi-te aru kara moo
 Mari-TOP shower-ACC take-*te aru* since already
 dekake-rareru
 go.out-POTENTIAL
 ‘Mari has taken a shower, so she can go out now’

c. Transitive activity verb that is an accomplishment in English

Mari-wa yuuhan-o tukut-te aru kara sibaraku
 Mari-TOP dinner-ACC make-*te aru* since for.a.while
 terebi-o mi-te-mo daizyoobu-da
 television-ACC watch-*te-also* alright-COP
 ‘Mari has cooked dinner, so it will be alright if she watches TV for a while’

d. Intransitive achievement verb

Mari-wa huransu sisya-ni it-te aru kara gyoomu
 Mari-TOP France branch-LOC go-*te aru* since work
 naiyoo-o kuwasiku hookoku dekiru
 content-ACC in.detail report do.POTENTIAL
 ‘Mari has been to the branch office in France, so she can report their work projects in detail ’

e. Intransitive activity verb

Mari-wa sannen hatarai-te aru kara
 Mari-TOP three.year work-*te aru* since
 MBA-no puroguramu-ni gansyo-o das-eru
 MBA-GEN program-LOC application-ACC send-POTENTIAL
 ‘Since Mari has worked for three years, she can send an application to the MBA program’

The above examples can all be used given specific contexts. For (16a),
 imagine that there is a particular book in the library that helps Mari doing homework.

For (16b), it should be the case that Mari would not feel ready to go out unless she takes a shower. Similarly for (16c), Mari would not be able to watch TV unless she has finished cooking dinner. For (16d), imagine a situation where Mari works for the main office, and desires to report on the work projects at the branch office in France to her fellow employees at the main office. For (16e), imagine a situation where this particular MBA program requires applicants to have at least three years of work experience. As the examples in (16) indicate, any verb can be used with *-te aru*, as long as it is used in an appropriate context.

If non-intransitivizing *-te aru* yields perfective readings as has been assumed, a non-intransitivizing sentence should be possible only when a necessary outcome of a specified event obtains. First consider (16a) and (16d). Achievement verbs are used in these examples. We need to examine whether or not the necessary outcomes of the achievement events need to obtain. The achievement event referred to in (16a) is *borrowing a book*; the achievement event referred to in (16d) is *going to the branch office*. The necessary outcome of a book-borrowing event is the book being in the possession of the agent. The necessary outcome of going to the branch office is being at the branch office. In fact, such resultant states are not required in order for (16a) and (16d) to be true. Indeed, (16a) can be used not only when the book is in Mari's possession, but even after she returns the book. Imagine a situation where Mari makes a copy of the pages that will help her with the homework. She returns the book after making the copies. Although the book is not in Mari's possession any longer, (16a) can still be uttered. As for (16d), there is in fact a strong intuition that Mari is already back from the branch office, and (16d) is actually rather odd if Mari is still away. We

can conclude that the necessary outcome of an achievement event does not need to obtain for non-intransitivizing *-te aru*. This suggests that non-intransitivizing *-te aru* can yield an experiential reading even when an achievement verb is used.

Next, if we consider non-intransitivizing *-te aru* with activity verbs such as (16b) and (16e), there is no entailed outcome associated with events of taking a shower or working. Events of taking a shower and working can continue forever, theoretically speaking. There is no necessary outcome. Activity events can either continue or stop. One might say that the outcome of shower-taking event is a clean body. However, that is not a necessary outcome. One can come out from a shower without being clean. Nevertheless, that individual can still say that she in fact took a shower. In contrast, being in England is the necessary outcome of going to England. If an individual has never touched the ground of England, that person cannot say that she went to England. Since there is no natural and necessary outcome associated with activity verbs, I argue that activity verbs + *-te aru* such as (16b) and (16e) cannot yield perfective readings.

Finally, consider (16c). It exemplifies non-intransitivizing *-te aru* with an activity verb + direct object, which is considered to be an accomplishment in English. As I discussed in Section 2.3 of Chapter 3, accomplishments in Japanese behave just like activities, and in Japanese they do not entail necessary outcomes. As such, a predicate like *yuuhan-o tukuru* (*cook dinner*) does not denote an event that entails the existence of a cooked dinner. It is possible to assert that somebody cooked a dinner even when the cooking did not actually result in dinner. Since there is no entailed outcome, (16c) cannot yield a perfective reading, on par with (16b) and (16e).

I conclude that non-intransitivizing *-te aru*, regardless of the type of predicate, can always yield an experiential reading. As for non-intransitivizing *-te aru* with an activity predicate, it is impossible to obtain a perfective reading. However, we still have not excluded the possibility that non-intransitivizing *-te aru* with an achievement predicate yields a perfective reading. This is because non-intransitivizing *-te aru* can be used when the entailed outcome obtains, as well as when it does not obtain. It may be that the reading of non-intransitivizing *-te aru* is perfective when the entailed outcome does obtain. In the following section, I apply grammatical tests to answer this question, as well as to confirm that non-intransitivizing *-te aru* with an activity predicate yields only an experiential reading.

5.3 Grammatical tests

In order to confirm that all of the examples in (16) have experiential readings, and also to answer the question of whether or not (16a) and (16d) are ambiguous between perfective and experiential, I apply some of the tests that I laid out in Section 3 of Chapter 3.

First of all, marking the subjects with particle *-ga* in all the examples in (16) results in the exhaustive *-ga* reading. This property is shared with ILPs, and I argued in Chapter 3 that experiential sentences are individual-level sentences.

- (17) a. Mari-**ga** hon-o kari-te aru
 Mari-**ga** book-ACC borrow-*te aru*
 ‘Mari is the one that has borrowed a book’
 (exhaustive *-ga* reading)
- b. Mari-**ga** syawaa-o abi-te aru
 Mari-**ga** shower-ACC take-*te aru*
 ‘Mari is the one that has taken a shower’
 (exhaustive *-ga* reading)
- c. Mari-**ga** yuuhan-o tukut-te aru
 Mari-**ga** dinner-ACC make-*te aru*
 ‘Mari is the one that has cooked dinner’
 (exhaustive *-ga* reading)
- d. Mari-**ga** huransu sisya-ni it-te aru
 Mari-**ga** France branch-LOC go-*te aru*
 ‘Mari is the one that has been to the branch office in France’
 (exhaustive *-ga* reading)
- e. Mari-**ga** sannen hatarai-te aru
 Mari-**ga** three.year work-*te aru*
 ‘Mari is the one that has worked for three years’
 (exhaustive *-ga* reading)

Importantly, the readings of *-ga* above are unambiguously exhaustive. Given that the *ga*-marked subjects are found in matrix sentences, they can never yield descriptive readings. This suggests that even non-intransitivizing *-te aru* with an achievement predicate yields an experiential reading exclusively. This is the conclusion that could not be reached in the previous section where I considered the

necessary outcomes of events. Now we can conclude that all non-intransitivizing *-te aru* sentences yield only experiential readings.

Second, non-intransitivizing *-te aru* sentences are incompatible with the immediacy usage (non-conditional usage) of the expression *tokoro-da*, just like ILPs and experiential *-te iru*, as illustrated in the following.

- (18) a. *Mari-wa hon-o kari-te aru tokoro-da
 Mari-TOP book-ACC borrow-*te aru* place-COP
 Attempted meaning: ‘Mari has borrowed a book right at this moment’
- b. *Mari-wa syawaa-o abi-te aru tokoro-da
 Mari-TOP shower-ACC take-*te aru* place-COP
 Attempted meaning: ‘Mari has taken a shower right at this moment’
- c. *Mari-wa yuuhan-o tukut-te aru tokoro-da
 Mari-TOP dinner-ACC make-*te aru* place-COP
 Attempted meaning: ‘Mari has cooked dinner right at this moment’
- d. *Mari-wa huransu sisya-ni it-te aru tokoro-da
 Mari-TOP France branch-LOC go-*te aru* place-COP
 Attempted meaning: ‘Mari has been to the branch office in France right at this moment’
- e. *Mari-wa sannen hatarai-te aru tokoro-da
 Mari-TOP three.year work-*te aru* place-COP
 Attempted meaning: ‘Mari has worked for three years right at this moment’

The above examples confirm that non-intransitivizing *-te aru* yields only an experiential reading. If it were ambiguous between perfective and experiential, the

examples in (18) should have been grammatical in at least some contexts. However, regardless of the context, all of the examples in (18) are ungrammatical.

Third, if a past adverbial is used with non-intransitivizing *-te aru*, tense agreement does not need to obtain, as illustrated in the following.²

- (19) a. Mari-wa kyonen hon-o kari-te aru
 Mari-TOP last.year book-ACC borrow-*te aru*
 Lit: ‘Mari has borrowed a book last year’
- b. Mari-wa kinoo syawaa-o abi-te aru
 Mari-TOP yesterday shower-ACC take-*te aru*
 Lit: ‘Mari has taken a shower yesterday’
- c. Mari-wa kinoo yuuhan-o tukut-te aru
 Mari-TOP yesterday dinner-ACC make-*te aru*
 Lit: ‘Mari has cooked dinner yesterday’
- d. Mari-wa kyonen huransu sisya-ni it-te aru
 Mari-TOP last.year France branch-LOC go-*te aru*
 Lit: ‘Mari has been to the branch office in France last year’
- e. Mari-wa kyonen hatarai-te aru
 Mari-TOP last.year work-*te aru*
 Lit: ‘Mari has worked last year’

² It is possible for all the examples in (19) to have tense agreement. In that case, however, the past tense adverbials work as sentential modifiers, rather than predicate modifiers. For example, if we take (19e), when tense agreement obtains, it will express the property of Mari *as of* last year, but she may have worked prior to last year.

As the above three tests indicate, examples with non-intransitivizing *-te aru* exhibit properties of ILPs. Contrary to the assumption that *-te aru* always yields perfective readings, I conclude that non-intransitivizing *-te aru* yields only experiential readings.

6. Interpretations of intransitivizing *-te aru*

6.1 Introduction

The purpose of this section is to reconsider the readings of intransitivizing *-te aru*. Specifically, I will cast a doubt on the claim that intransitivizing *-te aru* has a perfective reading (Martin, 1975; Takahashi, 1976; Soga, 1983; Teramura, 1984; Miyagawa, 1989; Matsumoto, 1990; Harasawa, 1994; Hasegawa, 1996; Kageyama, 1996; Miyagawa & Babyonyshev, 2004). While it is a wide-spread assumption that intransitivizing *-te aru* has a perfective reading, I believe that there has been no attempt to conduct a careful examination. The source of this assumption is probably the fact that examples of intransitivizing *-te aru* are most commonly formed with achievement predicates. As discussed, the *-te iru* form of an achievement yields a perfective reading. Therefore, it is easy for one to assume that intransitivizing *-te aru* also yields a perfective reading. However, there is still the possibility that intransitivizing *-te aru* yields an experiential reading, as was the case for non-intransitivizing *-te aru*.

Following the same format used in Section 5, I will first examine the interpretation of *-te aru* from the perspective of entailed outcomes of events, since an entailed outcome is the necessary factor for a perfective reading. Second, I will use grammatical tests to distinguish between perfective and experiential. I will conclude that intransitivizing *-te aru* yields only experiential readings, just as was the case for non-intransitivizing *-te aru*. At the end of the section, I will discuss what this conclusion entails.

6.2 Necessary outcomes of events

Intransitivizing *-te aru* can be formed only with transitive predicates. As discussed in Section 3, there are two types of pragmatic constraints associated with the use of intransitivizing *-te aru*. One is that the agent of the denoted event has to be a human with an intention; the other is that there has to be some kind of evidence for a speaker to be able to deduce the outcome of the event that caused it. As long as these conditions are met, any transitive predicate can be used in intransitivizing *-te aru*.

In terms of aspectual properties, there are two types of transitive predicates in Japanese. One is achievements and the other is activities. When discussing necessary outcomes of events associated with predicates, the distinction between activities and achievements is essential. Therefore, I discuss these two types of predicates separately. In my discussion, activity predicates will include so-called accomplishments. I have already established arguments in Chapter 2 and Chapter 3

that Japanese does not distinguish between activities and accomplishments. Therefore, I will discuss accomplishments as activities, although I will put a note on accomplishments for clarification purposes.

The following exemplifies intransitivizing *-te aru* with various types of predicates.

(20) a. Transitive achievement

hon-ga kari-te aru
 book-NOM borrow-*te aru*
 ‘A book has been borrowed’

b. Transitive activity

kuruma-ga untensi-te aru
 car-NOM drive-*te aru*
 ‘A car has been driven’

c. Transitive activity (but accomplishment in English)

roosoku-ga take-te aru
 candle-NOM light-*te aru*
 ‘A candle has been lit’

The above examples can be used given that the agents of the denoted actions are humans with purposes, and that the speakers have enough evidence to deduce the outcomes of the denoted events.

If intransitivizing *-te aru* yields perfective readings as has been assumed, an intransitivizing sentence should be possible only when a necessary or entailed outcome of a specified event obtains. First consider (20a) with the achievement

predicate. The achievement event referred to in (20a) is borrowing a book. The necessary outcome of a book-borrowing event is that of the book being in the possession of the agent. In fact, such a resultant state is not required in order for (20a) to be true. Indeed, (20a) can be uttered when the book is in the possession of the agent, but even after the book is returned, (20a) can still be used. Imagine a situation where somebody looks at the checkout record of the book at the library. Confirming that the book has been checked out before, she utters (20a), which is perfectly legitimate. We can conclude that the necessary outcome of an achievement event does not need to obtain for intransitivizing *-te aru*. This suggests that intransitivizing *-te aru* can yield an experiential reading, just like non-intransitivizing *-te aru*, even when an achievement predicate is used.

Second, consider (20b) and (20c) with activity predicates. I have argued that there are no natural outcomes associated with activity events, including so-called accomplishment events. As such, perfective readings are impossible for (20b) and (20c). A car-driving event does not entail a particular outcome. A candle-lighting event, in Japanese, does not entail a particular outcome either, even if that outcome is implied. In fact, (20c) can be uttered when the candle is no longer burning. For example, somebody can identify the melted candle as evidence for the candle having been lit before, then utter (20c). This is a completely legitimate usage.

I conclude that intransitivizing *-te aru* with an activity predicate yields only an experiential reading. As for intransitivizing *-te aru* achievement predicates, I argue that it can yield an experiential reading, but we do not yet know if it yields only an experiential reading; i.e. it might be that it yields *both* perfective and experiential

readings. This is because intransitivizing *-te aru* can be used when the entailed outcome obtains, as well as when it does not obtain. In the following section, I apply the grammatical tests to answer this question, as well as to confirm that intransitivizing *-te aru* with an activity predicate also yields only an experiential reading.

6.3 Grammatical tests

In order to confirm that all of the examples in (20) have experiential readings, and also to answer the question of whether or not (20a) is ambiguous between perfective and experiential, I will apply two grammatical tests. I first examine compatibility with the expression *tokoro-da*. Second, I examine the effects of tense modifiers.

First, intransitivizing *-te aru* sentences are incompatible with the immediacy usage (non-conditional usage) of the expression *tokoro-da*, just like ILPs and experiential *-te iru*, as illustrated in the following.

- (21) a. *hon-ga kari-te aru tokoro-da
 book-NOM borrow-*te aru* place-COP
 Attempted meaning: ‘A book has been borrowed right at this moment’
- b. *kuruma-ga untensi-te aru tokoro-da
 car-NOM drive-*te aru* place-COP
 Attempted meaning: ‘A car has been driven right at this moment’

- c. *roosoku-ga take-te aru tokoro-da
 candle-NOM light-*te* *aru* place-COP

Attempted meaning: ‘A candle has been lit right at this moment’

The above examples confirm that intransitivizing *-te aru* exclusively yields experiential readings. If it were ambiguous between perfective and experiential, the examples in (21) should be grammatical in at least some contexts. However, regardless of context, all of the examples in (21) are ungrammatical.

Second, if a past adverbial is used with intransitivizing *-te aru*, tense agreement does not need to obtain, as illustrated in the following.³

- (22) a. hon-ga kyonen kari-te aru
 book-NOM last.year borrow-*te aru*
 Lit: ‘A book has been borrowed last year’
- b. kuruma-ga kinoo untensi-te aru
 car-NOM yesterday drive-*te aru*
 Lit: ‘A car has been driven yesterday’
- c. roosoku-ga kinoo take-te aru
 candle-NOM yesterday light-*te aru*
 Lit: ‘A candle has been lit yesterday’

³ Paralleling the discussion in Footnote 2, it is possible for all the examples in (22) to have tense agreement. In that case, however, past tense adverbials work as sentential modifiers, rather than predicate modifiers. For example, when tense agreement obtains in (22b), the driving event itself may not have happened yesterday; it could have been the day before yesterday.

As the above tests indicate, intransitivizing *-te aru* exhibit properties of ILPs. Contrary to the assumption that intransitivizing *-te aru* is perfective, I conclude that it yields only experiential readings. This is the same conclusion that I reached for non-intransitivizing *-te aru*. Therefore, we can say that all *-te aru* sentences yield experiential readings, and not perfective readings.

An important question arises as a result of this conclusion. If intransitivizing *-te aru* is experiential, whose experience does it denote? An agent is never expressed in the intransitivizing *-te aru* construction. Therefore, it is not clear if the experiences are of an unspecified agent or of somebody or something else. I discuss this issue in the following section.

6.4 Experience of an unspecified agent

If intransitivizing *-te aru* is experiential, whose experience does it denote? Precisely speaking, whose property is the experience? I suggest that it is the properties of an unspecified agent, as opposed to the individual or entity that is referred to by the *ga*-marked nominal; i.e. the underlying direct object. In what follows, I present my arguments for this claim.

In the last section, I presented three arguments to support the claim that intransitivizing *-te aru* is experiential: 1) outcomes of events do not need to obtain; 2) it is incompatible with *tokoro-da*; 3) past modifiers do not shift tense. Readers may have noticed that I did not present an argument based on the interpretations of *-wa* and *-ga*. This was not an accident. In fact, I will argue that facts about the

interpretations of *-wa* and *-ga* suggest intransitivizing *-te aru* denotes properties of an unspecified agent, rather than of the overtly specified argument of the sentence.

Recall the facts about the interpretations of *-wa* and *-ga* in *-te iru* and non-intransitivizing *-te aru* sentences summarized below.

- (23) a. Progressive and perfective *-te iru*
 i. *wa*-marked subject: topic reading
 ii. *ga*-marked subject: descriptive reading
- b. Experiential *-te iru*
 i. *wa*-marked subject: topic reading
 ii. *ga*-marked subject: exhaustive reading
- c. Non-intransitivizing *-te aru*
 i. *wa*-marked subject: topic reading
 ii. *ga*-marked subject: exhaustive reading

We see in (23) that there are two patterns: one is a topic *-wa* and descriptive *-ga* pattern observed in progressive and perfective *-te iru*; the other is a topic *-wa* and exhaustive *-ga* pattern observed in experiential *-te iru* and non-intransitivizing *-te aru*. It turns out that the *-wa* and *-ga* interpretations in intransitivizing *-te aru* do not match either of these two patterns as shown below.

- (24) a. Mari-**wa** kyosee-sookan si-te aru
 Mari-**wa** force-deportation do-*te aru*
 ‘Mari (as opposed to somebody else) has been deported’
 (contrastive *-wa*)

- b. Mari-**ga** kyoosee-sookan si-te aru
 Mari-**ga** force-deportation do-*te* *aru*
 ‘Mari has been deported’
 (descriptive *-ga*)

The contrastive *-wa* in (24a) does not pattern with anything that we have seen so far. I will not discuss here why the subject in (24a) receives the contrastive reading, since it is beyond the scope of our present purposes. For now, it is sufficient to acknowledge the fact alone. Moreover, the *-ga* interpretation in (24b) seems to contradict the conclusion reached in the previous section that intransitivizing *-te aru* is experiential. If it is experiential, we would expect that the use of *-ga* results in the exhaustive reading. Instead, the descriptive *-ga* in (24b) patterns with progressive and perfective *-te iru*.

The fact that the *-wa* and *-ga* interpretations in intransitivizing *-te aru* do not pattern with those in other experiential sentences is actually a piece of evidence that intransitivizing *-te aru* does not denote the properties or experiences of the overtly specified argument of the sentence. I elaborate on this point below.

First, we have to clarify the status of the subject that receives the topic reading (when marked with *-wa*) and the exhaustive reading (when marked with *-ga*) in sentences with ILPs, experiential *-te iru*, and non-intransitivizing *-te aru*. Consider the examples below.

(25) ILP

a. Mari-wa se-ga takai
 Mari-TOP height-NOM tall
 ‘Mari is tall’

b. Mari-ga se-ga takai
 Mari-EXHST height-NOM tall
 ‘Mari is the one that is tall’

(26) Experiential –te iru

a. amerika seehu-wa ima made-ni sankai Mari-o
 America government-TOP now up.to-LOC three.times Mari-ACC
 kyoosee-sookan si-te iru
 force-deportation do-*te iru*
 ‘The U.S. government has deported Mari three times up to now’

b. amerika seehu-ga ima made-ni sankai
 America government-EXHST now up.to-LOC three.times
 Mari-o kyoosee-sookan si-te iru
 Mari-ACC force-deportation do-*te iru*
 ‘The U.S. government is the one that has deported Mari three times up to now’

(27) Non-intransitivizing –te aru

a. amerika seehu-wa Mari-o kyoosee-sookan
 America government-TOP Mari-ACC force-deportation
 si-te aru
 do-*te aru*
 ‘The U.S. government has deported Mari’

- b. amerika seehu-ga Mari-o kyoosee-sookan
 America government-EXHST Mari-ACC force-deportation
 si-te aru
 do-*te aru*
 ‘The U.S. government is the one that has deported Mari’

All of the examples above denote properties of the overtly listed subjects.

These subjects are the ones that receive the topic reading when marked with *-wa*, and the exhaustive reading when marked with *-ga*.

Next, consider the passivized versions of (26) and (27) below.

(28) Experiential *-te iru*, passive

- a. Mari-wa ima made-ni sankai amerika
 Mari-TOP now up.to-LOC three.times America
 seehu-ni (yotte) kyoosee-sookan s-are-te iru
 government-DAT by force-deportation do-PASS-*te iru*
 ‘Mari has been deported by the U.S. government three times up to now’
- b. Mari-ga ima made-ni sankai amerika
 Mari-EXHST now up.to-LOC three.times American
 seehu-ni (yotte) kyoosee-sookan s-are-te iru
 government-DAT by force-deportation do-PASS-*te iru*
 ‘Mari is the one that has been deported by the U.S. government three times up to now’

(29) Non-intransitivizing *-te aru*, passive

- a. Mari-wa amerika seehu-ni (yotte)
 Mari-TOP America government-DAT by
 kyoosee-sookan s-are-te aru
 force-deportation do-PASS-*te aru*
 ‘Mari has been deported by the U.S. government’

- b. Mari-ga amerika seehu-ni (yotte)
 Mari-EXHST America government-DAT by
 kyoosee-sookan s-are-te aru
 force-deportation do-PASS-*te* *aru*
 ‘Mari is the one that has been deported by the U.S. government’

The passive sentences in (28) and (29) now denote the properties of Mari, who is the subject of the passive. Again, this subject has the topic reading when marked with *-wa*, and the exhaustive reading when marked with *-ga*.

By examining the active and passive sentences, it seems that the expression that receives the topic reading (when marked with *-wa*) and the exhaustive reading (when marked with *-ga*) is the one that denotes the individual or entity whose properties are referred to by the experiential sentence.

With this in mind, reconsider the facts of intransitivizing *-te aru* in (24) repeated below.

(24) Intransitivizing *-te aru*, active

- a. Mari-**wa** kyoosee-sookan si-te aru
 Mari-**wa** force-deportation do-*te* *aru*
 ‘Mari (as opposed to somebody else) has been deported’
 (contrastive *-wa*)
- b. Mari-**ga** kyoosee-sookan si-te aru
 Mari-**ga** force-deportation do-*te* *aru*
 ‘Mari has been deported’
 (descriptive *-ga*)

In contrast to other experiential sentences, the apparent subjects of intransitivizing *-te aru* do not receive either the topic reading or the exhaustive reading. I suggest that this supports the idea that the apparent subject of intransitivizing *-te aru* is not in fact the subject. As such, intransitivizing *-te aru* does not refer to a property of the individual or entity that is denoted by the apparent subject. Rather, intransitivizing *-te aru* refers to properties of an unspecified agent (or what might be referred to as a PROarb). As discussed in Section 3, there is always an implicit agent in intransitivizing *-te aru*. In fact, there are strict pragmatic rules that apply to this implicit agent even though it can never be explicit; i.e. the implicit agent has to be a human with a purpose. Although the agent never appears, it always exists at least thematically. In contrast, passive sentences have grammatical agents expressed in a *-ni (yotte)* phrase. This is a clear distinction between intransitivizing *-te aru* and passive.

If we take intransitivizing *-te aru* as referring to properties or experiences of an unspecified individual, it is consistent with the fact that this unspecified individual always exists. Furthermore, the only way to measure the properties or experiences of the unspecified individual is to observe the traces of the experiences; i.e. we need to find some evidence. By identifying evidence, we are able to redeem the experiences of the unspecified individual. Thus, to consider intransitivizing *-te aru* as referring to properties of an unspecified individual allows us to apply the pragmatic requirement consistently. In all cases, the speaker needs to identify evidence to deduce that the action has been taken.

While there is no affirmative evidence to argue that intransitivizing *-te aru* refers to properties of an unspecified individual, employing this idea enables a consistent interpretation of the facts. I formally implement the idea in Chapters 5 and 6. In fact, the syntax of intransitivizing *-te aru* proposed in Chapter 6 is distinct from that of other experiential sentences. This distinction will turn out to accommodate the readings of *-wa* and *-ga* observed here.

7. Summary

In this chapter, I discussed *-te aru*, which is subcategorized into intransitivizing *-te aru* and non-intransitivizing *-te aru*. Intransitivizing *-te aru* can be formed only from transitive verbs. As with the passive, the object of the underlyingly transitive verbs is marked nominative. In contrast, non-intransitivizing *-te aru* can be formed with any type of predicate (transitive or intransitive), and the construction shows standard case-marking properties.

In order to legitimately use either of the two *-te aru* types, specific pragmatic requirements have to be met. For both types of *-te aru*, the agent of the event denoted by the verb needs to be a human with an intention or purpose. With intransitivizing *-te aru* specifically, it also has to be the case that the speaker has some evidence to claim that the event actually occurred. With non-intransitivizing *-te aru*, there is no need for the speaker to look for evidence, but there is always an implication that the agent has done something as preparation for something else.

Contrary to what is generally claimed, I argued that all *-te aru* sentences yield experiential readings by using the diagnostics for perfective and experiential that I established in Chapter 3. First, any *-te aru* sentence can be used regardless of the status of the entailed outcome of the denoted event. Second, no *-te aru* sentence is compatible with the expression *tokoro-da*. Third, if a past tense adverbial is used with any *-te aru* sentence, tense agreement does not need to obtain. Lastly, with non-intransitivizing *-te aru*, marking the subject with *-ga* requires the exhaustive reading.

I used the fact that the topic *-wa* and the exhaustive *-ga* pattern does not obtain for intransitivizing *-te aru* as evidence for claiming that intransitivizing *-te aru* refers to properties of an unspecified individual. I illustrated the empirical fact that the expression that receives the topic reading (when marked with *-wa*) and the exhaustive reading (when marked with *-ga*) is the one that denotes the individual or entity whose properties are referred to by an experiential sentence. Since the topic *-wa* and the exhaustive *-ga* pattern does not obtain for what appears to be the subject of intransitivizing *-te aru*, the option that we are left with is to consider the possibility that intransitivizing *-te aru* refers to properties of an unspecified individual. This is consistent with the fact that there is always an implicit individual with purpose even though it can never be referred to explicitly. It is also consistent with the pragmatic requirement that the speaker needs to identify evidence that an action has taken place. This is because the only way to measure the properties or experiences of the unspecified individual is to observe the traces of the experiences.

In the two following chapters, I present a semantics and syntax that formally implement the conclusions that I have reached in this chapter. My claim that intransitivizing *-te aru* refers to properties of an unspecified individual may not be entirely convincing at this point. However, as a result of formally implementing this idea, we will see that the complete set of readings associated with *-wa* and *-ga* reading facts will follow as well.

CHAPTER 5

SEMANTICS OF *-TE IRU* AND *-TE ARU*

1. Introduction

In Chapters 3 and 4, I showed that experiential *-te iru* and all *-te aru* sentences have properties of ILPs, while progressive and perfective *-te iru* sentences have properties of SLPs. Given this observation, the goal of this chapter is to justify and develop a formal semantics of *-te iru* and *-te aru* that reflects this distinction. I begin in Section 2 with a review of two formal semantic treatments of SLPs and ILPs. The first is Carlson (1977) and the second is Kratzer (1995). In this thesis, I choose to use Kratzer's characterization of the distinction between SLPs and ILPs. Kratzer's claim is essentially that SLPs have an extra argument position for events in the sense of Davidson (1967), while ILPs lack this position.

In Section 3, I review the semantics of progressive and perfective *-te iru* proposed in McClure (2007). Although he does not consider either experiential *-te iru* or any *-te aru* sentences, and although there need to be modifications made to the proposals found in his paper, I believe that the basic claims in McClure (2007) help to build the kind of formalism that I seek in this thesis. My goal is to present formal and unified representations of *-te iru* and *-te aru*, respectively, that account for all of their different readings, and simultaneously reflect the SLP/ILP distinction between progressive/perfective readings and experiential readings. Using the claims in Kratzer

(1995) and McClure (2007) as my starting point, I develop a proposal that meets this goal.

In McClure (2007), progressive and perfective readings are derived from a single neo-Davidsonian event semantic representation of *-te iru*. Interactions between the semantics of *-te iru* and the different aspectual types of the predicates (i.e. being an activity vs. being an achievement) give rise to the progressive/perfective reading distinction. Given its event semantic formula, a *-te iru* sentence is denoted by a set of events. The essence of the claim proposed in Section 3 is that a *-te iru* sentence does not have to represent a set of events at all times. Specifically, there are two types of variables to be bound, a variable over an individual and a variable over an event, and the order of existential closure can vary. If the individual variable is bound first, the event variable takes wide scope at the final point of the derivation (which is what we see in McClure (2007)). Such a formula is basically a set of events, and the resulting readings are either progressive or perfective. If the event variable is bound first, however, the individual variable takes wide scope at the final point of the derivation. Such a formula is basically a set of individuals, and the resulting reading is experiential.

Although Kratzer (1995) claims that ILPs completely lack an event argument, I argue that the representation of experiential *-te iru* proposed in Section 3 still captures the essence of an ILP, in that it is basically a set of individuals. The distinctive claim I make here is that the stage-level and individual-level distinction does not have to be reduced to the presence vs. absence of an event argument. Instead, I suggest that the relative scope of the event and individual variables can also capture

the stage and individual-level distinction. While Kratzer discusses the distinction only at the level of the predicate, my proposal extends her claim to the level of the proposition.

Finally in Section 4, I propose a semantics for *-te aru*. In Chapter 4, I argued that both non-intransitivizing and intransitivizing *-te aru* sentences are experiential, and that they exhibit individual-level properties. I implement this idea by using the semantic representation of individual-level sentences proposed for experiential *-te iru*. In fact, I propose an identical representation for experiential *-te iru* and non-intransitivizing *-te aru*. I argue that these two sentence types have the same truth conditions and that all of their differences can be attributed to pragmatics. As for intransitivizing *-te aru*, its semantic representation is essentially the same as that of experiential *-te iru* and non-intransitivizing *-te aru*. The only difference is that the subject variable is never identified as a specific individual. This is due to the lack of explicit mention of the agent in intransitivizing *-te aru*, which I discussed in Chapter 4.

2. Formal distinction between SLP and ILP

2.1 Carlson (1977)

Carlson (1977) is often cited as the source of the terms stage-level predicate and individual-level predicate. However, as noted in Chapter 1, his classification of predicates is based on observations found in Milsark (1974). Milsark notes that some

English adjectives are allowed in *there*-insertion while others are not, as exemplified in the following.

- (1) a. There were several students {*tired, drunk, hungry, awake...* }
 b. *There were several students {*intelligent, boring, tall, fat...* }

Milsark refers to adjectives which are allowed in *there*-insertion as *states* and those which are not allowed as *properties*. He describes states as transitory conditions of entities, while properties are permanent, unalterable, and assumed facts about entities. Removal of a state does not cause any change to the essential qualities of an entity, while removal of a property does.

Milsark further observes that the two different types of adjectives select for different types of subjects. The existential use of the indefinite article *a*, the unstressed variant of *some*, and the existential reading of the bare plural are selected by adjectives which are allowed in *there*-insertion. On the other hand, adjectives which are not allowed in *there*-insertion are strange when predicated of the existential *a*, the unstressed *some*, and select the universal reading of the bare plural. The following examples illustrate the contrast.

- (2) a. Sm students are {*tired, drunk, hungry, awake...* }
 b. A student is {*tired, drunk, hungry, awake...* }
 c. Students are {*tired, drunk, hungry, awake...* }
- (3) a. *Sm students are {*intelligent, boring, tall, fat...* }
 b. ?A student is {*intelligent, boring, tall, fat...* }
 c. Students (i.e. all students) are {*intelligent, boring, tall, fat...* }

Carlson notes that Milsark's observation can be generalized to all types of predicates, as opposed to being restricted to adjectives. Further, Carlson uses the terms *stage-level predicates* and *individual-level predicates*, which correspond to Milsark's *states* and *properties* respectively. Carlson's use of the terms *stage* and *individual* follows Quine (1960). A *stage* is a spatially and temporally bounded manifestation of something. An *individual* is something that ties a series of stages together to make them stages of the same thing.

The meaning of the terms *individual-level predicate* and *stage-level predicate* is captured in Carlson's formal characterizations of the two types of predicates. Carlson proposes that individual-level predicates (ILPs) and stage-level predicates (SLPs) are predicated of different types of entities. ILPs characterize individuals; hence they are individual-level. SLPs characterize stages of individuals; hence they are stage-level. In order to formalize the distinction between SLPs and ILPs, Carlson introduces a relation *R* ('realizes'), which is a two-place, asymmetric, irreflexive, transitive relation between stages and individuals. $R(a, b)$ means *a* is a stage of *b*. ILPs denote sets of individuals, and they apply directly to individuals. In contrast, SLPs denote sets of stages, and they apply only to stages of individuals via the realization relation. Formal representations of *Mary is intelligent* and *Mary is tired* are given below.

- (4) a. ILP
 $\| \text{Mary is intelligent} \| = I(m)$
 b. SLP
 $\| \text{Mary is tired} \| = \exists x[R(x, m) \ \& \ T(x)]$

The formula in (4a) is a standard predicate logic representation. *Intelligent* denotes a set of individuals, and the sentence is true if and only if Mary is in that set. In contrast, *tired* in (4b) denotes a set of stages, and the sentence is true if and only if one of Mary's stages is in that set.

One of the difficulties with Carlson's formalism is that it does not relate directly to a corresponding syntax. Since one goal of this thesis is to present both a semantics and a syntax of *-te iru* and *-te aru*, Carlson's semantics does not seem to be directly employable. Nevertheless, although I do not use Carlson's formal distinction between SLPs and ILPs, I do employ a modified version of the operator R in the semantics proposed in Section 3. The way I use the operator R is different from Carlson in that I use it in the context of event semantics. It should also be noted that the motivation for using the operator R is not driven by the need to capture the SLP/ILP distinction. Rather, the operator R is used to capture the denotation of *iru* in *-te iru* and *aru* in *-te aru*. For the formal SLP/ILP distinction, I employ the view presented in Kratzer (1995), which I review in the next section.

2.2 Kratzer (1995)

Kratzer attributes the distinction between SLPs and ILPs to their argument structures. She proposes that SLPs have an extra argument position for events or spatiotemporal locations, in the sense of Davidson (1967). According to Davidson, verbs have an implicit event argument in addition to the explicit arguments in the

sentence. For example, the denotation of *Mary buys books in Tokyo* is represented as *an event which is a buying event of books by Mary in Tokyo*, as shown in (5).¹

$$(5) \quad \|\text{Mary buys books in Tokyo}\| = \exists e[\text{buy}'(b,m,e) \wedge \text{in}'(t,e)]$$

Kratzer argues that the event argument is present only in SLPs, and not in ILPs. The examples below illustrate the difference.

- (6) a. dance (SLP)
 $\|\text{Mary dances in Tokyo}\| = \exists e[\text{dance}'(m,e) \wedge \text{in}'(t,e)]$
- b. is a dancer (ILP)
 $\|\text{Mary is a dancer}\| = D(m)$

¹ The formula in (5) follows the original approach found in Davidson (1967). The arguments have ordered positions in the argument structure of the verb (e.g. $\text{buy}'(b,m,e)$), and the adjuncts are modifiers of the event argument (e.g. $\text{in}'(t,e)$). Alternatively, in so-called neo-Davidsonian event semantics (Carlson, 1984; Higginbotham, 1985; Dowty, 1989; Parsons, 1990), both arguments and adjuncts are represented as predicates of the event. The following example uses a neo-Davidsonian approach.

$$(1) \|\text{Mary buys books in Tokyo}\| \\ = \exists e[\text{buy}'(e) \wedge \text{Agent}(m,e) \wedge \text{Theme}(b,e) \wedge \text{in}'(t,e)]$$

Although Kratzer (1995) follows the traditional Davidsonian approach, she employs a neo-Davidsonian format in Kratzer (1996). This is mainly because neo-Davidsonian formulae can be more easily mapped into syntax. McClure (2007), which I review in the next section, uses neo-Davidsonian formulae as well. Semantic proposals found in later sections also follow a neo-Davidsonian format.

Also note that all noun phrases in Kratzer (1995, 1996) are restricted to those of type e . Thus, there is no individual variable found in her semantic representations. For the purpose of generalizing her claims, in the semantic proposals found in this and later chapters, the nouns are all of type $\langle e,t \rangle$.

Dance is an SLP. As a consequence, the denotation in (6a) has an event argument that appears in the form of a variable. In contrast, *be a dancer* in (6b) is an ILP, and it lacks an event argument.

As supporting evidence for the proposed contrast, Kratzer gives examples such as the following.

(7) SLP

- a. ...weil fast alle Flüchtlinge in dieser Stadt umgekommen
 since almost all refugees in this city perished
 sind
 are
 i. 'since almost all of the refugees in this city perished'
 ii. 'since almost all the refugees perished in this city'
- b. ...weil uns heute fast alle Kandidaten beeindruckt haben
 since us today almost all candidates impressed have
 i. 'since almost all of today's candidates impressed us'
 ii. 'since almost all the candidates impressed us today'

(8) ILP

- a. ...weil fast alle Schüler in dieser Schule Französisch
 since almost all students in this school French
 können
 know
 'since almost all of the students in this school know French'
- b. ...weil heute fast alle Kandidaten "Hans" hiessen
 since today almost all candidates "Hans" were.named
 'since almost all of today's candidates were named "Hans"'

(p.127)

The sentences with SLPs in (7) have two readings, while the sentences with ILPs in (8) have only one. The two readings of (7) come from the two items that can be modified by the spatial or temporal expressions. In (7a), the spatial expression *in dieser Stadt* (*in this city*) modifies the noun *Flüchtlinge* (*refugees*) in the first reading, while it modifies the verb *umgekommen* (*perished*) in the second reading. In (7b), the temporal expression *heute* (*today*) modifies the noun *Kandidaten* (*candidates*) in the first reading, while it modifies the verb *beeindrückt* (*impressed*) in the second reading. In contrast, the spatial and temporal expressions in (8), i.e. *in dieser Schule* (*in this school*) and *heute* (*today*), can modify the nouns but not the predicates, i.e. *können* (*know*) and *hiessen* (*were named*). The contrast exhibited here can be accounted for if we assume that spatial and temporal expressions relate to the verb they modify via an event argument. Spatial and temporal expressions can modify SLPs but not ILPs because SLPs have an event argument while ILPs do not.

It should be noted that Kratzer does not locate the distinction between SLPs and ILPs in the lexicon. In other words, it is not the case that a predicate is lexically determined to be an SLP or an ILP. For example, *have brown hair* is normally considered to be an ILP, but it does not always have to be. If somebody dyes her hair different colors every day, then *have brown hair* or *have red hair* are SLPs with respect to that individual (e.g. *Mary had brown hair yesterday but she has red hair today. She will probably have blue hair tomorrow*). Although speakers of a language are more or less in agreement regarding what types or predicates are normally used as SLPs and others as ILPs, we can in fact choose to use predicates in atypical ways. For Kratzer, a predicate like *have brown hair* lacks an event argument just in case it is

used as an ILP. If the same predicate is used as an SLP, in a situation like the one described above, it has an event argument.

Kratzer's claim is not without controversy. The main argument against Kratzer's claim seems to be that some or all ILPs also need to accommodate an extra event argument (e.g. Chierchia, 1995; Higginbotham & Ramchand, 1997; Rothstein, 1999; Schwarzschild, to appear). One problem with many of these arguments is that in adding an event argument to ILPs, it becomes much more difficult to characterize many of the distinctions that are agreed to obtain between SLPs and ILPs. In developing a semantic theory of *-te iru* and *-te aru*, it is necessary to start with a formal characterization of the distinction between SLPs and ILPs. Kratzer's proposal provides a tool for this step.

In Section 3 and 4, I use Kratzer's characterization of SLPs and ILPs to capture the distinction between progressive/perfective readings, on the one hand, and experiential readings, on the other. In fact, I go further and claim that there are complex individual-level predicates (such as the experiential reading of *swim + -te iru*) that nevertheless contain event variables in their representations. The distinction between stage-level and individual-level does not always have to be reduced to the presence or absence of an event variable. Rather, the distinction is linked to the position of the event variable with respect to the individual variable. When the individual variable takes wide scope and the event variable takes narrow scope, the representation basically denotes a set of individuals, and such a representation has the properties of an ILP. This parallels Kratzer's characterization of an ILP as lacking an

event argument, but it is an extension of it in a sense that I extend her claim from the simple-predicate level to the complex-predicate level.

3. Semantics of *-te iru*

3.1 Introduction

In this section, I propose a single semantics of *-te iru* that allows all of its three interpretations, i.e. progressive, perfective, and experiential. In Section 3.2, I first review McClure (2007), which proposes a semantics of progressive and perfective *-te iru*. Since there is a problem with the proposed formula, I suggest a solution in Section 3.3. With the modified formula at hand, in Section 3.4, I proceed to present how the experiential reading can be derived. Extending the claims found in Kratzer (1995), I suggest that the relative scope of the individual and event variables can capture the stage-level and individual-level distinction between progressive/perfective and experiential *-te iru*, while maintaining a single semantics for *-te iru*. Essentially, I argue that while the logical form of progressive/perfective *-te iru* has an event argument taking wide scope, the logical form of experiential *-te iru* has an individual argument taking wide scope. In Section 3.5, I present empirical facts with temporal modifiers used in experiential *-te iru* sentences to support my argument that the logical representation of experiential *-te iru* has an event argument taking narrow scope.

3.2 McClure (2007)

McClure approaches the *-te iru* form by paying attention to its morphological components. First, and most importantly, he notes the fact that there is an independent lexical item, *iru*, which means *exist*. The following examples show how the verb *iru* is used.

- (9) *iru* (*exist, be, stay* – animate)
- a. i-te kudasai
iru-te please
 ‘Please stay (here)’

 - b. neko-ga niwa-ni iru
 cat-NOM yard-LOC *iru*
 ‘There is a cat in the yard’

 - c. kami-wa iru
 God-TOP *iru*
 ‘There is God’ / ‘God exists’

Although *iru* in *-te iru* is usually considered an auxiliary verb as noted in Chapter 1, McClure believes that there has to be some fundamental connection between the full-fledged verb *iru* and the auxiliary verb *iru*. McClure also notes that *iru* is not a copula. While the English progressive construction contains the copula *be*, the Japanese copula *da* is nowhere to be seen in the Japanese progressive, as mentioned in Chapter 1. The following examples are copula sentences.

- (10) Japanese copula
- a. nitiyoobi-da
Sunday-COP
'It's Sunday'
 - b. Mari-wa gakusee-da
Mari-TOP student-COP
'Mari is a student'

Second, McClure considers *-te* to be semantically vacuous. He refers to work by Frellesvig (2001) where it is shown that *-te* is historically related to the particle *-to*. Since *-to* is normally considered to be Complementizer (Kuno 1973), McClure suggests that *-te* may well be Complementizer as well.² What this amounts to is that, for McClure, *-te* is a functional item in syntax that does not make any independent semantic contribution.

With this background, McClure claims that the semantic function of the auxiliary verb *iru* is to require extensionality of an event. Essentially, this means that the event has to actually exist, or that it has to be realized. This is derived from the meaning of the full-fledged verb *iru* (*exist*).

McClure's analyses of progressive and perfective *-te iru* are compositionally shown in (11) and (12) below. Based on the morphological analysis, the syntactic structure of (11a) is presented in (11b). In (11c), the logical form of *Mari-ga oyoï* (*Mari swim*) is shown in a neo-Davidsonian style event semantic representation.³

² For a detailed discussion of the syntactic status of *-te* (leading ultimately to a conclusion that is different from the one given here), see Chapter 6 Section 3.2.

³ The original examples in McClure (2007) exclusively use proper nouns such as

(11c) defines a set of events of swimming which are predicated of Mari. (11d) shows exactly what semantic component *-te iru* adds to (11c). As indicated by the down operator (Montague 1973), the event of swimming by Mari is now required to be extensional or to have actually realized.⁴ Finally, the step from (11d) to (11e) shows a formal operation of existential closure (Parsons 1990). Since no variable can be left existentially unbound, the event variable in (11d) must be bound, yielding the final formula in (11e).

- (11) a. Mari-ga oyoi-de iru
 Mari-NOM swim-*te* *iru*
 ‘Mari is swimming’
 b. [[[[Mari-ga oyoi]-de] iru]]
 c. $\| \text{Mari-ga oyoi} \| = \lambda e \exists x [\text{swim}'(e) \wedge \text{Mari}'(x) \wedge \theta(e,x)]$
 d. $\| \text{Mari-ga oyoi-de iru} \| = \lambda e \exists x^\forall [\text{swim}'(e) \wedge \text{Mari}'(x) \wedge \theta(e,x)]$
 e. $\| \text{Mari-ga oyoi-de iru} \| = \exists e \exists x^\forall [\text{swim}'(e) \wedge \text{Mari}'(x) \wedge \theta(e,x)]$

The semantics shown in (12) works exactly the same way as in (11). As shown in (12c), the logical form of *Mari-ga it (Mari go)* represents a set of events of going which are predicated of Mari. Combined with *-te iru*, as shown in (12d), the

John. As such, there is no individual variable in his original semantic representations. For the purpose of generalizing the claim, I use common nouns as well as proper nouns in my examples and treat all noun phrases as of type $\langle e, t \rangle$, i.e. general predicative arguments.

⁴ The co-existence of the existential quantifier \exists and the down operator $^\forall$ may seem redundant in the formula (11d). McClure (2007) does not explicitly defend this point in his paper, but I discuss this issue in Section 3.3 where I modify the formula.

event of going by Mari is required to be extensional as indicated by the down operator.

(12e) is the final formula in the derivation.

- (12) a. Mari-ga it-te iru
 Mari-NOM go-te iru
 ‘Mari is gone’
 b. [[[[[Mari-ga it]-te] iru]]
 c. $\| \text{[Mari-ga it]} \| = \lambda e \exists x [\text{go}'(e) \wedge \text{Mari}'(x) \wedge \theta(e,x)]$
 d. $\| \text{[Mari-ga it-te iru]} \| = \lambda e \exists x^\forall [\text{go}'(e) \wedge \text{Mari}'(x) \wedge \theta(e,x)]$
 e. $\| \text{[Mari-ga it-te iru]} \| = \exists e \exists x^\forall [\text{go}'(e) \wedge \text{Mari}'(x) \wedge \theta(e,x)]$

The semantics of *-te iru* works exactly the same way in (11) and (12), and the general logical representation of *-te iru* is shown in (13) below. A *-te iru* sentence is represented as a set of realized events with participants.

- (13) *-te iru*
 $\lambda e \exists x^\forall [P(e) \wedge Q(x) \wedge \theta(e,x)]$

Of course, an immediate question is how the apparent difference in meaning between progressive and perfective is derived from this unified semantic representation. McClure claims that the interaction between the aspectual properties of verbs and extensionality of the events required by the semantic function of *iru* gives rise to the progressive/perfective distinction. Note that examples (11) and (12) involve different types of predicates; i.e. an activity in (11) and an achievement in (12). An activity event is comprised of a number of homogeneous segments. Therefore, an activity event is realized as soon as it starts. At the same time, the *-te*

iru form is in the present tense (and the past of *iru* would be *ita*). An activity event can be extensional (i.e. realized in the actual world) and present at a given moment of time only when it is in progress. In contrast, an achievement event is instantaneous. Once it is realized, it is over. All that can continue to obtain in the present is the result of the achievement. Therefore, the *-te iru* form of an achievement is compatible only with a perfective reading.

I use McClure's analyses of progressive/perfective *-te iru* as the basis for my semantic proposal. McClure's analysis of *-te iru* is in fact incomplete mainly because he does not consider experiential readings. Moreover, McClure has nothing to say about *-te aru*. Nevertheless, his semantics turns out to be useful to achieve the goals of the thesis for the following reasons. First, it employs an event semantic approach, where I can easily apply Kratzer's claim regarding the SLP/ILP distinction. Second, it pays attention to the morphological components of the construction and it is compositional, which provide an advantage when looking at its syntactic application. In addition, its compositionality turns out to enable relatively easy modification and extension to account for experiential *-te iru*, and even *-te aru*.

3.3 Semantics of progressive and perfective *-te iru* revised

Before presenting how McClure's analysis can be extended to include experiential readings, I point out one problem with the current proposal and suggest a solution. McClure does not address activity predicates with direct objects.

Creation-type predicates such as *keeki-o tukuru* (*make a cake*), *ie-o tateru* (*build a*

house), *maru-o kaku* (*draw a circle*), and *hon-o kaku* (*write a book*) crucially involve direct objects, and this type of predicate creates a problem for the proposed semantics. The example below illustrates a problem with the representation of *-te iru* as presented in McClure (2007).

- (14) a. Mari-ga keeki-o tukut-te iru
 Mari-NOM cake-ACC make-*te* *iru*
 ‘Mari is making a cake’
- b. $\| \text{Mari-ga keeki-o tukut-te iru} \|$
 $= \lambda e \exists x \exists y^\forall [\text{make}'(e) \wedge \text{Mari}'(x) \wedge \text{cake}'(y) \wedge \theta_1(e,x) \wedge \theta_2(e,y)]$

The sentence above, *Mari-ga keeki-o tukut-te iru*, has both progressive and experiential readings, but I discuss only the progressive reading in the following since that is the issue of concern here. As already discussed, the progressive reading in (14a) does not entail that the cake exists at the speech moment. However, the denotation in (14b) does not capture this fact. Since the down operator scopes over the entire formula including the direct object, “*cake'(y)*”, it actually says that there exists an actual cake. The problem here is that the scope of the down operator is too broad and its effect is too powerful.

As a solution, I modify these representations in the following way. The operator R (‘realized’) takes *e* as its argument. It is the event alone that is realized or not, as opposed to an entire clause.

$$(15) \quad \|\text{Mari-ga keeki-o tukut-te iru}\| \\ = \lambda e \exists x \exists y [\text{make}'(e) \wedge \mathbf{R}(e) \wedge \text{Mari}'(x) \wedge \text{cake}'(y) \wedge \theta_1(e, x) \wedge \theta_2(e, y)]$$

In this way, we are able to avoid the incorrect result of claiming that there exists a real cake. Instead of using a down operator that scopes over the whole formula, the operator \mathbf{R} makes a claim about only the event. The denotation in (15) requires the existence of a real event (of the making type), but it says nothing about the existence of a cake. One might expect that the existential quantifier \exists over the variable y alone does a job of requiring the existence of a cake, without the operator \mathbf{R} or \forall . This is not the case, however. In an event semantics, there is a formal requirement that all variables be bound by existential closure by the end of the derivation (Parsons 1990). Since existential closure is a formal necessity, it may not be enough to ensure the actual existence of an event or an individual. In contrast, the \mathbf{R} operator explicitly requires the extensionality of the variables under its scope. The co-existence of the existential quantifier \exists and the down operator \forall in McClure (2007) can be explained in the same way, although he is not explicit about this point in his paper.

Note that revising the representation as shown in (15) also takes away the explicit mention of the subject being real and existent. While the subject is under the scope of the down operator in (14b), \mathbf{R} does not operate on it in (15). I argue that this change does not have any consequences, because the existence of the subject is presupposed by the existence of an event (unlike the existence of the direct object). If there exists an event, it is presupposed that the subject of the event also exists.

The revised (15) correctly captures the truth conditions of *-te iru* sentences with all creation-type activity predicates with direct objects, such as *ie-o tateru* (*build a house*), *maru-o kaku* (*draw a circle*), and *hon-o kaku* (*write a book*). Note, however, that the creation-type is only one of the many kinds of activity predicates with direct objects. When we consider other types of predicates with direct objects, such as *hon-o yomu* (*read a book*), *eega-o miru* (*watch a movie*), *keeki-o taberu* (*eat a cake*), and *kaato-o osu* (*push a cart*), existence of the entities denoted by the direct objects are in fact necessary for the events to proceed. With a revised formula such as the one shown in (15), we can avoid the wrong result of requiring that objects of creation be realized, but do we now have the reverse problem with non-creation type predicates? My answer is no. The example in (16) below represents a *-te iru* sentence with the predicate *hon-o yomu* (*read a book*). The direct object *book* is not under the scope of R, but the event of reading is. If the event is required to be extensional, it follows that the book also has to be extensional. If there were no book, then it would be impossible for the reading event to be realized, since the predication relation between the event and the object is represented in the formula. Thus, even though the formula does not explicitly mention the status of the direct object in terms of being extensional or not, extensionality of the event naturally determines it.

$$(16) \quad \begin{aligned} & \|\text{Mari-ga hon-o yon-de iru}\| \\ & = \lambda e \exists x \exists y [\text{read}'(e) \wedge R(e) \wedge \text{Mari}'(x) \wedge \text{book}'(y) \wedge \theta_1(e, x) \wedge \theta_2(e, y)] \end{aligned}$$

The way the operator R is used in (15) and (16) is different from Carlson (1977) in the sense that it is used in an event semantic context. Aside from this apparent difference, I believe that the function of R in the proposed formula is very similar to that found in Carlson (1977). For Carlson, SLPs denote sets of stages, and the operator R connects those stages to individuals. Stages are defined as spatially and temporally bounded manifestations of something. Carlson describes an individual as something that ties a series of stages together to make them stages of the same thing. We can actually think of what Carlson calls *stages* as *events*. Events are also spatially and temporally bounded. The relation between an *event* and an individual can be thought of in the same way as the relation between a *stage* and an individual. In Carlson's formula, R operates over a stage defining its relation to an individual. A stage is 'realized' and it is realized as a stage of some individual. In the proposed formula in (15) and (16), R operates over an event instead. The event is 'realized'. The relation between an event and an individual is stated in the form of a predication relationship by virtue of the event semantic approach; i.e. the individual, Mari, is in a particular thematic relation with the event.

I would also point out that the R operator shares properties with the 'Cul' operator ('Cul' stands for 'culminate') found in Parsons (1990). Crucially, Cul operates strictly over events and is independent of tense operators. The R operator is also distinct from tense. Thus, in a present tense *-te iru* sentence, the event is indicated to be realized and present at the same time. This is crucial for distinguishing between the progressive and perfective interpretations. Since an activity event is comprised of a number of homogeneous segments, it is realized as soon as starts. The

only situation for an activity event to be realized and present at the same time is where it is in progress. In contrast, an achievement event is instantaneous. Once it is realized, it is over. All that can continue to obtain in the present is the result of the achievement. Note that when the event is indicated to be ‘realized’, this does not exclude a situation where the event is completely over; e.g. an event of swimming has been realized and it is over; an event of going to England has been realized and the subject of the event is back from England. Although the R operator does not exclude such situations, the logical form of progressive/perfective *-te iru* as a whole does.⁵ If an event is completely over, properties of that event do not obtain at the speech moment. Therefore, an event must be realized but not over for progressive/perfective *-te iru* to be true.⁶

The formula in (17) below shows the revised representation of *-te iru*. As shown in (18) and (19), it accounts for the progressive reading of *oyoi-de iru* (*swim* + *-te iru*) and the perfective reading of *it-te iru* (*go* + *-te iru*) in essentially the same way as McClure’s original proposed formula. In addition, it accounts for the progressive reading of activity predicates with direct objects such as *keeki-o tukuru* (*make a cake*) and *hon-o yomu* (*read a book*) as shown in (20) and (21).

- (17) *-te iru* (progressive and perfective)
 $\lambda e \exists x [P(e) \wedge R(e) \wedge Q(x) \wedge \theta(e, x)]$

⁵ In contrast, the logical form of experiential *-te iru* proposed in the next section does not exclude situations where events are completely realized and over.

⁶ Whereas the R operator allows an event to be either ‘realized and over’ or ‘realized and not over’, the Cul operator strictly requires that an event be over. Thus, Cul does not appear in the logical form of English progressive in Parsons (1990).

- (18) oyogu (swim) + -te iru
- a. Mari-ga oyoi-de iru
 Mari-NOM swim-te iru
 ‘Mari is swimming’
- b. $\| \text{Mari-ga oyoi-de iru} \| = \lambda e \exists x [\text{swim}'(e) \wedge \mathbf{R}(e) \wedge \text{Mari}'(x) \wedge \theta(e,x)]$
- (19) iku (go) + -te iru
- a. Mari-ga igirisu-ni it-te iru
 Mari-NOM England-LOC go-te iru
 ‘Mari (went to England and) is in England’
- b. $\| \text{Mari-ga igirisu-ni it-te iru} \|$
 $= \lambda e \exists x [\text{go}'(e) \wedge \mathbf{R}(e) \wedge \text{Mari}'(x) \wedge \text{to}'(\text{England}', e) \wedge \theta(e,x)]$
- (20) keeki-o tukururu (make a cake) + -te iru
- a. Mari-ga keeki-o tukut-te iru
 Mari-NOM cake-ACC make-te iru
 ‘Mari is making a cake’
- b. $\| \text{Mari-ga keeki-o tukut-te iru} \|$
 $= \lambda e \exists x \exists y [\text{make}'(e) \wedge \mathbf{R}(e) \wedge \text{Mari}'(x) \wedge \text{cake}'(y) \wedge \theta_1(e,x) \wedge \theta_2(e,y)]$
- (21) hon-o yomu (read a book) + -te iru
- a. Mari-ga hon-o yon-de iru
 Mari-NOM cake-ACC read-te iru
 ‘Mari is reading a book’
- b. $\| \text{Mari-ga hon-o yon-de iru} \|$
 $= \lambda e \exists x \exists y [\text{read}'(e) \wedge \mathbf{R}(e) \wedge \text{Mari}'(x) \wedge \text{book}'(y) \wedge \theta_1(e,x) \wedge \theta_2(e,y)]$

The formula in (18b) denotes a set of events of swimming, which have been realized, and are predicated of Mari. An activity event of swimming is realized as soon as it starts. It can be realized in the actual world and still obtain at the given moment of time only when it is in progress. As such, (18b) accounts for the progressive reading. The formula in (19b) denotes a set of events of going, which have been realized, directed to England, and are predicated of Mari. Once an event of going is realized in the actual world, it is over. All that can continue to obtain in the present is the result of going to England; i.e. Mari being in England. As such, (19b) accounts for the perfective reading. The formula in (20b) denotes a set of events of making, which have been realized, and are predicated of Mari as the subject and a cake as the object. An activity event of cake-making is realized as soon as it starts, while the cake itself is not yet realized. An event of cake-making can be realized in the actual world and present at the given moment of time only when it is in progress. As such, (20b) accounts for the progressive reading. The formula in (21b) denotes a set of events of reading, which have been realized, and are predicated of Mari as the subject and book as the object. An activity event of book-reading is realized as soon as it starts. (21b) accounts for the progressive reading just in the same way as (18b) and (20b) do.

3.4 Semantics of experiential *-te iru*

The logical representation of progressive/perfective *-te iru* proposed in the previous section is repeated in (22) below. The logical representation in (23) shows

the stage one step earlier in the derivation; i.e. the stage where no variable is existentially bound yet.

$$(22) \quad \underline{\text{Progressive and perfective } -te\ iru}$$

$$\lambda e \exists x [P(e) \wedge R(e) \wedge Q(x) \wedge \theta(e, x)]$$

$$(23) \quad \lambda e \lambda x [P(e) \wedge R(e) \wedge Q(x) \wedge \theta(e, x)]$$

There are two variables introduced by lambda operators in (23); one is an individual variable x and the other is an event variable e . In a standard event representation, it is a formal requirement that all variables are bound by existential closure by the end of the derivation. However, only one variable can be bound at a time. As such, there are really two possible orders of existential closure. In other words, the individual variable can be bound first and the event variable the next; or the event variable can be bound first and the individual variable the next. When the individual variable is bound first, we obtain (22), which represents progressive and perfective *-te iru*. These are sets of events predicated of an individual. In contrast, when the event variable in (23) is bound first, we obtain (24).

$$(24) \quad \lambda x \exists e [P(e) \wedge R(e) \wedge Q(x) \wedge \theta(e, x)]$$

The logical form in (24) represents a set of individuals predicated of an event. I propose that this formula represents experiential *-te iru*. This formalism captures the intuition that experiences are properties of individuals. The logical form in (24) refers

to a set of individuals with their role in an eventive predicate treated as a property of these individuals. Essentially, the contrast between (22) and (24) is that the former represents a set of events with certain properties, while the latter represents a set of individuals with certain properties. This contrast parallels the SLP/ILP distinction characterized by Kratzer (1995). For Kratzer, the stage-level and individual-level distinction is reduced to the presence vs. absence of an event argument. I argue that the relative scope of the individual and event variables can also capture the distinction. Although an event argument is present in (24), the formula still represents a set of individuals because the individual variable takes wide scope.

Let us go through examples. A *-te iru* sentence with an activity predicate *oyogu* (*swim*) is shown in (25a). It has a single semantic representation, but without any context to distinguish the two readings, it is ambiguous between progressive and experiential. Therefore, (25a) can be interpreted as either (25b) or (25c). The logical forms in (25b) and (25c) both follow from the logical form in (25a). (25b) represents a set of events of swimming, whose properties are such that they have been realized, and are predicated of Mari. Since the formula says that the swimming event is present and realized at the same time, the only possible interpretation is progressive. Turning to the logical form in (25c), this represents Mari whose property is such that she is the subject of some event of swimming, which has been realized. In other words, (25c) is true if and only if Mari has the property of having been engaged in a swimming event. This is experiential. As a result of the different orders of existential closure, (25b) and (25c) encode a scope distinction. It is this distinction that is linked to the differences in interpretation.

- (25) a. Mari-wa oyoide iru
 Mari-TOP swim-*te* iru
 $\lambda e \lambda x [\text{swim}'(e) \wedge R(e) \wedge \text{Mari}'(x) \wedge \theta(e, x)]$
- b. Progressive ('Mari is swimming')
 $\lambda e \exists x [\text{swim}'(e) \wedge R(e) \wedge \text{Mari}'(x) \wedge \theta(e, x)]$
- c. Experiential ('Mari has swum')
 $\lambda x \exists e [\text{swim}'(e) \wedge R(e) \wedge \text{Mari}'(x) \wedge \theta(e, x)]$

In both (25b) and (25c), events are required to have been realized. However, (25b) refers to properties of events at the speech moment, whereas (25c) refers to properties of individuals at the speech moment. As discussed in the last section, the only situation that satisfies (25b) is where swimming is in progress. If the swimming is over, properties of the event cannot obtain at the speech moment. In contrast, (25c) is true when swimming is in progress and also when it is over. In both cases, Mari has the property, at the speech moment, of being engaged in a swimming event, which has already been realized. In other words, the logical form of progressive/perfective *-te iru* does not allow events to be completely realized and over, whereas the logical form of experiential *-te iru* does. This is crucially due to the scope difference. The logical form of progressive/perfective *-te iru* denotes properties of events at the given moment. In contrast, the logical form of experiential *-te iru* denotes properties of individuals at the given moment. Properties of events need to obtain at the speech moment for progressive/perfective *-te iru* to be true, whereas they do not need to obtain at the speech moment for experiential *-te iru* to be true. In fact, as discussed in Section 2 of Chapter 3, it seems that we normally prefer to use experiential *-te iru*

sentences when the discussed events are completely over. It is not wrong to say that Mari has an experience of swimming while she is still swimming, but we tend to avoid such usage.

The examples in (26) illustrate a *-te iru* sentence with an achievement verb *iku* (go). Just as in the previous examples, the logical forms in (26b) and (26c) both follow from the logical form in (26a). (26b) represents a set of events of going, whose properties are such that they have been realized, directed to England, and are predicated of Mari. Once the event of going is realized, it is over. All that can continue to obtain in the present is the result of going to England. Therefore, the only possible interpretation is perfective. Turning to the logical form in (26c), it refers to Mari whose property is such that she is the subject of some event of going; the event has been realized and directed to England. In other words, (26c) is true if and only if Mari has the property of having been engaged in an event of going to England. This is experiential. Again, these truth conditions do not prevent Mari from being in England (in which case (26b) is also true), but it seems that we normally expect Mari to have left England by the speech moment.

- (26) a. Mari-wa igirisu-ni it-te iru
 Mari-TOP England-LOC go-*te* *iru*
 $\lambda e \lambda x [\text{go}'(e) \wedge \text{R}(e) \wedge \text{Mari}'(x) \wedge \text{to}'(\text{England}', e) \wedge \theta(e, x)]$
- b. Perfective ('Mari (went to England and) is in England')
 $\lambda e \exists x [\text{go}'(e) \wedge \text{R}(e) \wedge \text{Mari}'(x) \wedge \text{to}'(\text{England}', e) \wedge \theta(e, x)]$
- c. Experiential ('Mari has been to England')
 $\lambda x \exists e [\text{go}'(e) \wedge \text{R}(e) \wedge \text{Mari}'(x) \wedge \text{to}'(\text{England}', e) \wedge \theta(e, x)]$

The examples in (25) and (26) above involve one event variable e and one individual variable x . Since the number of variables is two, we have two permutations; the event variable is existentially bound first and the individual variable is bound next, or the individual variable is bound first and the event variable is bound next. Now consider a transitive predicate and thus a case where we have one event variable e and two individual variables x and y . Mathematically speaking, we have six permutations because the total number of variables is three. In practice however, there are still only two possible orders of variable binding even when we have two individual variables. This is due to syntax and the order in which the various elements of the sentence are combined. Basically, the object variable always has to be existentially bound first. I discuss this issue in the next chapter. For the time being, I assume that the object variable is always bound first and thus we still have two possible orders of variable binding, as illustrated below.

$$(27) \quad \begin{array}{l} \text{a. } \lambda e \lambda x \lambda y [\dots] \rightarrow \lambda e \lambda x \exists y [\dots] \rightarrow \lambda e \exists x \exists y [\dots] \rightarrow \exists e \exists x \exists y [\dots] \\ \text{b. } \lambda e \lambda x \lambda y [\dots] \rightarrow \lambda e \lambda x \exists y [\dots] \rightarrow \lambda x \exists e \exists y [\dots] \rightarrow \exists x \exists e \exists y [\dots] \end{array}$$

The variable x is the subject variable and y is the object variable in the above examples. In both derivations, the object variable is bound first. At the end of the derivation, the event argument takes wide scope in (27a) while the subject argument takes wide scope in (27b). In terms of the type of argument taking wide scope, (27a) parallels (25a) and (26a). Likewise, (27b) parallels (25b) and (26b).

Consider actual examples with two individual variables, such as the ones shown in (28) below. (28a) illustrates a *-te iru* sentence with an activity predicate with a direct object *keeki-o tukuru* (*make a cake*). It has a single semantic representation, but without any context to distinguish between the two readings, it is ambiguous between progressive and experiential. Therefore, (28a) can be interpreted as either (28b) or (28c). (28b) represents a set of events of making, whose properties are such that they have been realized, and are predicated of Mari as the subject and cake as the object. An activity of cake-making is realized as soon as it starts. It can be realized and present at the same time only when it is in progress. As such, (28b) accounts for the progressive reading. The logical form in (28c) represents Mari whose property is such that she is the subject of some event of making; the event has been realized and is predicated of cake as the object. This is experiential. The logical form allows the cake-making event to be either ‘realized but not over’ or ‘completely realized and over’. If it is completely realized and over, it is likely that a finished cake comes into existence. Just as discussed for the examples in (25c) and (26c), we would normally expect an event to be completely over when experiential *-te iru* is used. Moreover, we have a further expectation that if a cake-making event is completely over, then there exists a finished cake, although, as we have seen, this is not an entailment in Japanese. Therefore, if somebody uses (28c), we would normally expect that Mari completed the making of a cake and a finished cake actually existed. It is possible to cancel this expectation as discussed in Chapter 3 Section 2.3, but it would come as a surprise.

- (28) a. Mari-wa keeki-o tukut-te iru
 Mari-TOP cake-ACC make-*te* iru
 $\lambda e \lambda x \lambda y [\text{make}'(e) \wedge R(e) \wedge \text{Mari}'(x) \wedge \text{cake}'(y) \wedge \theta_1(e, x) \wedge \theta_2(e, y)]$
- b. Progressive ('Mari is making a cake')
 $\lambda e \exists x \exists y [\text{make}'(e) \wedge R(e) \wedge \text{Mari}'(x) \wedge \text{cake}'(y) \wedge \theta_1(e, x) \wedge \theta_2(e, y)]$
- c. Experiential ('Mari has made a cake')
 $\lambda x \exists e \exists y [\text{make}'(e) \wedge R(e) \wedge \text{Mari}'(x) \wedge \text{cake}'(y) \wedge \theta_1(e, x) \wedge \theta_2(e, y)]$

In Kratzer (1995), the logical representation for an ILP completely lacks an event argument, whereas the logical representation for an SLP has an event argument which, following Parsons (1990), is assumed to take wide scope. With the analysis of experiential *-te iru* presented in this thesis, I argue for the existence of a more general logical representation for an ILP as shown in (29) below. Precisely speaking, it is not an individual-level predicate; it is an individual-level sentence.

(29) $\exists x \exists e [\dots]$

In (29), an event argument is present. However, since the individual argument takes wide scope, the formalism basically denotes a predicate of individuals. Therefore, it actually parallels the representation of an ILP found in Kratzer. The event argument, in turn, takes narrow scope. Kratzer's characterization of stage level and individual level is at the level of single predicates, while the characterization of stage level and individual level proposed here is at the level of sentences. While the presence vs. absence of an event variable applies to the distinction at the

single-predicate level, the relative scope of the individual and event variables applies to the distinction at the complex-predicate level, such as that found in *-te iru* sentences.

3.5 Scope of the event argument

In this section, I discuss the effect of an event argument taking narrow scope in experiential *-te iru* sentences. Although individual-level, such sentences still have an event argument. The presence of an event argument allows local temporal modification, which further illustrates the complex nature of experiential *-te iru*. Consider the examples in (10) of Chapter 3, which are repeated as (30) below.

- (30) a. Experiential *-te iru* (with an activity verb)
 Mari-wa kyonen kono kawa-de oyoide iru
 Mari-TOP last.year this river-LOC swim-*te* *iru*.PRESENT
 Lit: ‘Mari has swum in this river last year’
- b. Experiential *-te iru* (with an achievement verb)
 Mari-wa kyonen igirisu-ni it-te iru
 Mari-TOP last.year England-LOC go-*te* *iru*.PRESENT
 Lit: ‘Mari has gone to England last year’

In Chapter 3, I pointed out that experiential *-te iru* sentences such as those above are marked present tense even with the presence of past modifier *kyonen* (*last year*). There is an apparent contradiction between the meaning of the modifier and the tense of the sentences. In contrast, as pointed out in Chapter 3 Section 3.4, the tense

of progressive and perfective *-te iru* sentence agrees with past modifiers such as *kyonen*; *iru* becomes the past tense form *ita*. The mismatch found in experiential *-te iru* such as (30) can be explained if we assume that *kyonen* (*last year*) in these sentences function as a predicate modifier, and not as a sentential modifier. In other words, *kyonen* modifies the events within the sentences (the event of swimming in (30a) and the event of going in (30b)). This supports the representation in (29) repeated below as (31), where the event argument takes narrow scope.

(31) $\exists x \exists e [\dots]$

Consider another set of examples in (32) below, where the modifier *itiziteki-ni* (*temporarily*) is used.

- (32) a. Mari-wa ima made-ni itiziteki-ni kono kawa-de
 Mari-TOP now up.to-LOC temporarily this river-LOC
 oyoi-de iru
 swim-te iru
 ‘Mari has temporarily swum in this river up to now’
- b. Mari-wa ima made-ni itiziteki-ni igirisu-ni it-te iru
 Mari-TOP now up.to-LOC temporarily England-LOC go-te iru
 ‘Mari temporarily has been to England up to now’

Once an individual acquires an experience, she will always have that experience. Both an ILP and an experiential *-te iru* sentence denote permanent properties of individuals. Given this, use of the modifier *itiziteki-ni* (*temporarily*)

seems to contradict the permanency of what ILP and experiential *-te iru* denote.

Indeed, the use of *itiziteki-ni* with an ILP such as the example in (33) below yields an anomalous result.

- (33) #Mari-wa itiziteki-ni se-ga takai
 Mari-TOP temporarily height-NOM tall
 ‘Mari is temporarily tall’

In contrast to (33), the experiential *-te iru* examples in (32) are acceptable.

This is because *itiziteki-ni* is interpreted as a predicate modifier, i.e. it locally modifies *oyoi* (*swim*) and *it* (*go*). It is not possible to have an experience temporarily, and *itiziteki-ni* can never be interpreted as a sentential modifier in (32) regardless of where the modifier is placed in the sentence.⁷ In contrast, there is nothing wrong with saying that somebody has an experience of swimming-in-the-river-temporarily or going-to-England-temporarily, since swimming-in-the-river and going-to-England have temporal properties. Temporal modifiers such as *itiziteki-ni* always exclusively modify an event argument in experiential *-te iru*. This shows that the event argument in fact exists in experiential *-te iru*. Furthermore, it takes narrow scope.

The examples with the modifiers *kyonen* and *itiziteki-ni* above illustrate the complex nature of an individual-level sentence. While *kyonen* and *itiziteki-ni* cannot

⁷ Since Japanese allows scrambling, native speakers are always forced to process *itiziteki-ni* as a local modifier over the eventive predicate regardless of the surface position of the modifier in an experiential *-te iru* sentence. Of course, if the distance between the modifier and the eventive predicate becomes too long, for example due to multiple interveners, a sentence will be most likely to be degraded for sentence processing reasons.

be used as sentential modifiers in experiential *-te iru* sentences, they are allowed to modify eventive predicates locally. This is a consequence of an event argument taking narrow scope and an individual argument taking wide scope as proposed in the previous section. Although an experiential *-te iru* sentence as a whole shares properties with an ILP, the sentence contains an SLP. As such, we see different effects of a temporal modifier.

3.6 Summary

In this section, I proposed the semantics of *-te iru* as illustrated below.

- (34)
- | | | | | | |
|----|----------------|--|-----|---------------------------|--|
| a. | <i>-te iru</i> | $\lambda e \lambda x [P(e) \wedge R(e) \wedge Q(x) \wedge \theta(e, x)]$ | ↙ ↘ | b. progressive/perfective | $\lambda e \exists x [P(e) \wedge R(e) \wedge Q(x) \wedge \theta(e, x)]$ |
| | | | | c. experiential | $\lambda x \exists e [P(e) \wedge R(e) \wedge Q(x) \wedge \theta(e, x)]$ |

The semantics of *-te iru* requires that the event be extensional, as indicated by the R operator. Depending on the order of variable binding, the formula in (34a) can be interpreted as either progressive/perfective or experiential. When the individual variable is bound first, we obtain (34b). This formula represents a set of events with certain properties. When the event variable is bound first, we obtain (34c). This formula represents a set of individuals with eventive properties. The contrast in the

relative scope of the individual and event variables results in the stage-level and individual-level distinction between progressive/perfective *-te iru* and experiential *-te iru*. It also enables us to link the different interpretations of *-te iru* to a single unified semantics shown in (34a).

The formula in (34c) is an extended version of Kratzer's representation of an ILP. As an individual-level sentence that contains an SLP, (34c) has an event argument taking narrow scope. The presence of an event argument taking narrow scope is supported by the fact that temporal modifiers are allowed locally to modify eventive predicates.

4. Semantics of *-te aru*

4.1 Introduction

In this section, I apply the semantic representation of experiential *-te iru* proposed in the last section to *-te aru*. In Section 4.2, I propose that the semantic representation of non-intransitivizing *-te aru* is identical to that of experiential *-te iru*. I argue that non-intransitivizing *-te aru* and experiential *-te iru* have the same truth conditions, but non-intransitivizing *-te aru* has extra pragmatic constraints that distinguish between the two sentence types. In Section 4.3, I propose a representation for intransitivizing *-te aru*, which is basically the same as that of non-intransitivizing *-te aru* and experiential *-te iru* except that the subject variable is never identified as a specific individual. This is based on the discussion in Chapter 4, where I argued that

intransitivizing *-te aru* represents an experience/property of an unidentified individual. In Section 4.4, I present facts with temporal modifiers in non-intransitivizing and intransitivizing *-te aru* to support my argument that the logical representations of both *-te aru* sentence types have event arguments with narrow scope. This discussion parallels the one on experiential *-te iru* presented in Section 3.5.

4.2 Non-intransitivizing *-te aru*

In Chapter 4, I argued that all non-intransitivizing *-te aru* sentences are experiential. The example in (35a) below expresses the fact that Mari has the experience of working for three years. Compare (35a) with (35b), which is an experiential *-te iru* sentence. (35b) also expresses the fact that Mari has the experience of working for three years. The two examples in (35) seem to have the same truth conditions. However, as discussed in Chapter 4, the use of non-intransitivizing *-te aru* necessarily adds a particular implication, which is that the denoted action was taken intentionally for the purpose of being ready for something else. With the example in (35a), a possible scenario may be that Mari worked for three years for the purpose of applying for a particular MBA program that requires applicants to have at least three years of work experience. It is only under such circumstances that (35a) can be used. In contrast, the *-te iru* example in (35b) has no such pragmatic constraint.

- (35) a. Mari-wa sannnen hatarai-te aru
 Mari-TOP three.year work-*te* *aru*
 ‘Mari has worked for three years’
- b. Mari-wa sannnen hatarai-te iru
 Mari-TOP three.year work-*te* *iru*
 ‘Mari has worked for three years’

Given the observations above, I propose that non-intransitivizing *-te aru* and experiential *-te iru* are semantically identical. Of course, *-te iru* and *-te aru* are obviously not morphologically identical; i.e. *-te iru* contains *iru* and *-te aru* contains *aru*. However, when *iru* and *aru* are used independently as full-fledged verbs (as opposed to auxiliary verbs), they both mean *exist*. The only difference between them is that *iru* is used with animate subjects whereas *aru* is used with inanimate subjects. Examples are shown in (36) and (37) below. As auxiliary verbs, however, the animate/inanimate distinction is no longer present. Since the real verb *aru* means *exist* just as the real verb *iru*, it can be argued that the semantic contribution of the auxiliary verb *aru* is to require that the event be realized just as the auxiliary verb *iru*.

- (36) *iru* (*exist, be* – animate)
- a. neko-ga niwa-ni iru (= 9b)
 cat-NOM yard-LOC *iru*
 ‘There is a cat in the yard’
- b. kami-wa iru (= 9c)
 God-TOP *iru*
 ‘There is God’ / ‘God exists’

- (37) aru (*exist, be* – inanimate)
- a. tukue-ga heya-ni aru
 desk-NOM room-LOC *aru*
 ‘There is a desk in the room’
- b. tengoku-wa aru
 heaven-TOP *aru*
 ‘There is a heaven’ / ‘Heaven exists’

Below is the proposed semantic representation for non-intransitivizing *-te aru*, which is identical to the representation for experiential *-te iru*.

- (38) Non-intransitivizing *-te aru*
 $\lambda x \exists e [P(e) \wedge R(e) \wedge Q(x) \wedge \theta(e, x)]$

Since non-intransitivizing *-te aru* is always experiential, it is always represented as a set of individuals; i.e. the individual variable takes wide scope and the event variable takes narrow scope. The order of variables in *-te aru* is not as flexible as in *-te iru*. With *-te iru*, either variable can be bound first. When the individual variable is bound first, the event variable takes wide scope and we obtain progressive/perfective interpretations. When the event variable is bound first, the individual variable takes wide scope and we obtain experiential interpretations. In contrast, non-intransitivizing *-te aru* does not have an option of the event variable taking wide scope. It turns out that this is not an accident. In Chapter 6, I present evidence that *-te iru* occurs in two possible syntactic configurations while *-te aru* occurs in only one. By mapping semantic derivations to syntactic derivations, I argue

that the single possible syntactic configuration for *-te aru* mirrors the single possible semantic representation.

Let us go through examples. A *-te aru* sentence with an activity predicate *hataraku* (*work*) is shown in (39a) and its semantic representation is shown in (39b).

- (39) a. Mari-wa hatarai-te aru
 Mari-TOP work-*te* aru
 ‘Mari has worked’
- b. $\| \text{Mari-wa hatarai-te aru} \| = \lambda x \exists e [\text{work}'(e) \wedge \mathbf{R}(e) \wedge \text{Mari}'(x) \wedge \theta(e, x)]$

The logical form in (39b) represents Mari whose property is such that she is the subject of some event of working, which has been realized. In other words, (39b) is true if and only if Mari has the property of being engaged in an event of working. These truth conditions allow the event to be either in progress or be over. In both cases, Mari has the property, at the speech moment, of being engaged in an event of working, which has already been realized. For example, let's say that Mari gets a corporate job after graduating from college because she wants to apply for a MBA program that requires work experience. Imagine this first scenario where she works for the company for a few years and quits. She does not work any longer. Since she gained her work experience, one can utter (39a), implying that Mari is ready to apply for the program. This is a situation where the event of working has been completely realized and is over. Imagine the following second scenario where Mari is still working for the company and simultaneously seeks to apply for the program. One can

still utter (39a) and imply that Mari is ready to apply for the program. This is a situation where the event of working has been realized but is not over yet.

Another set of examples is shown in (40) with an activity predicate *tukuru* (*make*), which is a creation verb that takes a direct object.

- (40) a. Mari-wa yuuhan-o tukut-te aru
 Mari-TOP dinner-ACC make-*te* aru
 ‘Mari has made dinner’
- b. ||Mari-wa yuuhan-o tukut-te aru||
 $=\lambda x\exists e\exists y[\text{make}'(e) \wedge R(e) \wedge \text{Mari}'(x) \wedge \text{dinner}'(y) \wedge \theta_1(e,x) \wedge \theta_2(e,y)]$

I first point out that the object variable in (40b) is the first one to be existentially bound. The same applies to the logical representation of experiential *-te iru* with two individual variables, which I discussed in Section 3.4. This is due to the relationship between syntax and the order in which the various elements of the sentence are combined. I discuss this issue in Chapter 6.

The logical form in (40b) represents Mari whose property is such that she is the subject of some event of making; the event has been realized and is predicated of dinner as the object. In other words, (40b) is true if and only if Mari has the property of having been engaged in an event of dinner-making. This truth condition allows the event to be either in progress or be over. In both cases, Mari has the property, at the speech moment, of being engaged in an event of dinner-making, which has already been realized. For the example in (39a), I pointed out that the two situations, the event being in progress and the event being over, are equally imaginable for the

sentence to be legitimately used. However, (40a) is much more likely to be uttered when the event of dinner-making is over and the dinner is ready. I suggest that this is due to the ‘the preparatory purpose’ implication that non-intransitivizing *-te aru* has. For example, let’s say that Mari plans to go out in the evening but she has her husband and children to feed at home. She decides to make dinner early before she leaves home. If Mari makes dinner in order to be ready to go out, she will not be ready to go out unless the dinner-making event is over and the dinner is ready to be served. With creation-type predicates, it seems that *-te aru* is used almost exclusively in situations where the event has been completely realized and the object of creation has fully come to existence. Our expectation is that somebody will actually complete the creation process if she decided to do so in order to be ready for something else, and that she will not be ready unless she is done with the creation process.

Lastly, an example that contains an achievement predicate *kariru* (*borrow*) are shown in (41).

- (41) a. Mari-wa hon-o kari-te aru
 Mari-TOP book-ACC borrow-*te aru*
 ‘Mari has borrowed a book’
- b. ||Mari-wa hon-o kari-te aru||
 $=\lambda x\exists e\exists y[\text{borrow}'(e) \wedge \mathbf{R}(e) \wedge \text{Mari}'(x) \wedge \text{book}'(y) \wedge \theta_1(e,x) \wedge \theta_2(e,y)]$

The logical form in (41b) represents Mari whose property is such that she is the subject of some event of borrowing; the event has been realized and is predicated of a book as the object. In other words, (41b) is true if and only if Mari has the

property of having been engaged in an event of book-borrowing. Since *kariru* is an achievement predicate, once the event of borrowing is realized, it is over. However, the resultant state of book-borrowing can remain; i.e. Mari has the book. As an experiential statement, (41a) can be uttered whether or not Mari has returned the book at the moment of speech. In both cases, Mari has the property, at the speech moment, of being engaged in an event of book-borrowing, which has already been realized.

4.3 Intransitivizing *-te aru*

In Section 6 of Chapter 4, I argued that intransitivizing *-te aru* is strictly experiential, and that it refers to an experience of the implicit subject of the denoted event. To implement this idea, I propose that the logical representation of intransitivizing *-te aru* is the same as that of non-intransitivizing *-te aru*, but the subject variable is not identified in the derivation. Rather, the subject variable x is simply existentially closed via a formal operation. (42) is the proposed semantics of intransitivizing *-te aru*. (43) and (44) illustrate the contrast between non-intransitivizing *-te aru* and intransitivizing *-te aru*.

- (42) Intransitivizing *-te aru*
 $\lambda x \exists e \exists y [P(e) \wedge R(e) \wedge S(y) \wedge \theta_1(e, x) \wedge \theta_2(e, y)]$

(43) Non-intransitivizing *-te aru*

- a. Mari-wa hon-o kari-te aru
 Mari-TOP book-ACC borrow-*te aru*
 ‘Mari has borrowed a book’

b. $\lambda x \exists e \exists y [\text{borrow}'(e) \wedge \mathbf{R}(e) \wedge \text{Mari}'(x) \wedge \text{book}'(y) \wedge \theta_1(e,x) \wedge \theta_2(e,y)]$

(44) Intransitivizing *-te aru*

- a. hon-ga kari-te aru
 book-NOM borrow-*te aru*
 ‘A book has been borrowed’

b. $\lambda x \exists e \exists y [\text{borrow}'(e) \wedge \mathbf{R}(e) \wedge \text{book}'(y) \wedge \theta_1(e,x) \wedge \theta_2(e,y)]$

Whereas the subject variable x in (43b) is identified as *Mari*, the variable x in (44b) is left unidentified. Since leaving a variable unbound will cause the formula to be ill-formed, the variable x must be existentially closed, which is done by a formal operation.

The logical form in (44b) is true if and only if some individual has the property of having been engaged in an event of book-borrowing. Since *kariru* is an achievement predicate, once the event of borrowing is realized, it is over. However, the resultant state of book-borrowing can remain; i.e. the individual has the book. As an experiential statement, (44a) can be uttered whether or not the individual has returned the book at the moment of speech. In both cases, the individual has the property, at the speech moment, of being engaged in an event of book-borrowing, which has already been realized.

Semantically speaking, (43b) and (44b) have identical truth conditions except for the status of the book-borrower's identity. However, (43a) and (44a) have distinct pragmatics. By using the non-intransitivizing sentence in (44a), a speaker implies that the book-borrower (who is identified as Mari) borrowed the book in preparation for some other purpose; now that the book is in her possession, she is prepared. In contrast, a speaker of intransitivizing (44b) expresses her inference that somebody borrowed a book, judging from evidence available. The evidence may be, for example, the check-out record of the book. There is no preparatory implication with (44b).

Recall that the most distinct characteristic of an intransitivizing *-te aru* statement is that its speaker expresses her inference from available evidence. As a consequence, there is awkwardness in using intransitivizing *-te aru* when a speaker is unable to make an inference. This can happen because there is no evidence. It can also happen when the evidence is in some sense "too" immediate (and no inferring is required). Consider the example in (45), where an activity predicate is used.

- (45) a. kuruma-ga untensi-te aru
 car-NOM drive-*te* *aru*
 'A car has been driven'
- b. ||kuruma-ga untensi-te aru||
 = $\lambda x \exists e \exists y [\text{drive}'(e) \wedge \mathbf{R}(e) \wedge \text{car}'(y) \wedge \theta_1(e, x) \wedge \theta_2(e, y)]$

The logical form in (45b) represents some individual whose property is such that she is the subject of some event of car-driving, which has been realized. Since

kuruma-o untensuru (*drive a car*) is an activity predicate, these truth conditions allow the event to be either in progress or be over. In both cases, the unidentified individual has the property, at the speech moment, of being engaged in an event of car-driving, which has already been realized. However, pragmatically speaking, there is awkwardness in using (45a) while the event is in progress. If the speaker observes the event as it happens, there is no need for her to make any inference. If she sees an event in progress, why would she use (45a) and imply that she is making an inference from available evidence? It is more appropriate for her to use progressive *-te iru* (to report that a car-driving event is in progress), simple past tense (to report that a car-driving event took place in the past), experiential *-te iru* (to report that somebody has the property of having been engaged in a car-driving event), or non-intransitivizing *-te aru* (to report that somebody has a property of having been engaged in a car-driving event in order to be ready for something else). For somebody to use (45a) appropriately, the situation must be that the event of car-driving is over and the speaker is using evidence to infer that the event took place. In the driving example, the gas level might be low, the car might be covered with mud, etc.

As discussed in Chapter 4 Section 3.4, in particular situations, it is sometimes possible to use intransitivizing *-te aru* when there is no need for an inference. For example, when the speaker wants to intentionally discredit herself from doing a favor for another, one can utter (46a). This implies that *somebody has done a favor for you but I am only making this inference from the evidence available to me*, which denies the speaker's involvement in fixing the tea. In reality, it can be obvious that the speaker did fix the tea, but the statement is used as a form of politeness. As an

example of a completely opposite situation, one could use (46b) and imply that she had no involvement in breaking the vase; the speaker of (46b) tries to appear that she is making an inference from the broken vase. In this case, the statement is used as an escape from responsibility in wrong-doing.

- (46) a. otya-ga ire-te aru
 tea-NOM fix-*te* aru
 ‘Tea has been fixed’
- b. kabin-ga wat-te aru
 vase-NOM break-*te* aru
 ‘The vase has been broken’

4.4 Scope of the event argument

In this section, I discuss the effect of an event argument taking narrow scope in non-intransitivizing and intransitivizing *-te aru* sentences. The discussion in this section parallels the one on experiential *-te iru* in Section 3.5. The presence of an event argument in experiential *-te iru* allows local temporal modification, and this is also the case for *-te aru*. Examples (19) and (22) of Chapter 4 are repeated as (47) and (48) below.

- (47) Non-intransitivizing *-te aru*
- a. Mari-wa kyonen hon-o kari-*te* aru
 Mari-TOP last.year book-ACC borrow-*te* aru
 Lit: ‘Mari has borrowed a book last year’

- b. Mari-wa kinoo syawaa-o abi-te aru
 Mari-TOP yesterday shower-ACC take-*te aru*
 Lit: ‘Mari has taken a shower yesterday’
- c. Mari-wa kinoo yuuhan-o tukut-te aru
 Mari-TOP yesterday dinner-ACC make-*te aru*
 Lit: ‘Mari has cooked dinner yesterday’
- d. Mari-wa kyonen huransu sisya-ni it-te aru
 Mari-TOP last.year France branch-LOC go-*te aru*
 Lit: ‘Mari has been to the branch office in France last year’
- e. Mari-wa kyonen hatarai-te aru
 Mari-TOP last.year work-*te aru*
 Lit: ‘Mari has worked last year’

(48) Intransitivizing –*te aru*

- a. hon-ga kyonen kari-te aru
 book-NOM last.year borrow-*te aru*
 Lit: ‘A book has been borrowed last year’
- b. kuruma-ga kinoo untensi-te aru
 car-NOM yesterday drive-*te aru*
 Lit: ‘A car has been driven yesterday’
- c. roosoku-ga kinoo take-te aru
 candle-NOM yesterday light-*te aru*
 Lit: ‘A candle has been lit yesterday’

The sentences above are marked present tense even with the presence of past modifier *kyonen* (*last year*) or *kinoo* (*yesterday*). The mismatch between the meaning of the modifier and the tense of the sentences can be explained if we assume that

kyonen (last year) and *kinoo* (yesterday) in these sentences function as predicate modifiers, and not as sentential modifiers. This supports the proposed semantic representation of *-te aru*, where the event argument takes narrow scope.

Next, consider the following sets of examples below, where the modifier *itiziteki-ni* (temporarily) is used.

(49) Non-intransitivizing *-te aru*

- a. Mari-wa itiziteki-ni hon-o kari-te aru
 Mari-TOP temporarily book-ACC borrow-*te aru*
 ‘Mari has borrowed a book temporarily’
- b. Mari-wa itiziteki-ni hatarai-te aru
 Mari-TOP temporarily work-*te aru*
 ‘Mari has worked temporarily’

(50) Intransitivizing *-te aru*

- a. kuruma-ga itiziteki-ni untensi-te aru
 car-NOM temporarily drive-*te aru*
 ‘A car has been driven temporarily’
- b. roosoku-ga itiziteki-ni take-te aru
 candle-NOM temporarily light-*te aru*
 ‘A candle has been lit temporarily’

Itiziteki-ni in the above examples modifies the eventive predicate locally.

Temporal modifiers such as *itiziteki-ni* always exclusively modify an event argument in *-te aru* sentences. This shows that the event argument is in fact present in the representation of *-te aru*. Furthermore, it takes narrow scope.

4.5 Summary

In this section, I proposed the semantics of *-te aru* as illustrated below.

$$(51) \quad \underline{-te aru}$$

$$\lambda x \exists e \exists y [P(e) \wedge R(e) \wedge Q(x) \wedge S(y) \wedge \theta_1(e, x) \wedge \theta_2(e, y)]$$

-te aru denotes a set of individuals whose properties are such that they have been engaged in some events which are realized. The difference between the two types of *-te aru*, non-intransitivizing and intransitivizing *-te aru*, is that the former makes the identity of the subject explicit, while the latter keeps the subject unidentified. The variable x in intransitivizing *-te aru* is bound via a formal operation to make the formula well-formed. Other than the identity of the subject, the distinction between non-intransitivizing and intransitivizing *-te aru* is pragmatic. A speaker of non-intransitivizing *-te aru* implies that somebody is ready for something as a result of having been engaged in some event. In contrast, a speaker of intransitivizing *-te aru* implies that somebody is assumed to have been engaged in some event, judging from evidence available to the speaker.

The semantic representation in (51) is identical to the semantic representation of experiential *-te iru*. Among experiential *-te iru*, non-intransitivizing *-te aru*, and intransitivizing *-te aru*, the unmarked form is experiential *-te iru* because there are no pragmatic constraints associated with it. In contrast, non-intransitivizing and

intransitivizing *-te aru* have distinct pragmatic requirements, and therefore the three forms are not simply equivalent.

Just as is the case for experiential *-te iru*, the representation for *-te aru* has an event argument taking narrow scope. The presence of an event argument taking narrow scope is supported by the fact that temporal modifiers are allowed locally to modify eventive predicates.

5. Summary

In this chapter, I developed a formal semantics of *-te iru* and *-te aru*. Importantly, the proposed logical representations reflect the stage-level properties of progressive and perfective *-te iru*, and the individual-level properties of experiential *-te iru* and *-te aru*. While Kratzer reduces the distinction between SLP and ILP to the presence or absence of an event variable, I suggest that the relative scope of the event and individual variables can also capture the stage-level and individual-level distinction. Essentially, I extend Kratzer's single-predicate level generalization to the level of a proposition.

The following summarizes the logical representations proposed in this chapter.

$$(52) \quad a. \quad \underline{-te iru}$$

$$\lambda x \lambda e \lambda y [P(e) \wedge R(e) \wedge Q(x) \wedge S(y) \wedge \theta_1(e, x) \wedge \theta_2(e, y)]$$

b. Progressive/Perfective

$$\lambda e \exists x \exists y [P(e) \wedge R(e) \wedge Q(x) \wedge S(y) \wedge \theta_1(e, x) \wedge \theta_2(e, y)]$$

i. Progressive

||Mari-wa hon-o yon-de iru|| (*Mari is reading a book*)

$$= \lambda e \exists x \exists y [\text{read}'(e) \wedge R(e) \wedge \text{Mari}'(x) \wedge \text{book}'(y) \wedge \theta_1(e, x) \wedge \theta_2(e, y)]$$

ii. Perfective

||Mari-wa hon-o kari-te iru|| (*Mari has borrowed a book*)

$$= \lambda e \exists x \exists y [\text{borrow}'(e) \wedge R(e) \wedge \text{Mari}'(x) \wedge \text{book}'(y) \wedge \theta_1(e, x) \wedge \theta_2(e, y)]$$

c. Experiential

$$\lambda x \exists e \exists y [P(e) \wedge R(e) \wedge Q(x) \wedge S(y) \wedge \theta_1(e, x) \wedge \theta_2(e, y)]$$

i. ||Mari-wa hon-o yon-de iru|| (*Mari has read a book*)

$$= \lambda x \exists e \exists y [\text{read}'(e) \wedge R(e) \wedge \text{Mari}'(x) \wedge \text{book}'(y) \wedge \theta_1(e, x) \wedge \theta_2(e, y)]$$

ii. ||Mari-wa hon-o kari-te iru|| (*Mari has borrowed a book*)

$$= \lambda x \exists e \exists y [\text{borrow}'(e) \wedge R(e) \wedge \text{Mari}'(x) \wedge \text{book}'(y) \wedge \theta_1(e, x) \wedge \theta_2(e, y)]$$

(53) a. -te aru

$$\lambda x \lambda e \lambda y [P(e) \wedge R(e) \wedge Q(x) \wedge S(y) \wedge \theta_1(e, x) \wedge \theta_2(e, y)]$$

b. Non-intransitivizing -te aru

||Mari-wa hon-o kari-te aru|| (*Mari has borrowed a book*)

$$= \lambda x \exists e \exists y [\text{borrow}'(e) \wedge R(e) \wedge \text{Mari}'(x) \wedge \text{book}'(y) \wedge \theta_1(e, x) \wedge \theta_2(e, y)]$$

c. Intransitivizing -te aru

||hon-ga kari-te aru|| (*A book has been borrowed*)

$$= \lambda x \exists e \exists y [\text{borrow}'(e) \wedge R(e) \wedge \text{book}'(y) \wedge \theta_1(e, x) \wedge \theta_2(e, y)]$$

As shown in (52a), the semantics of *-te iru* requires that the event be realized, as indicated by the R operator. Depending on the order of variable binding, the formula in (52a) can be interpreted as either progressive/perfective or experiential. When the individual variable is bound first, we obtain (52b). This formula represents

a set of events with certain properties. When the event variable is bound first, we obtain (52c). The flexibility of the semantics of *-te iru* mirrors the particular syntactic configuration that I propose in the next chapter. The semantics of *-te aru* shown in (53a) is in fact identical to that of *-te iru* in (52a). However, unlike *-te iru*, there is only one possible order of variable binding for *-te aru*, and the event variable always takes narrow scope. This is due to the relationship between syntax and the order in which the various elements of the sentence are combined, which I discuss in the next chapter. At the final point of derivation, non-intransitivizing *-te aru* and experiential *-te iru* are still logically identical as exemplified in (53b) and (52c-ii). Any distinction between the two comes from pragmatics. Non-intransitivizing *-te aru* requires specific implications. In the case of (53b) for example, Mari must have borrowed the book for the purpose of getting ready for something else. In contrast, a speaker of (52c-ii) does not convey such an implication. As for intransitivizing *-te aru*, the subject variable is never identified in the derivation. Therefore at the final point of the derivation, intransitivizing *-te aru* yields a logical form distinct from experiential *-te iru* and non-intransitivizing *-te aru*.

Although the *-te iru* and *-te aru* forms are unique to the Japanese language, an experiential statement is not. For example, the English *have + past participle* provides an experiential reading as well as a perfective reading. *John has gone to England* can mean that John has been to England in the past or that he is in England now. If the arguments presented in this chapter are correct, it is plausible that the experiential reading of the English *have + past participle* can be also represented by

$\exists x \exists e [\dots]$. The content of $[\dots]$ is unknown because the semantics of *have* is apparently different from *-te iru* and *-te aru*, and it is beyond the scope of this thesis.

Lastly, the logical representation $\exists x \exists e [\dots]$ may not be unique to experiential sentences. There may be other types of sentences that represent sets of individuals predicated of events. Just as with experiential *-te iru* and *-te aru*, we would expect that such sentence types would take an SLP and produce a sentence with individual-level properties. Such a possibility must be kept in mind when investigating and characterizing the differences between stage-level and individual-level predication.

CHAPTER 6

SYNTAX OF *-TE IRU* AND *-TE ARU*

1. Introduction

In this chapter, I propose a syntax for each *-te iru* and *-te aru* sentence type. I begin in Section 2 by examining the basic complementation structures of *-te iru* and *-te aru*, and conclude that progressive *-te iru* and perfective *-te iru* have raising structures, while experiential *-te iru*, non-intransitivizing *-te aru*, and intransitivizing *-te aru* have control structures. In Section 3, I proceed to analyze the detailed structures of *-te iru* and *-te aru*, including the syntactic status of *-te* and the category of the complement of *iru* and *aru*. I argue that *-te* is added to its host verb in the numeration, and that all *-te iru* and *-te aru* sentence types have a mono-clausal structure. In addition, I propose that PROarb is present in the syntax of intransitivizing *-te aru*, which corresponds to the unspecified agent proposed in Chapters 4 and 5, and I present various supporting arguments for the existence of PROarb. Having proposed the syntax of *-te iru* and *-te aru*, I discuss in Section 4 how the syntax and the semantics of *-te iru* and *-te aru* align by showing step-by-step syntactic and semantic derivations. Most importantly, we see that the distinction between stage-level sentences and individual-level sentences is present in both semantics and syntax. In the semantics, the distinction is represented as the relative scope difference. In the syntax, the same distinction is mirrored by the raising/control distinction, which is consistent with the claims found in Diesing (1992) and Kratzer

(1995). We see that the different orders of existential closure that result in the relative scope difference in the semantics of *-te iru* and *-te aru* in fact follow from the raising/control distinction in the syntax.

2. Complementation structures

2.1 Introduction

In this section, the basic syntactic structures of *-te iru* and *-te aru* sentences are examined. In Section 2.2, I use various tests found in Kageyama (1989, 1993, 1999) and determine that *V-te iru* and *V-te aru* are syntactic compounds, as opposed to lexical compounds, and that they therefore involve complementation structures. In Section 2.3, I review different types of complementation structures, namely, raising and control. I discuss the distinction between these two structures as well as the tests used to determine which complementation structure should be associated with a given sentence in question. In Section 2.4, I examine the complementation structure of each *-te iru* and *-te aru* sentence type by applying the tests discussed in Section 2.3.

2.2 *-te iru* and *-te aru* as syntactic compounds

Japanese has numerous V-V compound verbs; some have the element *-te* intervening between the two Vs as in *V-te iru/aru*, but others have no intervening element between the two Vs such as *V-hazimeru* (*start to V*) and *V-wasureru* (*forget*

to V). In either case, the first V is always in the gerund form. Kageyama (1989, 1993, 1999) states that Japanese compound verbs can be classified into two groups: lexical compounds and syntactic compounds. Kageyama lists four tests to see whether or not a given compound is created in syntax. If a compound verb is able to include a passivized verb, an honorific verb, *soo su-* (*do so*), and *N-suru* (*do N*) in the V1 position, the compound verb is considered to be a syntactic compound.

Applying the four tests to *V-te iru* and *V-te aru* as shown below, we see that they are syntactic compounds.

(1) Passives in V1

a. Progressive -te iru

hon-ga ima yom-are-te iru
 book-NOM now read-PASS-*te iru*
 ‘A book is being read now’

b. Perfective -te iru

hon-ga ima kari-rare-te iru
 book-NOM now borrow-PASS-*te iru*
 ‘A book is checked-out now’

c. Experiential -te iru

kono hon-wa ima made-ni sankai kari-rare-te iru
 this book-TOP now up.to three.times borrow-PASS-*te iru*
 ‘This book has been borrowed three times up to now’

d. Non-intransitivizing -te aru

kono hon-wa kari-rare-te aru
 this book-TOP borrow-PASS-*te aru*
 ‘This book has been borrowed’

(2) Honorific verbs in V1¹a. Progressive –te iru

sensee-ga ima hon-o o-yomi-ni-nat-te iru
 teacher-NOM now book-ACC read-HONORIFIC-*te* *iru*
 ‘The teacher is reading a book now’

b. Perfective –te iru

sensee-ga ima hon-o o-kari-ni-nat-te iru
 teacher-NOM now book-ACC borrow-HONORIFIC-*te* *iru*
 ‘The teacher (borrowed a book and) has a book now’

c. Experiential –te iru

sensee-wa ima made-ni sankai kono hon-o
 teacher-TOP now up.to three.times this book-ACC
 o-kari-ni-nat-te iru
 borrow-HONORIFIC-*te* *iru*
 ‘The teacher has borrowed this book three times up to now’

d. Non-intransitivizing –te aru

sensee-wa hon-o o-kari-ni-nat-te aru
 teacher-TOP book-ACC borrow-HONORIFIC-*te* *aru*
 ‘The teacher has borrowed the book’

e. Intransitivizing –te aru

tegami-ga sensee-ni o-kaki-moosi-age-te aru
 letter-NOM teacher-DAT write-HONORIFIC-*te* *aru*
 ‘A letter has been written to the teacher’

¹ There are two types of honorification in Japanese: subject-honorification and object-honorification (Kuno, 1973; Harada, 1976). For the purpose of using honorification as a test to understand the syntactic structure of a compound verb, either type of honorification can be used. I use subject-honorification for (2a-d) and object-honorification for (2e). In each of the examples, *sensee* (*teacher*) is being honored. Note that object-honorification can be used to show respect for the reference of a noun marked dative as well (Kuno 1973). I return to this issue in Section 3.7.

(3) *soo su-* (*do so*) in V1a. Progressive –te iru

Mari-ga ima hon-o yon-de iru.

Mari-NOM now book-ACC read-*te iru*

imooto-mo soo si-te iru.

sister-also so do-*te iru*

‘Mari is reading a book now. Her sister is doing so, too’

b. Perfective –te iru

Mari-ga ima hon-o kari-te iru.

Mari-NOM now book-ACC borrow-*te iru*

imooto-mo soo si-te iru.

sister-also so do-*te iru*

‘Mari borrowed a book and has it now. Her sister did so, too’

c. Experiential –te aru

Mari-wa ima made-ni sankai kono hon-o

Mari-TOP now up.to three.times this book-ACC

kari-te iru. imooto-mo soo si-te iru.

borrow-*te iru* sister-also so do-*te iru*

‘Mari has borrowed the book three times up to now. Her sister has done so, too’

d. Non-intransitivizing –te aru

Mari-wa hon-o kari-te aru.

Mari-TOP book-ACC borrow-*te aru*

imooto-mo soo si-te aru.

sister-also so do-*te aru*

‘Mari has borrowed the book. Her sister has done so, too’

e. Intransitivizing –te aru

Mari-no hon-ga yabut-te aru.
 Mari-GEN book-NOM tear-te aru
 imooto-no hon-mo soo si-te aru.
 sister-GEN book-also so do-te aru

‘Mari’s book has been torn. Her sister’s book has been done so, too’

(4) N-suru (do N) in V1

a. Progressive –te iru

NYPD-ga ima FBI-to kyooryoku-si-te iru
 NYPD-NOM now FBI-with cooperation-do-te iru

‘NYPD is cooperating with FBI now’

b. Perfective –te iru

sensee-ga ima muzukasii mondai-o syatudai-si-te
 teacher-NOM now difficult question-ACC setting.of.question-do-te
 iru
 iru

‘The teacher has set out a difficult question now’

c. Experiential –te iru

NYPD-wa ima made-ni-mo FBI-to kyooryoku-si-te iru
 NYPD-TOP now up.to-also FBI-with cooperation-do-te iru

‘NYPD has cooperated with FBI before, too’

d. Non-intransitivizing –te aru

NYPD-wa FBI-to kyooryoku-si-te aru
 NYPD-TOP FBI-with cooperation-do-te aru

‘NYPD has cooperated with FBI’

e. Intransitivizing –te aru

muzukasii mondai-ga syatudai-si-te aru
 difficult question-NOM setting.of.question-do-te aru

‘A difficult question has been set out’

Passivization cannot be applied to intransitivizing *-te aru* because the grammatical object of the verb is already marked nominative. However, all other tests can be applied to intransitivizing *-te aru*, and we can conclude that *V-te iru* and *V-te aru* are syntactic compound verbs.

2.3 Raising and control

Having established that *-te iru* and *-te aru* are syntactic compounds, we are now in the position to ask what structures they are associated with. In the literature, it has been argued that some *V1-(te)-V2* compounds are raising structures while others are control (Inoue, 1976, 1989; Shibatani, 1978; Kuno, 1983; Kageyama, 1993; Nishigauchi, 1993; Matsumoto, 1996). Examples of raising verbs are *kakeru* (*about to*) and *sugiru* (*overdo*); examples of control verbs are *wasureru* (*forget*), and *-te oku* (*do in advance*).

(5) Raising

- a. [Mari-ga keeki-o tabe] kake-ta
 Mari-NOM cake-ACC eat about.to-PAST
 ‘Mari was about to eat the cake’
- b. [Mari-ga keeki-o tabe] sugi-ta
 Mari-NOM cake-ACC eat overdo-PAST
 ‘Mari ate cake too much’

(6) Control

- a. Mari_i-ga [PRO_i keeki-o tukuri] wasure-ta
 Mari-NOM cake-ACC make forget-PAST
 ‘Mari forgot to make a cake’
- b. Mari_i-ga [PRO_i keeki-o tukut-te] oi-ta
 Mari-NOM cake-ACC make-*te* do.in.advance-PAST
 ‘Mari made a cake in advance’

In (5), the only arguments of *kakeru* (*about to*) and *sugiru* (*overdo*) are their complements, indicated by the brackets. *Mari* is an argument of *tabe* (*eat*), and it raises to SpecTP, assuming EPP-feature checking (Chomsky 1995). Turning to (6), unlike a raising verb, a control verb takes two arguments; one is the complement phrase that contains the embedded verb, and the other is the external argument. In the above examples, it is *Mari*. *Mari* is a semantic argument of both the control verb and the embedded verb. Syntactically, PRO (Chomsky 1981) occupies the external argument position of *tukuru* (*make*) and is co-indexed with *Mari*, which is the external argument of the control verb.

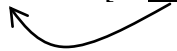
In order to determine which of these two complementation structures *-te iru* and *-te aru* are associated with, I employ two types of diagnostics; one is idiom chunk insertion, and the other is passivization. Below, I discuss how these tests distinguish between raising and control structures.

An idiom such as *the cat is out of the bag* bears a special meaning only when it forms a syntactic constituent. When the idiom is used together with a raising verb, for example, *seem*, it looks as though *the cat* is separated from the rest of the idiom,

as shown in (7a). However, the idiomatic meaning, ‘a big secret is revealed’, is preserved because *the cat* actually originates as an argument of the copular clause and therefore forms a syntactic constituent with the rest of the idiom, as shown in (7b). In contrast, when the idiom is used together with a control verb, for example, *try* as in (8a), the idiomatic meaning is not preserved; here, it has only the literal meaning. This is because *the cat* does not form a constituent with the rest of the idiom in the control structure, as shown in (8b).

(7) Raising

- a. The cat seems to be out of the bag
 b. [seems [to the cat be out of the bag]]



(8) Control

- a. The cat tried to be out of the bag
 b. [The cat_i tried [PRO_i to be out of the bag]]

Nishigauchi (1993) uses the idiom test to show that *hazimeru* (*begin*) is a raising verb while *oeru* (*finish*) is a control verb.

- (9) a. uwasa-ga uwasa-o yobu
 rumor-NOM rumor-ACC call
 Lit: ‘Rumors call rumors’
 Idiomatic meaning: ‘Rumors spread in various directions’
- b. uwasa-ga uwasa-o yobi hazime-ta
 rumor-NOM rumor-ACC call begin-PAST
 ‘Rumors began spreading in various directions’

- c. #uwasa-ga uwasa-o yobi oe-ta
 rumor-NOM rumor-ACC call finish-PAST
 ‘Rumors finished calling rumors’

As shown in (9a), *uwasa-ga uwasa-o yobu* is an idiomatic expression meaning ‘Rumors spread in various directions’. With *hazimeru* (*begin*), the idiomatic meaning is preserved as shown in (9b). In contrast, with *oeru* (*finish*), only the literal meaning is available, resulting in an anomalous sentence as shown in (9c).

Another diagnostic that can be used to distinguish between raising and control structures is passivization (Davies & Dubinsky 2004). A raising verb shows a voice transparency in that the passive sentence is synonymous with its active counterpart. In contrast, a control verb does not show voice transparency; i.e. passivizing the embedded verb yields a different meaning from that of the original sentence. Examples are shown below.

- (10) a. The doctor forgot to examine Mary
 b. Mary forgot to be examined by the doctor
- (11) a. The doctor seems to have examined Mary
 b. Mary seems to have been examined by the doctor

In (10a&b), since the control verb *forgot* takes different external arguments in the active voice and passive voice, there is a significant difference in the meanings; i.e. the doctor forgot in (10a), but Mary forgot in (10b). In contrast, in (11), neither

the doctor nor *Mary* is the argument of the raising verb *seem*. Therefore, (11a) and (11b) do not have distinctive interpretations.

In the context of Japanese raising and control, the same type of results can be observed with passivization, as the following examples indicate.

- (12) a. *isya-ga Mari-o sinsatusi wasure-ta*
 doctor-NOM Mari-ACC examine forget-PAST
 ‘The doctor forgot to examine Mari’
- b. *Mari-ga isya-ni (yotte) sinsatus-are wasure-ta*
 Mari-NOM doctor-DAT by examine-PASS forget-PAST
 ‘Mari forgot to be examined by the doctor’
- (13) a. *isya-ga Mari-o sinsatusi kake-ta*
 doctor-NOM Mari-ACC examine about.to-PAST
 ‘The doctor was about to examine Mari’
- b. *Mari-ga isya-ni (yotte) sinsatus-are kake-ta*
 Mari-NOM doctor-DAT by examine-PASS about.to-PAST
 ‘Mari was about to be examined by the doctor’

In (12), the active voice and the passive voice result in distinctive interpretations. In contrast, the truth conditions for (13a) and (13b) seem to be the same.

In the following section, I use idiom chunks and passivization to examine the complementation structures of *-te iru* and *-te aru*.

2.4 Complementation structures of *-te iru* and *-te aru*

When the idiom chunk test is applied, the behavior of *-te iru* splits between progressive/perfective on the one hand, and experiential on the other. Since progressive *-te iru* obtains exclusively with activity verbs, idiom chunks that contain activity verbs are used; in the example below, these are *yobu* (*call*) and *huku* (*blow*). For perfective *-te iru*, idiom chunks that contain achievement verbs are used; in the examples below, these are *sugiru* (*pass by*) and *naru* (*become*). For experiential *-te iru*, idiom chunks are used with all four verbs because both activity and achievement verbs are compatible with experiential *-te iru*.

(14) Idioms with activity verbs

- a. uwasa-ga uwasa-o yobu
 rumor-NOM rumor-ACC call

Lit: ‘Rumors call rumors’

Idiomatic meaning: ‘Rumors spread in various directions’

- b. akikaze-ga huku
 autumn.wind-NOM blow

Lit: ‘Autumn wind blows’

Idiomatic meaning: ‘Love relationship falls apart’

(15) Progressive *-te iru*

- a. ima uwasa-ga uwasa-o yon-de iru
 now rumor-NOM rumor-ACC call-*te iru*

‘Rumors are spreading in various directions now’

- b. ima Mari-to kare-no aida-ni akikaze-ga
 now Mari-with he-GEN between-LOC autumn.wind-NOM
 hui-te iru
 blow-*te* *iru*
 ‘The relationship between Mari and her boyfriend is falling apart now’

(16) Idioms with achievement verbs

- a. kuti-ga sugiru
 mouth-NOM pass.by
 Lit: ‘The mouth passes by’
 Idiomatic meaning: ‘Too much is said’
- b. asi-ga boo-ni naru
 leg-NOM stick-DAT become
 Lit: ‘Legs become sticks’
 Idiomatic meaning: ‘Legs get tired’

(17) Perfective *-te iru*

- a. ima-wa kuti-ga sugi-te iru kamosirenai ga
 now-TOP mouth-NOM pass.by-*te iru* may but
 rikaisi-te morau made-wa sikata-ga nai
 understand-*te* receive until-TOP means-NOM none
 ‘It may be that I have said too much, but nothing else can be done until I
 am understood’
- b. aruki sugi-te ima asi-ga boo-ni nat-te iru
 walk pass.by-*te* now leg-NOM stick-DAT become-*te iru*
 ‘My legs are tired from walking too much’

(18) Experiential –te iru

- a. #kako-ni suukai uwasa-ga uwasa-o yon-de iru
 past-LOC several.times rumor-NOM rumor-ACC call-*te iru*
 kara kiotuke-ta hoo-ga ii
 because be.careful-PAST way-NOM good
 ‘Rumors have called rumors several times in the past, so you should be careful’
- b. #kako-ni suukai Mari-to kare-no aida-ni
 past-LOC several.times Mari-with he-GEN between-LOC
 akikaze-ga hui-te iru ga ima-wa umaku yat-te iru
 autumn.wind-NOM blow-*te iru* but now-TOP well do-*te iru*
 ‘Autumn wind has blown between Mari and her boyfriend several times in the past, but they are getting along well now’
- c. #kako-ni suukai zyoosi-ni taisite kuti-ga sugi-te iru
 past-LOC several.times boss-DAT against mouth-NOM pass.by-*te iru*
 kara kiotuke-ta hoo-ga ii
 because be.careful-PAST way-NOM good
 ‘The mouth has passed by against the boss several times in the past, so you should be careful’
- d. #kako-ni suukai aruki sugi-te asi-ga boo-ni
 past-LOC several.times walk pass.by-*te* leg-NOM stick-DAT
 nat-te iru
 become-*te iru*
 ‘My legs have become sticks several times in the past from walking’

The meanings of the idioms are preserved in progressive and perfective *–te iru*. This suggests that progressive and perfective *–te iru* are associated with a raising structure. However, when the same set of idioms is used in experiential *–te iru*, we

obtain anomalous results.² This suggests that experiential *-te iru* is associated with a control structure.

Turning to *-te aru*, we first find that the idiom test cannot be applied to non-intransitivizing *-te aru*. This is because of the pragmatic restrictions that are associated with non-intransitivizing *-te aru*. As discussed in Chapter 4, the subject of non-intransitivizing *-te aru* has to refer to a human who has a preparatory purpose in mind. On top of these pragmatic restrictions, the verb of non-intransitivizing *-te aru* has to be transitive. I am unable to find an idiom chunk that can accommodate this complete set of restrictions. However, the passivization test can still be applied, which I discuss later in this section.

With intransitivizing *-te aru*, the idiom test can be applied. Since the agent of a transitive verb cannot be expressed in intransitivizing *-te aru*, idioms without fixed subjects are chosen. We see that the idiomatic meanings are preserved in intransitivizing *-te aru*.

(19) Idioms without fixed subjects

- a. me-o tuku
 eye-ACC attach
 Lit: ‘to attach an eye’
 Idiomatic meaning: ‘to pay special attention to something’

² In (18), the subject of each sentence is marked with the particle *-ga*, rather than *-wa*. Although *-wa* is the default particle to mark the subject of an experiential sentence, we see *ga*-marked subjects in (18) because the subjects appear in the subordinate clauses. As mentioned in Chapter 3 Section 3.3, exhaustive interpretations of *-ga* can only be forced in matrix clauses. Thus, in a non-matrix clause, *-ga* is the default particle in an experiential sentence.

- b. *te-o kiru*
 hand-ACC cut
 Lit: ‘to cut a hand’
 Idiomatic meaning: ‘to end a relationship’

(20) Intransitivizing *-te aru*

- a. *hanzai soosa-de kono ie-ni sumu otoko-ni*
 criminal investigation-LOC this house-LOC live man-DAT
me-ga take-te aru
 eye-NOM attach-*te aru*
 ‘During the criminal investigation, special attention has been paid to a man living in this house’
- b. *yakuza-to te-ga kit-te aru*
 yakuza-with hand-NOM cut-*te aru*
 ‘The relationship with the *yakuza* has been ended’

Although the idiom meanings are preserved in (20), I hesitate to conclude that intransitivizing *-te aru* has a raising structure. This is because I argued for an unspecified agent being present in the semantics of intransitivizing *-te aru*. Certainly, the idiom test result indicates that the *ga*-marked nominal forms a constituent with the verb, but it does not show whether or not the *ga*-marked nominal ultimately raises to a higher position in the structure. A good candidate for the syntactic representation of an unspecified agent is PROarb. If PROarb is present in the structure, it is possible that the *ga*-marked nominal does not raise. I explore this possibility in Section 3.7.

Having applied the idiom test to *-te iru* and *-te aru* sentences, I now apply the passivization test. First, consider progressive and perfective *-te iru*.

(21) Progressive –te iru

- a. Mari-ga ima hon-o yon-de iru
 Mari-NOM now book-ACC read-*te* *iru*
 ‘Mari is reading a book now’
- b. hon-ga ima Mari-ni (yotte) yom-are-te iru
 book-ACC now Mari-DAT by read-PASS-*te* *iru*
 ‘A book is being read by Mari now’

(22) Perfective –te iru

- a. Mari-ga ima hon-o kari-te iru
 Mari-NOM now book-ACC borrow-*te* *iru*
 ‘Mari (borrowed a book and) has a book now’
- b. hon-ga ima Mari-ni (yotte) kari-rare-te iru
 book-NOM now Mari-DAT by borrow-PASS-*te* *iru*
 ‘A book is checked-out by Mari now’

In both the progressive *–te iru* and perfective *–te iru* examples, the active voice sentence and the passive voice sentence seem to have the same truth conditions. This suggests that progressive and perfective *–te iru* are associated with a raising structure, which is consistent with the result we obtained from the idiom chunk test.

Next, consider experiential *–te iru*. Unlike progressive/perfective *–te iru*, the active voice and passive voice sentences have distinctive meanings.

(23) Experiential –te iru

- a. Mari-wa ima made-ni sankai hon-o yon-de iru
 Mari-TOP now up.to three.times book-ACC read-*te* *iru*
 ‘Mari has read a/the book three times up to now’

- b. hon-wa ima made-ni sankai Mari-ni (yotte)
 book-TOP now up.to three.times Mari-DAT by
 yom-are-te iru
 read-PASS-*te iru*
 ‘The book has been read by Mari three times up to now’
- c. Mari-wa ima made-ni sankai hon-o kari-te iru
 Mari-TOP now up.to three.times book-ACC borrow-*te iru*
 ‘Mari has borrowed a/the book three times up to now’
- d. hon-wa ima made-ni sankai Mari-ni (yotte)
 book-TOP now up.to three.times Mari-DAT by
 kari-rare-te iru
 borrow-PASS-*te iru*
 ‘The book has been borrowed by Mari three times up to now’

While the active voice sentences in (23a&c) express properties of Mari, the passive voice sentences in (23b&d) express properties of a book. In other words, the external argument of *iru* is Mari in (23a&c) whereas it is *hon (book)* in (23b&d). This may not be so apparent because *iru* does not have a lexical content unlike a control verb such as *wasureru (forget)*. However, we can see truth conditional differences between (23a&c) and (23b&d). That is, *hon (book)* in (23a&c) can be interpreted as either definite or indefinite, whereas it must be interpreted as definite in (23b&d). The truth conditional differences between active voice and passive voice sentences suggest that experiential *-te iru* has a control structure, which is consistent with the result obtained from the idiom test.

Although the idiom test could not be applied to non-intransitivizing *-te aru*, the passivization test can. Consider the following.

(24) Non-intransitivizing *-te aru*

a. Mari-wa hon-o kari-te aru
 Mari-TOP book-ACC borrow-*te aru*
 'Mari has borrowed a/the book'

b. hon-wa Mari-ni (yotte) kari-rare-te aru
 book-TOP Mari-DAT by borrow-PASS-*te aru*
 'The book has been borrowed by Mari'

Paralleling the result with experiential *-te iru*, the active voice sentence in (24a) refers to a property of Mari, whereas the passive voice sentence in (24b) refers to a property of a book. This is confirmed by the fact that *hon (book)* requires the definite interpretation in (24b), while it can be interpreted either as definite or indefinite in (24a). The passivization test suggests that non-intransitivizing *-te aru* has a control structure.

As for intransitivizing *-te aru*, passivization is not possible, as mentioned in Section 2.2. However, I will pursue the possibility of intransitivizing *-te aru* having a control structure. Gathering the results for *-te iru* and non-intransitivizing *-te aru*, we actually see a syntactic distinction paralleling the semantic distinction. That is, stage-level sentences (i.e. progressive and perfective *-te iru*) are associated with a raising structure, while individual-level sentences (experiential *-te iru* and non-intransitivizing *-te aru*) are associated with a control structure. Based on this parallel, it is not unreasonable to consider a control structure for intransitivizing *-te aru*, since I have concluded in Chapter 4 that intransitivizing *-te aru* is an individual-level sentence. The parallel between the raising/control distinction in

syntax and the stage-level/individual-level distinction in semantics is discussed in detail in Section 4.

2.5 Summary

In this section, I discussed and examined the basic syntactic structures of *-te iru* and *-te aru*. I first showed that *-te iru* and *-te aru* involve syntactic complementation structures by applying the tests found in Kageyama (1989, 1993, 1999). Next, I applied the idiom chunk test and the passivization test, and I concluded that progressive and perfective *-te iru* have raising structures, while experiential *-te iru*, non-intransitivizing *-te aru*, and intransitivizing *-te aru* have control structures.³ Although the test results for intransitivizing *-te aru* is indecisive, I speculate at this point that intransitive *-te aru* has a control structure. This is because we find the raising/control distinction mirroring the stage-level/individual-level distinction in each of the other *-te iru/aru* sentence types. Since experiential *-te iru* and non-intransitive *-te aru*, which are individual-level sentences, are associated with a control structure, it is reasonable to associate intransitivizing *-te aru*, which is another individual-sentence type, with a control structure as well. In the following sections, I present various supporting arguments for this idea.

³ A consequence of this analysis is that *iru* is ambiguous between raising and control. Similar claims are made for verbs such as *hazimeru* (*begin*), *dasu* (*start*), and *tuzukeru* (*continue*) (Shibatani, 1978; Kuno, 1983 among others), although there is not complete consensus on this point (cf. Nishigauchi 1993).

3. The proposal

3.1 Introduction

In this section, I present the detailed syntactic structures of each *-te iru/aru* sentence type. I begin, however, by discussing two general issues involving *-te iru* and *-te aru* sentences. First is the syntactic status of *-te*, which I discuss in Section 3.2. There are basically three different views regarding the syntactic status of *-te*. One is that it is a predicate affix and it does not correspond to any functional head (Sells, 1990; Tsujimura, 1996; Hasegawa, 1996; Miyagawa & Babyonyshev, 2004 among others), another is that it is a realization of Tense (Nakatani, 2003; Aono, 2006), the other is that it is a realization of Complementizer (McClure 2007). I argue against the possibility of *-te* being Tense or Complementizer, and suggest that it is added to its host verb in the numeration. The second general issue is the category of the complement of *iru* and *aru*, which I discuss in Section 3.3. Specifically, I argue that *-te iru* and *-te aru* have mono-clausal structures, contra Miyagawa & Babyonyshev (2004). Section 3.4 provides an interim summary before proceeding to the detailed proposals for the syntactic structure of each *-te iru/aru* sentence type. In Section 3.5, I present the syntax of progressive/perfective *-te iru*. In Section 3.6, I present the syntax of experiential *-te iru* and non-intransitivizing *-te aru*. In Section 3.7, I present the syntax of intransitivizing *-te aru* and propose that PROarb is present in the structure. I present various arguments in support of this idea. One specific

consequence I defend is that the *ga*-marked nominal in intransitivizing *-te aru* stays low.

3.2 *-te*

Many have pointed out that the basic function of *-te* is to establish a temporal sequence between the conjoined events (Kuno, 1973; Yoshikawa, 1976; Ogihara, 1998 among others). At the same time, however, only a few have gone so far as to claim that *-te* in fact projects a TP (Nakatani, 2003; Aono, 2006). Rather, *-te* is generally treated as a predicate affix, not corresponding to any functional head (Sells, 1990; Tsujimura, 1996; Hasegawa, 1996; Miyagawa & Babyonyshev, 2004 among others). In this section, I argue that *-te* does not correspond to any functional head.

I first argue against the claim that *-te* is Tense. Although it is said that there is often a sense of temporal order in events conjoined by *-te*, as in the example in (25), *-te* does not always give rise to a temporal sequence. This is discussed thoroughly in Hasegawa (1996); her (atemporal) examples are shown in (26).

- (25) Temporal sequence
 Mari-wa yuuhan-o tabe-te terebi-o mi-ta
 Mari-TOP dinner-ACC eat-*te* TV-ACC watch-PAST
 ‘Mari ate dinner and watched TV’

- (26) a. Additive
 kono utyuu-no soodaina sungeki-wa setunaku-te
 this universe-GEN grand drama-TOP oppressive-*te*
 sinpiteki-da
 mysterious-COP
 ‘This grand drama of the universe is oppressive AND mysterious’
- b. Cause
 tomodati-o izime-te sensee-ni sika-rare-ta
 friend-ACC bother-*te* teacher-DAT scold-PASS-PAST
 ‘I was scolded by the teacher BECAUSE I bothered my friend’
- c. Means
 hi-ni kazasi-te mizu-o zyohatu-saseru
 flame-LOC hold.up-*te* water-ACC evaporate-CAUSE
 ‘BY holding over the flame, evaporate the water’
- d. Contrastive
 Maki-ga gookakusi-te Hiro-ga hugookaku-dat-ta
 Maki-NOM pass-*te* hiro-NOM disqualification-COP-PAST
 ‘Maki passed, BUT Hiro was disqualified’
- e. Concessive
 kare-wa sono koto-o sittei-te iwa-nai
 he-TOP that matter-ACC know-*te* say-NEG
 ‘ALTHOUGH he knows the subject matter, he won’t say it’
- f. Conditional
 zenbu tabe-te nizyuu doru-desu
 all eat-*te* twenty dollars-COP
 ‘IF you eat everything, it is twenty dollars’

Looking at the examples above, we see that *-te* probably does not make a specific semantic contribution. This is consistent with the approach taken by McClure (2007) and this thesis, which takes the view that *-te* makes no semantic contribution. Rather, the appropriate meaning of *-te* seems to be determined by the nature of the two events. Even the example in (25) can be explained without attributing a tense feature to *-te*; i.e. where reasonable, we normally interpret the event mentioned first to have occurred first. As Grice (1975) suggests as one of the principles underlying the efficient cooperative use of language, *be orderly* is an implicit rule that we follow when we speak. In fact, that Mari ate dinner before watching TV is only *implied* in (25), and not *entailed*. If Mari watched TV before eating dinner, and somebody states (25), the statement is still true. It only makes the speaker uncooperative.

There is also more concrete evidence against the proposal that *-te* is Tense. The *sika-na(i)* (*only-NEG*) sequence can be used as a diagnostic to see that *-te iru/-te aru* are mono-clausal. *Sika-na(i)* is one way of expressing ‘only’ in Japanese. *Sika* is a strict negative polarity item which attaches to the constituent that is the focus of ‘only’. Crucially, *sika* and negation must be in the same clause (Muraki, 1978; McCawley & Momoi, 1986; Kato, 1994). Thus, while (27a-c) are grammatical, (27d&e) are not.

- (27) a. Mai-wa keeki-sika tukura-nakat-ta
 Mari-TOP cake-*sika* make-NEG-PAST
 ‘Mari made only a cake’

- b. Mari-wa [imooto-ga keeki-sika tukura-nakat-ta] to it-ta
 Mari-TOP sister-NOM cake-*sika* make-NEG-PAST that say-PAST
 ‘Mari said that her sister made only a cake’
- c. Mari-sika [imooto-ga keeki-o tukut-ta] to
 Mari-*sika* sister-NOM cake-ACC make-PAST that
 iwa-nakat-ta
 say-NEG-PAST
 ‘Only Mari said that her sister made a cake’
- d. *Mari-wa [imooto-ga keeki-sika tukut-ta] to
 Mari-TOP sister-NOM cake-*sika* make-PAST that
 iwa-nakat-ta
 say-NEG-PAST
- e. *Mari-sika [imooto-ga keeki-o tukura-nakat-ta] to
 Mari-*sika* sister-NOM cake-ACC make-NEG-PAST that
 it-ta
 say-PAST

With *-te iru/-te aru*, *sika* can immediately follow *V-te* in a negative sentence.

See the examples below.

- (28) a. Progressive *-te iru*
 Mari-wa keeki-o tukut-te-sika i-nai
 Mari-TOP cake-ACC make-*te-sika* *iru*-NEG
 ‘Mari is only making a cake’
- b. Perfective *-te iru*
 Mari-wa hon-o kari-te-sika i-nai
 Mari-TOP book-ACC borrow-*te-sika* *iru*-NEG
 ‘Mari only (borrowed a book and) has a book’

c. Experiential *-te iru*

Mari-wa ima made-ni igirisu-ni it-te-sika i-nai
 Mari-TOP now up.to England-LOC go-*te-sika iru*-NEG
 ‘Mari has only been to England up to now’

d. Non-intransitivizing *-te aru*

Mari-wa hon-o kari-te-sika nai
 Mari-TOP book-ACC borrow-*te-sika aru*-NEG
 ‘Mari has only borrowed a book’

e. Intransitivizing *-te aru*

hon-ga kari-te-sika nai
 book-NOM borrow-*te-sika aru*-NEG
 ‘A book has only been borrowed’

The above examples indicate that V-*te* and negation are clause-mates. This eliminates a possibility that *-te* projects a TP.

McClure (2007) considers *-te* to project a CP. He cites a claim found in Frellesvig (2001) that there is historical evidence that *-te* is related to *-to*. *-to* is normally considered to be Complementizer and it is essentially the English equivalent of *that*. Putting these two together, McClure speculates that *-te* is Complementizer. However, unlike *-to*, *-te* never takes a clausal argument as shown below.

- (29) a. taberu to
 eat.PRESENT *to*
- b. tabe-ta to
 eat-PAST *to*

- c. *tabe-te*
eat.GERUND-*te*
- d. **taberu-te*
eat.PRESENT-*te*
- e. **tabe-ta-te*
eat-PAST-*te*

Although Complementizer is usually considered to take a clausal argument, Chung & McCloskey (1987) claim that CP takes a small clause in Irish. Therefore, the fact that *-te* can never take a clausal argument may not be entirely convincing evidence to argue against the idea that *-te* is Complementizer. However, along with the fact that *-te* can never take a clausal argument, we can also note that CP is known to block A-movement. Specifically, SpecCP is an A-bar position, and movement from an A-position via an A-bar position back to an A-position would result in improper movement (Chomsky 1981, 1995). In more recent developments, CP is regarded as a phase (Chomsky 2001), and A-movement cannot escape from the phase by touching down on its edge. An example of CP blocking A-movement can be illustrated with the case of raising construction in Dutch. Raising is an instance of A-movement. In Dutch, whereas a control verb can take an embedded clause that is introduced by Complementizer, a raising verb can never take such an embedded clause. This contrast is illustrated below.

- (30) a. Control
 dat hij probeerde (om) te winnen
 that he tried (COMP) to win
 ‘that he tried to win’
- b. Raising
 dat hij leek (*om) te gaan winnen
 that he seemed (*COMP) to go win
 ‘that he seemed to win’

In both of the above examples, the infinitival clause is extraposed. While extraposed infinitival clauses in Dutch generally accept *om* as Complementizer, this is not possible in (30b). This shows that A-movement in raising constructions is incompatible with an overt Complementizer.

In Section 2.4, I concluded that progressive and perfective *-te iru* have a raising structure. Since raising is an instance of A-movement, we can reasonably exclude the possibility of *-te* being Complementizer.

I suggest therefore that *-te* does not correspond to any functional head, and it is added to its host verb in the numeration. The facts that favor this position are: 1) *-te* cannot appear without a predicate; 2) *-te* can never have scope over two verbs, as shown below.

- (31) a. *Mari-ga tabe-te i-te imooto-mo te iru
 Mari-NOM eat-*te* iru-*te* sister-also *te* iru
 Attempted meaning: ‘Mari is eating and her sister is also eating’

- b. *Mari-ga tabe non-de iru
 Mari-NOM eat drink-*te iru*
 Attempted meaning: ‘Mari is eating and drinking’

3.3 Mono-clausal vs. bi-clausal analysis

I have pointed out that modifiers that refer to the past such as *kyonen* (*last year*) can be used along with present tense in experiential sentences. In such cases, the modifier has narrow scope over the embedded verb. For example, (32) refers to a property of Mari at the speech moment, but the property was obtained by reading thirty books before the speech moment, during the preceding year to be exact.

- (32) Mari-wa kyonen sanzyussatu-no hon-o yon-de iru/aru
 Mari-TOP last.year thirty.volume-GEN book-ACC read-*te iru/aru*
 Lit: ‘Mari has read thirty books last year’

Noting the same fact with non-intransitivizing *-te aru* sentences, Miyagawa & Babyonyshev (2004) claim that non-intransitivizing *-te aru* has a bi-clausal structure; i.e. *aru* takes a TP complement. Miyagawa & Babyonyshev propose a bi-clausal structure exclusively in the context of non-intransitivizing *-te aru*. However, as I have already discussed, a past tense modifier can appear in any present tense experiential sentence: experiential *-te iru*, non-intransitivizing *-te aru*, and intransitivizing *-te aru*. Thus, if we are to employ Miyagawa & Babyonyshev’s treatment of non-intransitivizing *-te aru*, we also have to assume a bi-clausal

structure for all experiential sentences. However, I argue here that there is significant evidence against the bi-clausal analysis of experiential sentences.

Other than the fact that the past tense modifier can appear in a present tense experiential sentence, there is no evidence to argue for an embedded TP. First of all, there is no morphological realization of T. Furthermore, negation is not possible below *-te*, suggesting that the structure of the complement of *iru/aru* is quite small. The following examples are all ungrammatical.

- (33) a. *Mari-wa kyonen sanzyussatu-no hon-o
 Mari-TOP last.year thirty.volume-GEN book-ACC
 yon-da-de iru/aru
 read-PAST-*te* *iru/aru*
 Attempted meaning: ‘Mari has read thirty books last year’
- b. *hon-ga kyonen yon-da-te aru
 book-NOM last.year read-PAST-*te* *aru*
 Attempted meaning: ‘A book has been read last year’
- c. *Mari-wa kyonen sanzyussatu-no hon-o
 Mari-TOP last.year thirty.volume-GEN book-ACC
 yon-da iru/aru
 read-PAST *iru/aru*
 Attempted meaning: ‘Mari has read thirty books last year’
- d. *hon-ga kyonen yon-da aru
 book-NOM last.year read-PAST *aru*
 Attempted meaning: ‘A book has been read last year’

- e. *Mari-wa kyonen sanzyussatu-no hon-o
 Mari-TOP last.year thirty.volume-GEN book-ACC
 yoma-nai-de iru/aru
 read-NEG-*te* *iru/aru*
 Attempted meaning: ‘Mari has not read thirty books last year’
- f. *hon-ga kyonen yoma-nai-de aru
 book-NOM last.year read-NEG-*te* *aru*
 Attempted meaning: ‘A book has not been read last year’

In fact, even stronger evidence against the bi-clausal analysis has already been presented. In the previous section, I showed that the negative polarity item *sika* can be licensed in all *-te iru* and *-te aru* sentence types. Assuming the clause-mate condition of *sika* and negation discussed in Muraki (1978), McCawley & Momoi (1986), and Kato (1994), this suggests that all *-te iru* and *-te aru* sentence types have a mono-clausal structure. The examples from the previous section are repeated below.

- (34) a. Progressive *-te iru*
 Mari-wa keeki-o tukut-te-sika i-nai
 Mari-TOP cake-ACC make-*te-sika* *iru*-NEG
 ‘Mari is only making a cake’
- b. Perfective *-te iru*
 Mari-wa hon-o kari-te-sika i-nai
 Mari-TOP book-ACC borrow-*te-sika* *iru*-NEG
 ‘Mari only (borrowed a book and) has a book’

c. Experiential –te iru

Mari-wa ima made-ni igirisu-ni it-te-sika i-nai
 Mari-TOP now up.to England-LOC go-te-sika iru-NEG
 ‘Mari has only been to England up to now’

d. Non-intransitivizing –te aru

Mari-wa hon-o kari-te-sika nai
 Mari-TOP book-ACC borrow-te-sika aru-NEG
 ‘Mari has only borrowed a book’

e. Intransitivizing –te aru

hon-ga kari-te-sika nai
 book-NOM borrow-te-sika aru-NEG
 ‘A book has only been borrowed’

The arguments presented above eliminate the possibility that *iru* and *aru* take TP as a complement. I conclude that *–te iru* and *–te aru* have mono-clausal structures.

3.4 Interim summary

Below is a summary of the points that I have made so far regarding the syntax of *–te iru* and *–te aru*.

- (35)
- a. progressive and perfective *–te iru* have a raising structure
 - b. experiential *–te iru*, non-intransitivizing *–te aru*, and intransitivizing *–te aru* have a control structure
 - c. *–te* is added to its host verb in the numeration
 - d. *–te aru* and *–te aru* have a mono-clausal structure

In the rest of Section 3, I implement these points and present the syntax of each *-te iru* and *-te aru* sentence type. In Section 2, I was not able to make a strong association between intransitivizing *-te aru* and a control structure, but I will propose such a structure for intransitivizing *-te aru* in Section 3.7, and defend the idea with several arguments, including consistency with the semantic claims, subjecthood tests, and particle *-wa* interpretation.

3.5 Progressive and perfective *-te iru*

I propose the following syntactic structure for progressive *-te iru* and perfective *-te iru*.

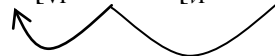
(36) a. Progressive *-te iru*

Mari-ga hon-o yon-de iru

Mari-NOM book-ACC read-*te* iru

‘Mari is reading a book’

[TP [VP iru [VP Mari-ga [VP hon-o yon-de]]]]



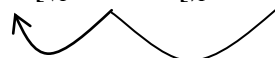
b. Perfective *-te iru*

Mari-ga hon-o kari-te iru

Mari-NOM book-ACC borrow-*te* iru

‘Mari (borrowed a book and) has a book’

[TP [VP iru [VP Mari-ga [VP hon-o kari-te]]]]





Essentially, progressive and perfective *-te iru* have identical syntax. The difference between them is solely semantic-based; i.e. the progressive/perfective distinction arises from an interaction between the aspectual semantics of the verb and the semantics of *iru*.⁴

I assume that the external argument originates in *vP* (Chomsky 1995). Having established that *-te iru* is mono-clausal and *-te* is added to its host verb in the numeration, I propose that *iru* takes *vP* as its complement. As a raising verb, *iru* does not assign an external theta-role. The subject originates in *SpecvP* and raises to *SpecTP* for EPP-feature checking.

3.6 Experiential *-te iru* and non-intransitivizing *-te aru*

In Chapter 5, I proposed that experiential *-te iru* and non-intransitivizing *-te aru* have identical semantics, and attributed their differences to pragmatics. The syntax I propose below is consistent with my semantic proposal; i.e. experiential *-te iru* and non-intransitivizing *-te aru* have identical syntax.

⁴ Although many Japanese achievement verbs are believed to be unaccusative (e.g. *iku* (go), *sinu* (die), *tuku* (arrive)), this is not always the case. There are achievement verbs that are transitive (e.g. *kariru* (borrow), *kasu* (lend)). Therefore, perfective *-te iru* is not something that is exclusively tied to an unaccusative structure.

- (37) a. Experiential –te iru
 Mari-ga hon-o kari-te iru
 Mari-NOM book-ACC borrow-te iru
 ‘Mari has borrowed a book’
 [TP [VP *Mari_i-ga* [VP *iru* [VP PRO_i [VP *hon-o kari-te*]]]]]

- b. Non-intransitivizing –te aru
 Mari-ga hon-o kari-te aru
 Mari-NOM book-ACC borrow-te aru
 ‘Mari has borrowed a book’
 [TP [VP *Mari_i-ga* [VP *aru* [VP PRO_i [VP *hon-o kari-te*]]]]]


Unlike progressive/perfective *–te iru*, the subjects of experiential *–te iru* and non-intransitivizing *–te aru* originate as the external arguments of *iru/aru*. In the above examples, the subject *Mari* is co-indexed with PRO, which serves as the external argument of *kari-te* (*borrow*). *Mari-ga* raises to SpecTP for EPP-feature checking.

As I concluded in Section 3.3, all *–te iru* and *–te aru* sentences have mono-clausal structures. Although it may appear unusual that a ‘bare’ verbal projection (crucially not including T or C) has a PRO subject, it is regularly claimed that Japanese control predicates take a bare verbal projection when the control predicate corresponds to V2 in a verbal compound of the form V1-(*te*)-V2 (Kageyama 1993; Nishigauchi, 1993; Aoshima, 2003).

As I have already mentioned, when we use experiential *–te iru* or non-intransitivizing *–te aru*, the default particle used to mark the subject is *–wa*, and

with this *-wa*, we obtain the topic reading. In contrast, marking the subject with *-ga* inevitably results in the exhaustive reading. Identifying the exact syntactic mechanism of *-wa* and *-ga* marking and the correlation to their interpretations (Kuroda, 1965; Kuno, 1973; Hoji, 1985; Saito, 1985; Tateishi, 1989, 1994) is well-beyond the scope of this thesis. Following many, I assume *-ga* to be the default Case-marking particle in syntax (Kuno, 1973; Fukui, 1986; Kuroda, 1978, 1988; Fukui & Takano, 1998) as in (37) above.⁵ Topicalization may take place after the subject raises to SpecTP, but I refrain from making any specific claim.

3.7 Intransitivizing *-te aru*

I propose the syntax of intransitivizing *-te aru* as below.

- (38) Intransitivizing *-te aru*
 hon-ga kari-te aru
 book-NOM borrow-*te aru*
 ‘A book has been borrowed’
 [TP [VP PROarb_i [VP aru [VP PRO_i [VP hon-ga kari-te]]]]]

I propose that intransitivizing *-te aru* has a control structure. The idiom test that I applied in Section 2.4 suggests that ‘NP-*ga* V-*te*’ forms a constituent. This is certainly compatible with a raising structure, but it is in fact also compatible with the structure presented in (38). As an experiential sentence, intransitivizing *-te aru* is

⁵ I return to this issue at the end of Section 3.7.

represented as sets of individuals in the semantics, on par with experiential *-te iru* and non-intransitivizing *-te aru*. By associating intransitivizing *-te aru* with a control structure, we obtain a syntactic distinction paralleling that of the semantics; i.e. all individual-level *-te iru* and *-te aru* sentences are associated with a control structure whereas the stage-level *-te iru* sentences are associated with a raising structure.

In Chapter 5, I proposed that the unspecified agent is present in the semantics of intransitivizing *-te aru*. This idea is represented as PROarb in the syntax, which serves as the external argument of the control verb *aru*. PROarb is co-indexed with PRO, which serves as the external argument of the verb *kariru* (*borrow*). PROarb is a type of PRO which is not controlled and which has an arbitrary reference (Chomsky 1981). Although PROarb usually appears in the subject position of a tenseless clause as shown in the example in (39a), Kuroda (1983) reports that PROarb may also appear in finite clauses, as shown in (39b).

- (39) a. [PROarb sensei-ni au]-no-wa muzukasii
 teacher-DAT meet-GEN-TOP difficult
 ‘To meet teacher is difficult’
 (Kuroda 1983)
- b. [PROarb taima-o kat-ta] koto-ga kokugaituihoo-no
 marijuana buy-PAST thing-NOM deportation-GEN
 genin-ni nari uru
 cause-DAT become can
 ‘Having bought marijuana can be a cause of deportation’
 (Kuroda 1983)

Below I present three arguments to support the structure proposed in (38). Specifically, I show that the arbitrary subject is structurally present and that the *ga*-marked nominal does not raise to the subject position.

First, subject honorification (Kuno, 1973; Harada, 1976), which is often used as a diagnostic test for subjecthood in Japanese, can be used in intransitivizing *-te aru* which has no overt reference to a person. Subject honorification is expressed by a verbal complex of the form *o-verb-ni-naru*. The target of honorification must be a person. In (40a), there is no overt reference to a person, and yet subject honorification is possible. Since *hon* (*book*) cannot be the target of honorification, we can say that a subject (that refers to a person) is structurally present. In contrast, subject honorification cannot be used to express respect toward the agent of a verb in a passive sentence (Matsumoto 1992). Although the agent of the verb *kaku* (*write*) is implicit in (40b), the agent is not structurally present as a subject. Thus, we can say that the implicit existence of a subject is not enough to license subject honorification.

- (40) a. *hon-ga o-kaki-ni-nat-te aru*
 book-NOM write-SUB.HONORIFIC-*te aru*
 ‘A book has been written’
- b. **hon-ga okaki-ni-nar-are-ta*
 book-NOM write-SUB.HONORIFIC-PASS-PAST
 Attempted meaning: ‘A book was written’

In fact, not only does intransitivizing *-te aru* allow subject honorification, it also allows object honorification. Object honorification (Kuno, 1973; Harada, 1976)

is expressed by the form *o-verb-moosi-ageru*, and is used to show respect for the reference of either the object noun or dative-marked noun. Examples are shown below.

- (41) a. Mari-ga sensee-o o-maneki-moosi-age-ta
 Mari-NOM teacher-ACC invite-OBJ.HONORIFIC-PAST
 ‘Mari invited the teacher’
- b. Mari-ga sensee-ni tegami-o
 Mari-NOM teacher-DAT letter-ACC
 o-kaki-moosi-age-ta
 write-OBJ.HONORIFIC-PAST
 ‘Mari wrote a letter to the teacher’

Object honorification is in fact possible with intransitivizing *-te aru*, with the reference of the *ga*-marked nominal being respected. In contrast, object honorification is not possible with a passive sentence. This contrast is illustrated below.

- (42) a. sensee-ga o-maneki-moosi-age-te aru
 teacher-NOM invite-OBJ.HONORIFIC-*te aru*
 ‘The teacher has been invited’
- b. *sensee-ga o-maneki-moosi-age-rare-ta
 teacher-NOM invite-OBJ.HONORIFIC-PASS-PAST
 Attempted meaning: ‘The teacher was invited’

Since the target of object honorification is the reference of *ga*-marked nominal, it shows that the *ga*-marked nominal does not raise to the subject position.

Importantly, the reference of *sensee* (*teacher*) in (42a) can only be honored via object honorification, and not subject honorification.

Third, as pointed out by Miyagawa & Babyonyshev (2004), the subject-oriented anaphor *zibun* (*self*) cannot refer to the *ga*-marked nominal in intransitivizing *-te aru*, which indicates that the *ga*-marked nominal does not raise to the subject position (i.e. SpecTP). The example in Miyagawa & Babyonyshev (2004) is shown below.

- (43) *Hanako_i-ga zibun_i-no sensei-ni syookaisi-te aru
 Hanako-NOM self-GEN teacher-DAT introduce-*te aru*
 Attempted meaning: ‘Hanako has been introduced to her own teacher’
 (Miyagawa & Babyonyshev 2004)

Lastly, the fact that marking the ‘surface’ subject of intransitivizing *-te aru* with *-wa* yields the contrastive reading indicates that it stays low in the structure. It is often said that the contrastive *-wa* does not appear on the initial element of a sentence; at least not without a special context (Kuno 1973). Rather, we obtain the contrastive reading when, for example, *-wa* attaches to PP, VP, CP, object NP (replacing the accusative *-o*), or NP in a relative clause. If it is correct that the contrastive reading indicates that the element marked with *-wa* is a non-initial element in the sentence, we can say that the ‘surface’ subject in intransitivizing *-te aru* is in fact a non-initial element, and that PROarb is the initial element. However,

there exist cases where certain predicates in Japanese always require the contrastive *-wa* reading (Miyajima 2002). An example is *mieru* (*be visible*).

- (44) yama-wa mieru
 mountain-*wa* be.visible
 ‘A mountain (as opposed to something else) is visible’

With a simple sentence such as above, we may not want to say that there exists an invisible sentence initial element sitting above *yama-wa*, enforcing the contrastive reading. If we are to reconcile this data and the observation that contrastive *-wa* normally appears in a non-initial position, we can make the more modest claim that the contrastive *-wa* can be sentence initial, but stays relatively ‘low’ in the structure. Defining the exact position of the *-wa* marked NP in intransitivizing *-te aru* is beyond the scope of thesis, thus I simply leave it as that the contrastive reading of NP-*wa* suggests that the NP stays low.

I have argued that the *ga*-marked nominal in intransitivizing *-te aru* stays low, and that the unspecified subject is structurally present as PROarb. As a consequence, a question arises as to how the NP-*ga* is Case-licensed.⁶ Following Kuno (1973),

⁶ The same type of issue seems to apply to what Kuno (2005) calls *the non-canonical double nominative construction*. This construction involves a transitive stative predicate, and the nominal that appears to be thematically an object is marked with *-ga*. An example is shown below.

- (1) Taro-ga Hanako-ga suki-da
 Taro-NOM Hanako-NOM fond.of-COP
 ‘Taro likes Hanako’
 (Kuno 2005)

Fukui (1986), Kuroda (1978, 1988), and Fukui & Takano (1998), I assume that *-ga* is the default Case-marking particle in Japanese. The particle *-ga* is not the realization of a unique θ -role. Rather, the θ -role borne by *ga*-marked argument can be Agent, Experiencer, Theme, and so on. From the earliest studies of Japanese, linguists have taken a purely formal approach to the assignment of *-ga*; *-ga* is assigned to the first or the left-most NP in the sentence (Kuno 1973). I maintain that Case-checking does not occur with the NP-*ga* in intransitivizing *-te aru*. However, since a structure without *-ga* is screened out (Kuroda 1978), *-ga* needs to find a host NP.

3.8 Summary

In this section, I proposed the detailed syntactic structures of each *-te iru/aru* sentence type. In Section 3.2, I eliminated the possibility of *-te* being a realization of Tense or Complementizer. Instead, I suggested that *-te* is added to its host verb in the numeration. In Section 3.3, I argued that *-te iru* and *-te aru* have a mono-clausal structure, by showing that there is no morphological realization of embedded T, and that the negative polarity item *sika* can be licensed in all *-te iru* and *-te aru* sentence types. In Section 3.5, I proposed the syntax of progressive and perfective *-te iru*. The

Kuno (2005) argues that the second *ga*-marked nominal is really an object by showing facts of subject honorification, reflexive *zibun*, subject-predicate relationship, and elliptical sentences. However, Kuno does not provide any insight as to how the second NP-*ga* is Case-licensed. To the extent that both non-canonical double nominative and intransitivizing *-te aru* constructions involve *ga*-marked objects, any insight into the mechanism of the *ga*-marking in either of the two constructions may shed some light on the *ga*-marking puzzle of the other construction. I leave this to future investigation.

syntax of progressive and perfective *-te iru* are proposed to be identical. The difference between them is solely semantic; i.e. the progressive/perfective distinction arises from an interaction between the aspectual semantics of the verb and the semantics of *iru*. In Section 3.6, I proposed the syntax of experiential *-te iru* and non-intransitivizing *-te aru*. The syntax of these two are identical, just as their semantics are identical as proposed in Chapter 5. The difference between them is pragmatic. As discussed in Chapter 4, non-intransitivizing *-te aru* has strict pragmatic conditions whereas there are no such condition for experiential *-te iru*. In Section 3.7, I proposed the syntax of intransitivizing *-te aru*. I argued that PROarb is present in the syntax of intransitivizing *-te aru*, and that the *ga*-marked nominal stays low. As supporting evidence, I presented facts concerning subject and object honorification, the subject-oriented anaphor *zibun*, and the contrastive *-wa* interpretation.

4. Syntax-semantics mapping

4.1 Introduction

Having proposed the syntax of each *-te iru/aru* sentence type in the previous section, the purpose of this section is to map the semantic proposals in Chapter 5 onto each structure and show how the syntax and the semantics correspond. Most importantly, we see that the distinction between stage-level sentences and individual-level sentences are present in both semantics and syntax. In semantics, I proposed that the stage-level sentences (i.e. progressive and perfective *-te iru*) denote

sets of events, with the event variable taking wide scope and the individual variables taking narrow scope. In contrast, the individual-level sentences (i.e. experiential *-te iru*, non-intransitivizing *-te aru*, and intransitivizing *-te aru*) denote sets of individuals, with the individual variable taking wide scope and the event variable taking narrow scope. In other words, the distinction between stage-level and individual-level is represented as the relative scope difference in the semantics. As for the syntax, by gathering purely syntactic evidence, I reached the conclusion that progressive and perfective *-te iru* have raising structures, while the others have control structures. As a result, we obtained evidence that the raising/control distinction exactly mirrors the stage-level/individual-level distinction. This result is in fact consistent with Diesing (1992) and Kratzer (1995), which I review in Section 4.2.

Before presenting the detailed derivations, I lay out the basic tools of computational operations that I employ. In Section 4.3, I discuss the set identification operation called Variable Identification (McClure, 1999; Hole, 2005), which is a generalized version of Event Identification in Kratzer (1996). I assume that Variable Identification is a semantic operation corresponding to the syntactic merge operation. In Section 4.4, I discuss the semantic role of the projection of little *v*. I consider that the semantic function of little *v* is to introduce an external argument. In Section 4.5, I discuss the operation of existential closure. Following Diesing (1992) and Kratzer (1995), I basically assume VP to be the domain of existential closure, but I generalize it in the context of a structure with little *v*P, and multiple VPs (or *v*Ps) within a single clause. Finally in Sections 4.6-4.8, I present the derivation of each *-te iru/aru* sentence type, and show how the syntax and the semantics correspond to each other.

4.2 Stage-level and individual-level distinction

Diesing (1992) considers the distinction between SLPs and ILPs to be primarily syntactic. Noting that bare plural NP subjects of SLPs support either a generic or an existential interpretation while the same subjects of ILPs support only a generic interpretation, Diesing proposes that two distinct syntactic subject positions are responsible for the two distinct interpretations. First, consider the logical forms below.

(45) SLP

- a. Firemen are available
- b. $\exists x$ x is a fireman \wedge x is available
- c. Gen x,t [x is a fireman \wedge t is a time] x is available at t

(46) ILP

- a. Firemen are brave
- b. Gen x,t [x is a fireman \wedge t is a time] x is brave at t

Both existential and generic readings are available for (45a) with an SLP, as shown in (45b&c). In contrast, only a generic reading is available for (46a) with an ILP. In (45b), the clause is divided into two parts: an existential operator and a nuclear scope. The variable introduced by *firemen* is bound by the existential operator. In (45c) and (46b), the clause is divided into a tripartite construction: a generic operator, a restriction, and a nuclear scope. The variable introduced by *firemen* is bound by the generic operator, and the interpretation of the subject variable is limited

by the restriction. Comparing the two types of logical representations, it is derived that there exist two interpretive domains. Material within the domain of existential closure receives an existential reading. In contrast, material above the nuclear scope receives a generic reading. Translating this into syntax, Diesing proposes that a lower subject position, SpecVP, is mapped into the domain of existential closure, and a higher position, SpecIP, is mapped into the restriction. This is expressed in the form of a Mapping Hypothesis.

(47) Mapping Hypothesis

Material from VP is mapped in to the nuclear scope

Material from IP is mapped into a restrictive clause

The hypothesis amounts to saying that the subjects of an SLP may be in either SpecIP or SpecVP, while the subject of an ILP is always in the SpecIP (i.e. the higher) position. Specifically, Diesing associates an SLP with a raising Infl. The subject is base generated internal in SpecVP. The subject raises to SpecIP, but it may move back to SpecVP via quantifier lowering (May 1977, 1985) at LF and be bound by the existential operator. In contrast, an ILP is associated with a control Infl. The subject of an ILP is base generated in SpecIP and controls a PRO in SpecVP. Since the SpecVP position is assigned a theta-role, the subject in SpecIP cannot move back to SpecVP. Thus, it can only be bound by the generic operator.

Kratzer (1995) provides a similar account of the syntactic distinction between SLPs and ILPs. Recall that Kratzer proposes that an event argument is present in the semantics of SLPs. Kratzer argues that the implicit event argument is external while

the remaining arguments of an SLP are internal. Thus, the subject of an SLP is always base-generated within the VP, which is the domain of existential closure. In contrast, an ILP does not have an event argument, and therefore some other argument may be external. Hence, the subject of an ILP has two possible positions; SpecIP and SpecVP. If the subject is generated at SpecIP, it escapes the domain of existential closure, and instead it is bound by the generic operator.

Both Diesing (1992) and Kratzer (1995) reduce the interpretive asymmetry between the subjects of SLPs and ILPs to their subject positions. The subjects of SLPs must be low, while the subjects of ILPs may be high. Importantly, Diesing associates SLPs with raising, and ILPs with control. The syntax and semantics of *-te iru* and *-te aru* presented here is consistent with this claim. Stage-level *-te iru* sentences (i.e. progressive and perfective *-te iru*) have a raising structure, while individual-level *-te iru/aru* sentences (i.e. experiential *-te iru*, non-intransitivizing *-te aru*, and intransitivizing *-te aru*) have a control structure. Since Diesing and Kratzer discuss a distinction between individual level and stage level at the single-predicate level, the proposed raising and control structures are slightly different from the traditional raising and control structures of sentences with two predicates (i.e. main predicate and embedded predicate). In contrast, *-te iru* and *-te aru* have full-fledged raising and control structures in the traditional sense.

4.3 Variable identification

In the semantic derivations presented in Sections 4.6–4.8 below, I utilize combinatorial operations called Event Identification (Kratzer 1996) and Variable Identification (McClure, 1999; Hole, 2005). Event Identification is a rule of operation in which two discrete elements are allowed to conjoin if their event arguments are identical. Its general format is given below.

$$(48) \quad \text{Event Identification (Kratzer 1996)}$$

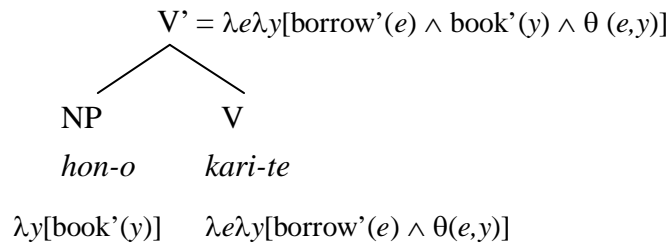
$$\begin{array}{ccc} f & g & \rightarrow h \\ \langle e, \langle s, t \rangle \rangle & \langle s, t \rangle & \langle e, \langle s, t \rangle \rangle \end{array}$$

In the computation above, if s is the type of events, e the type of individuals, and t the type of truth-values, then entities of type $\langle s, t \rangle$ are functions from events to truth-values, and entities of type $\langle e, \langle s, t \rangle \rangle$ are functions that map individuals to functions from events to truth-values. Event Identification yields an output h which is again a function of the type $\langle e, \langle s, t \rangle \rangle$. Event Identification is licensed if and only if the event variables in f and g are identical.

Independently from each other, McClure (1999) and Hole (2005) extend Event Identification into a more general operation, which they both call Variable Identification. In Variable Identification, two elements are allowed to conjoin as long as they have at least one variable in common. Event Identification can be considered a type of Variable Identification, since Variable Identification is the generalized

operation. In other words, Event Identification is ‘Variable Identification over e ’. The example in (49) below illustrates the operation of Variable Identification.

(49) Variable Identification



In (49), the logical form at V' obtains by Variable Identification over y . The conjunction at the V' node is licensed if and only if the two y 's are identical. Thus, the single variable y in the formula at the V' node is required to be both a book and an argument of the verb *borrow*.

4.4 External argument and the projection of little ν

Following Kratzer (1996), I assume that a predicate such as *borrow* selects for its internal argument, and that the external argument is introduced by an additional projection. Kratzer implements this idea by postulating a projection of Voice, which, when filled by the Agent predicate, introduces an external argument into the structure above VP. In this thesis, however, I employ little ν P as a projection that introduces an external argument, following Chomsky (1995). Thus, I assume that the semantic function of little ν is to introduce an external argument.

4.5 Existential closure

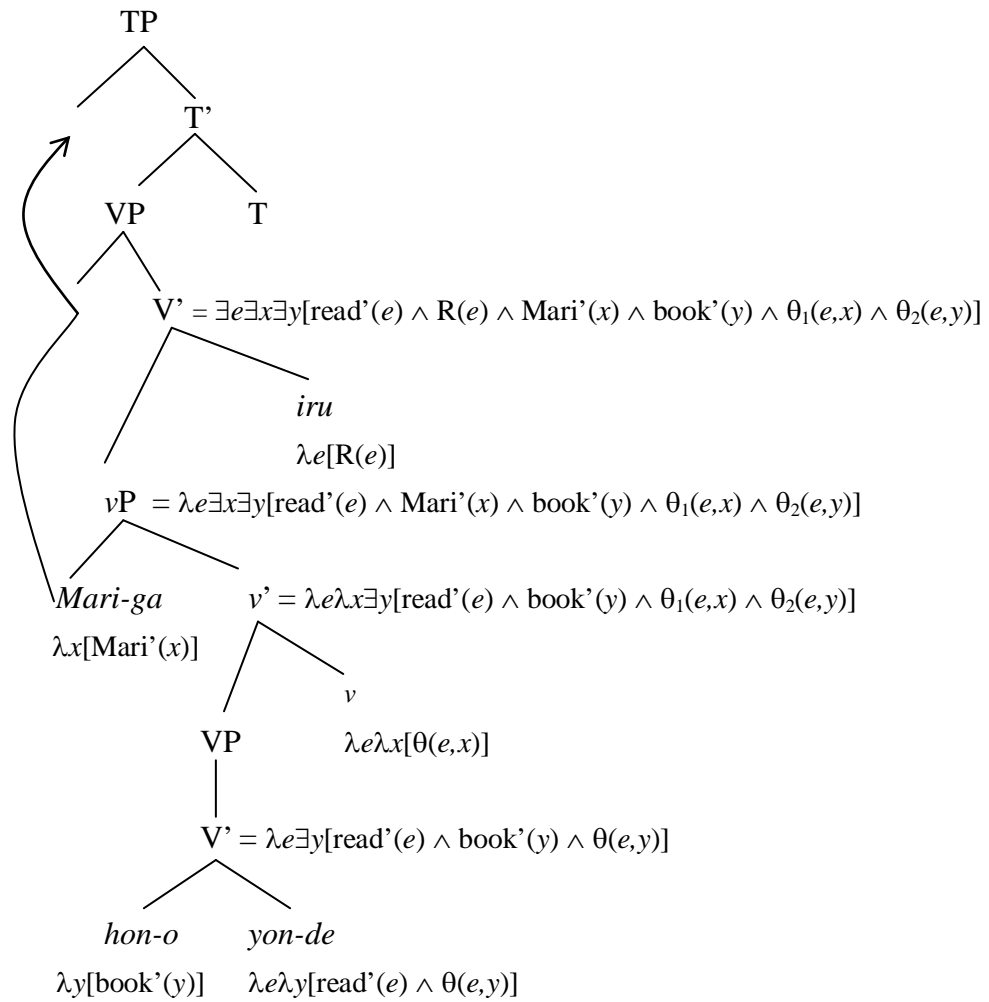
Following Diesing (1992) and Kratzer (1995), I basically assume VP to be the domain of existential closure, with a slight modification. Since I assume that the external argument originates in little *v*P, following Chomsky (1995), I consider *v*P to be the domain of existential closure in addition to VP. Precisely speaking, internal arguments are existentially closed inside VP, and external arguments are existentially closed inside *v*P.

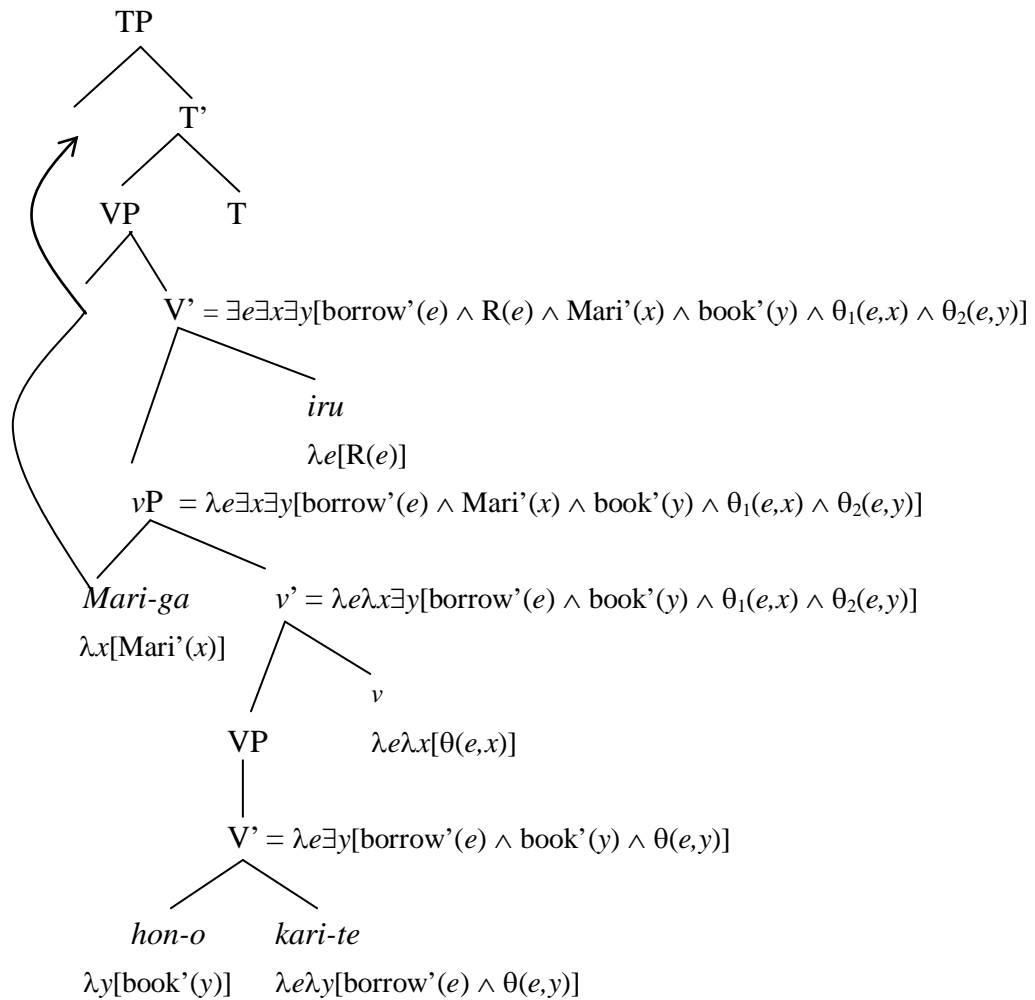
Having said that *v*P and VP are the domains of existential closure, note that each *-te iru/aru* sentence has two separate domains of existential closure in a single clause. In the raising structure of progressive/perfective *-te iru*, although there is only one projection of *v* (introduced by the embedded predicate), there are two projections of V; one introduced by the embedded predicate and the other introduced by *iru*. In the control structure of experiential *-te iru*, and *-te aru*, there are two projections of both *v* and V, since both the embedded predicate and *iru/aru* take internal and external arguments. Since we have two separate domains of existential closure in *-te iru* and *-te aru*, we have to choose one or the other location for existentially closing variables. This is because a single variable cannot be closed twice. In fact, the exact location of existential closure has to follow from the basic mechanics of Variable Identification. In order for Variable Identification to take place, variables have to be kept open. Thus, for any given variable, it cannot be closed until its identity is specified in the derivation (a lexical item enters the computation) by Variable Identification. This amounts to saying that the exact location where a particular

variable is existentially closed may vary depending on the location where it is base-generated. In fact, this is exactly what we will see in the following proposed derivations. Basically, objects must be closed low. In contrasts, the location of subject closure may vary. The subject is base-generated inside the lower ν P in the raising structure, and thus the subject variable is existentially closed in the lower ν P. In contrast, the subject is base-generated inside the higher ν P in the control structure, and thus the subject variable is existentially closed in the higher ν P.

4.6 Progressive and perfective *-te iru*

Having laid out the basic tools of the syntax-semantics mapping, the following shows how the syntax and the semantics of progressive/perfective *-te iru* correspond to each other.

(50) Progressive -te iru

(51) Perfective –te iru

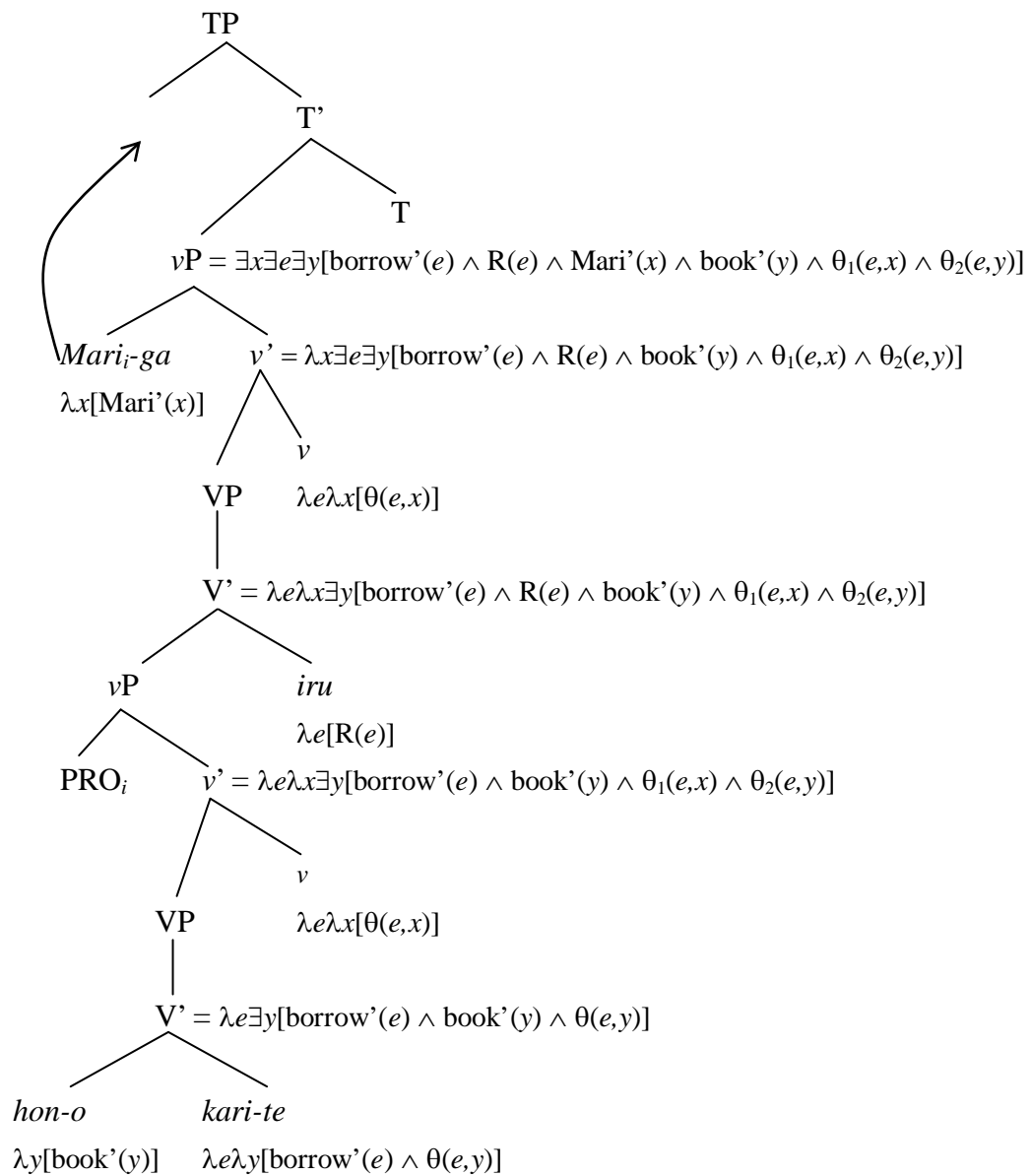
The difference between the progressive *-te iru* example in (50) and the perfective *-te iru* example in (51) is the aspectual type of the embedded verb; i.e. the activity verb *yomu* (*read*) is used in (50) and the achievement verb *kariru* (*borrow*) is used in (51). Otherwise, the derivations found in (50) and (51) are identical.

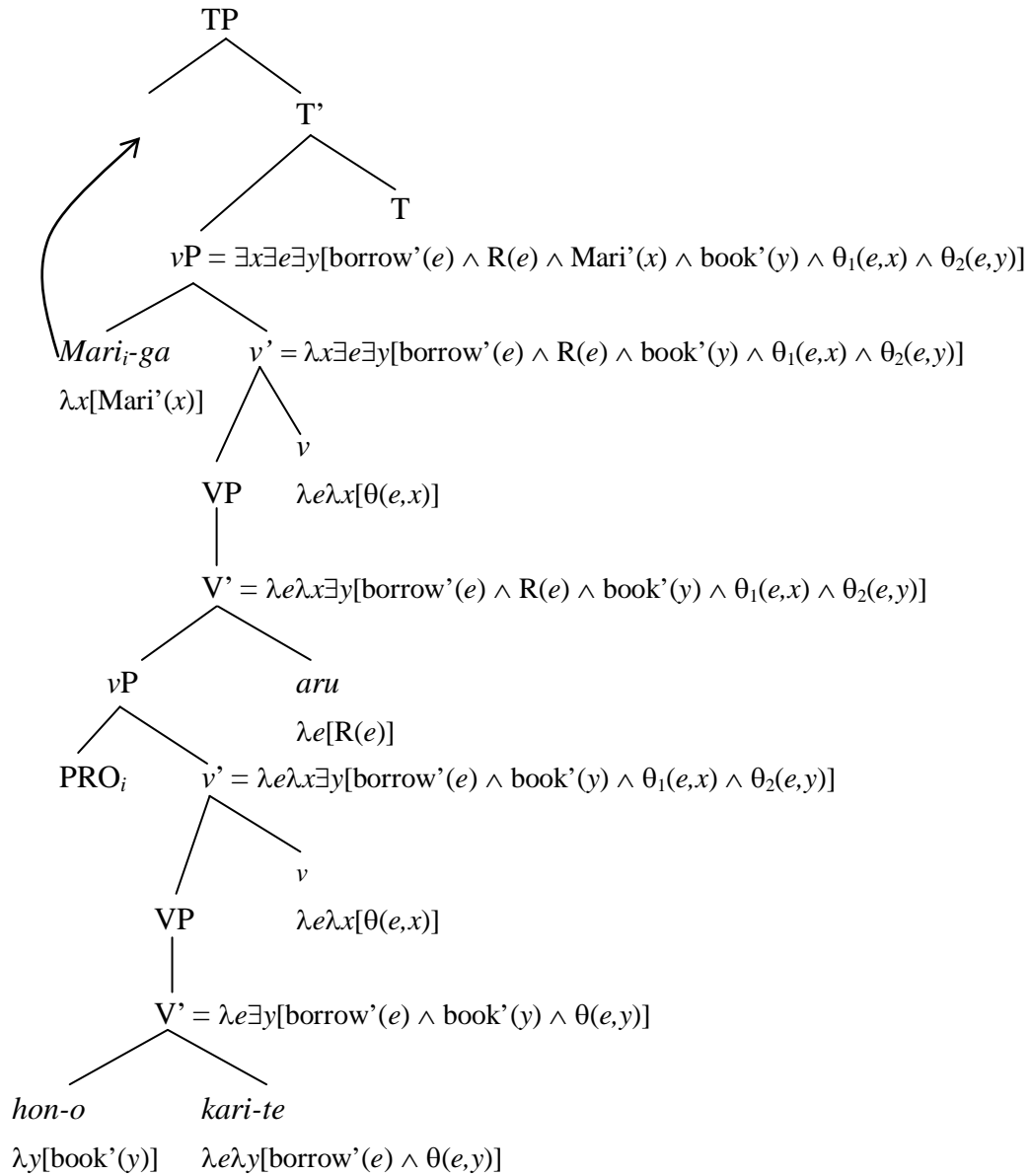
Starting from the bottom, the transitive verb *yon-de/kari-te* (*read-te/borrow-te*) enters the computation introducing an event variable and an

individual variable; the individual variable is specified as the internal argument of the transitive verb (Kratzer 1996). The logical form at the V node represents a set of events of ‘reading/borrowing of y ’. The logical form of the complement of V represents a set of books. At the V’ node, the NP *hon-o* and *yon-de/kari-te* are merged, and a set intersection operation via Variable Identification over y takes place. The variable y is now identified as *book*, and the variable y is existentially closed. Next, a new set is introduced by little v ; i.e. a set of agents of transitive verbs (Kratzer 1996). At the v ’ node, Variable Identification over e (i.e. Event Identification) takes place, and we obtain a set of events of ‘reading/borrowing of a book by x ’. This set is further intersected with a set corresponding to Mari. As a result, we obtain a set of events of ‘reading/borrowing of a book by Mari’ at the v P node. Subsequently, *Mari-ga* moves up, but the identify of x is specified at v P via Variable Identification over x , and therefore the variable x is existentially closed at v P. Next, *iru* introduces a set of events that are realized. By intersecting this set and the set obtained at v P via Variable Identification over e (i.e. Event Identification), we obtain the logical form at V’, which represents a set of events of reading/borrowing, which have been realized, and which have Mari as the agent and a book as the object. Since there is nothing more that enters into the computation, the event variable is existentially closed. In the final logical form, the event argument takes wide scope, and the individual variables take narrow scope as proposed in Chapter 5.

4.7 Experiential *-te iru* and non-intransitivizing *-te aru*

I have proposed that experiential *-te iru* and non-intransitivizing *-te aru* have identical syntax and semantics (and any differences between them have their source in pragmatics). As such, the derivations presented in (52) and (53) are really the same, except that *iru* is used in (52) and *aru* is used in (53).

(52) Experiential -te iru

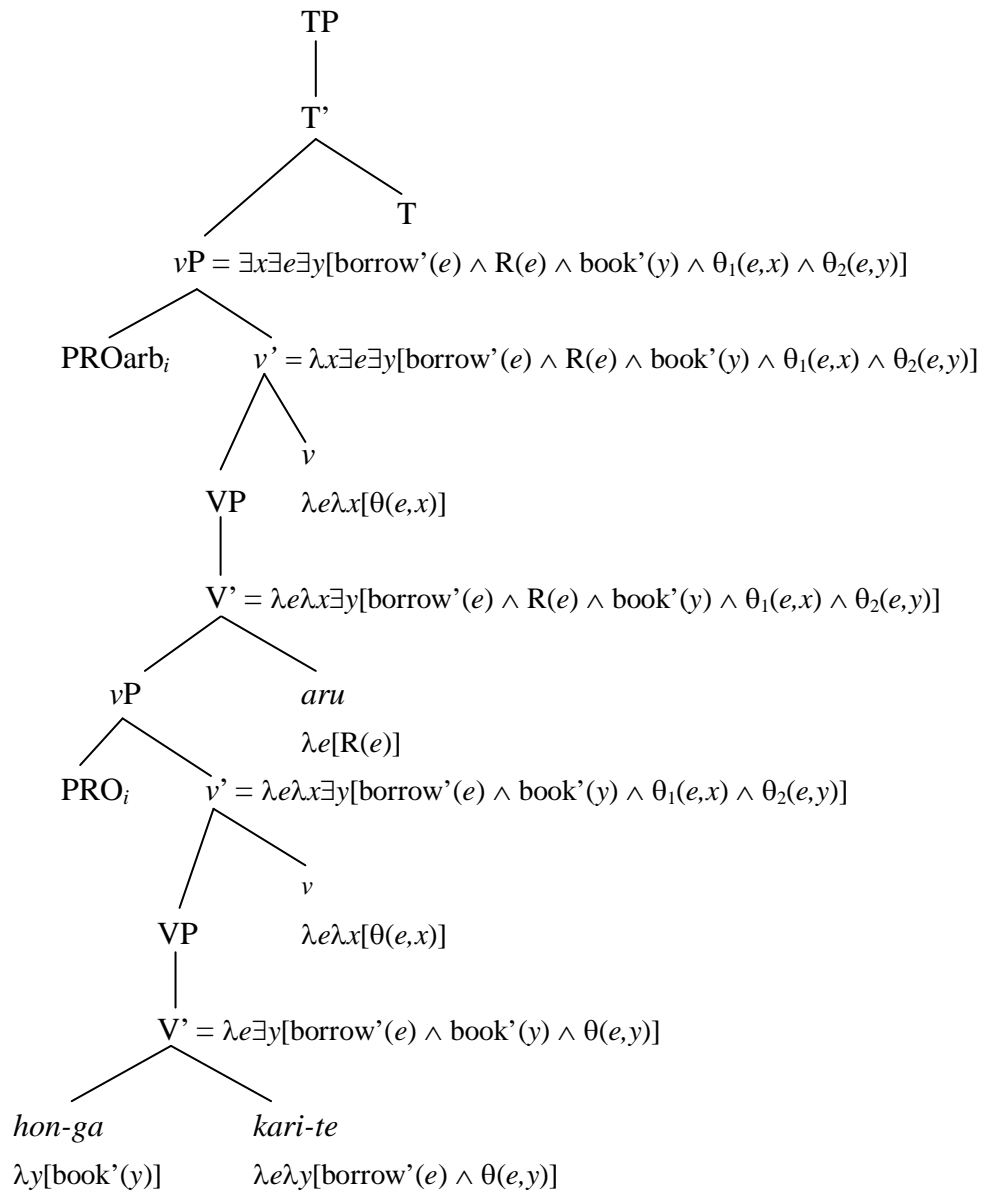
(53) Non-intransitivizing –te aru

Up to the lower little v' node, the derivation is identical to that of the perfective *–te iru* example in (51). However, beyond this node, the control structures in (52) and (53) exhibit distinct derivations. PRO enters the computation at Spec νP ,

but it does not make any semantic contribution. The external argument has already been introduced by the little v , and PRO has nothing more to add. As a result, the logical representation obtained at the lower v' is left unchanged and carried through up to the lower vP node, with the identity of x left unspecified. Next, it is merged with the set introduced by *iru* in (52) and *aru* in (53). By Variable Identification over e (i.e. Event Identification), we obtain the logical form at the upper V' node, which is carried through up to the upper VP node. Next, since *iru* and *aru* in (52) and (53) are control verbs, they assign an external θ -role, which means that there is a projection of little v . This upper little v introduces an external argument, but an external argument has already been introduced by the lower little v . As a consequence, merging the set introduced at the upper little v with the set obtained at the upper VP becomes a semantically vacuous operation. In other words, a set of agents of transitive verbs has already been intersected, and thus intersecting the identical set later again has no consequence (i.e. $((a \cap b) \cap b) = a \cap b$). After this vacuous intersecting operation, no set that involves an event variable is going to be introduced, and therefore the event variable is existentially closed at this point. Next, *Mari-ga* enters the computation, and the set corresponding to Mari and the set obtained at the upper little v' node are intersected. The variable x is specified as Mari, and is existentially closed. In the final logical form, the individual argument that refers to the agent takes wide scope, and the event variable takes narrow scope as proposed in Chapter 5.

4.8 Intransitivizing *-te aru*

The following shows how the syntax and the semantics of intransitivizing *-te aru* correspond to each other. Up to the upper *v'* node, the derivation is identical to that in (53), except that the internal argument of *kari-te* (*borrow-te*) is marked with *-ga*.

(54) Intransitivizing -te aru

After the merging operation at the upper v' takes place, PRO_{arb} enters the computation, but just as PRO , it makes no semantic contribution. Therefore, the identity of the variable x is left unspecified at the vP node. Nothing else is going to enter the computation that affects the status of variable x , and it needs to be closed

within the domain of existential closure, so the variable is closed at vP . The final logical form corresponds to what was proposed in Chapter 5. The individual argument that refers to the agent takes wide scope, and the event variable takes narrow scope. Furthermore, and unlike experiential *-te iru* and non-intransitivizing *-te aru*, the identity of the agent is unspecified. Importantly, the syntax and the semantics of intransitivizing *-te aru* differ from those of a passive sentence and a sentence with an unaccusative verb, which are considered to lack an external argument (Perlmutter, 1978; Burzio, 1986; Chierchia, 2004). In intransitivizing *-te aru*, the external argument is present, but its identity is unspecified.

4.9 Summary

In this section, I showed that the distinct orders of existential closure between stage-level sentences (i.e. progressive and perfective *-te iru*) and individual-level sentences (i.e. experiential *-te iru*, non-intransitivizing *-te aru*, and intransitivizing *-te aru*) proposed in Chapter 5 follow from the syntax of *-te iru* and *-te aru* proposed in Section 3 of this chapter. Specifically, with the raising structure of progressive/perfective *-te iru*, all the individual variables are existentially closed inside the lower vP . As a result, the event variable is the last to be existentially closed, yielding the logical form with the event variable taking wide scope. In contrast, with the control structures of experiential *-te iru*, non-intransitivizing *-te aru*, and intransitivizing *-te aru*, the individual variable that corresponds to the external argument is existentially closed inside the upper vP , yielding a logical form with this variable taking wide

scope. The idea that the distinction between stage-level and individual-level is reflected as a syntactic distinction between raising and control is consistent with the proposals found in Diesing (1992) and Kratzer (2005).

5. Summary

In this Chapter, I proposed that progressive and perfective *-te iru* have raising structures, while experiential *-te iru*, non-intransitivizing *-te aru*, and intransitivizing *-te aru* have control structures. In addition, I argued that *-te* is not a realization of Tense or Complementizer, and that all *-te iru* and *-te aru* sentence types have mono-clausal structures. For intransitivizing *-te aru* specifically, I argued for the existence of PROarb, presenting supporting evidence from subject honorification, the subject-oriented anaphor, and the contrastive *-wa* interpretation facts.

The raising/control distinction in the proposed syntax reflects the stage-level/individual-level distinction, which is consistent with Diesing (1992) and Kratzer (2005). With the raising structure of progressive/perfective *-te iru*, the event variable is the last variable to be existentially closed, resulting in a logical form with the event variable taking wide scope, which is exactly what is proposed to be the semantics of progressive and perfective *-te iru*; i.e. stage-level sentences. In contrast, with the control structures of experiential *-te iru*, non-intransitivizing *-te aru*, and intransitivizing *-te aru*, the individual variable that corresponds to the external argument is the last one to be existentially closed, resulting in a logical form with this

variable taking wide scope. This is exactly what is proposed to be the semantics of these individual-level sentences.

CHAPTER 7

HABITUAL *-TE IRU*

1. Introduction

An introduction to habitual *-te iru* was found in Chapter 2, although the discussion was rather brief. This is because laying the groundwork by establishing the formal properties of progressive, perfective, and experiential *-te iru* first, now facilitates an understanding of habitual *-te iru*.

Beginning in Section 2, I start with a review of the literature on habituality in general. Although many seem to believe that we have a clear intuition as to what a habitual sentence looks like, I believe that a close look at the literature reveals that we do not really have a clear formal definition of habitual sentences. In this discussion, I use a rather intuitive test, which is to paraphrase a sentence by using ‘*x* has the habit of *y*’. If the sentence can be paraphrased this way, then I consider it to be a habitual sentence.

After discussing general properties of the habitual, I turn next to a literature review of habitual *-te iru*. In fact, ‘habitual *-te iru*’ is a rather recent term. In the early descriptive literature, what we now call habitual *-te iru* was called *iterative -te iru*. Furthermore, *iterative -te iru* was a broad term that was also used to include some types of non-habitual *-te iru* sentences. In the more recent literature, a single unified analysis has been given to explain all *iterative -te iru* sentences. Essentially, the claim is that all *iterative -te iru* sentences are a type of progressive.

In Section 3, I present my analysis of habitual *-te iru*. Unlike previous analyses, I argue that habitual *-te iru* is a type of experiential *-te iru*, because a habitual *-te iru* sentence exhibits the properties of an ILP. Therefore, I argue against the use of the term *iterative* to include both habitual and non-habitual sentences, since they have distinct formal properties.

Although I claim that habitual *-te iru* is a type of experiential *-te iru*, and the syntax and the semantics of habitual *-te iru* and experiential *-te iru* are identical, I maintain that there is still merit in using the terms habitual *-te iru* and experiential *-te iru* separately. This is because habitual *-te iru* has some pragmatic restrictions that do not apply to the more general experiential *-te iru*.

In Section 4, I discuss *-te iru* sentences with inanimate subjects. Habitual *-te iru* does not allow inanimate subjects, and an attempt to express the regularity of an event involving an inanimate subject actually results in a peculiar progressive/perfective reading. It seems that we generally perceive a habit as a property of an animate individual, and in Japanese in particular, this perception is grammatically realized.

2. Literature review

2.1 Definition of habitual sentences

According to Krifka et al. (1995), a *characterizing sentence* (or a *generic sentence*) is a proposition which does not refer to a specific episode or an isolated fact,

but instead reports a general property. A habitual sentence is a special kind of characterizing sentence. The following sentences exemplify characterizing sentences.

- (1) a. John smokes a cigar after dinner
 b. A potato contains vitamin C, amino acids, protein and thiamine
 (Krifka et al. 1995)

As characterizing sentences, both examples in (1) report a regularity which summarizes a group of particular episodes or facts. However, (1a) can be further described as a habitual sentence. The habitual sentence in (1a) reports a habit, which is a generalization over events predicated of an individual.

According to Krifka et al. (1995), habitual sentences are defined as propositions which express generalizations over situations that are specified by the corresponding episodic verbal predicate. This definition can be understood by comparing the following examples.

- (2) a. John smokes
 b. John is a smoker

The example in (2a) is considered a habitual sentence. The predicate *smoke* expresses generalizations over John's smoking activities, i.e. multiple occurrences of *smoke* are represented by the identical eventive predicate *smoke*. In contrast, (2b) also expresses generalizations over John's smoking activities but the multiple occurrences

of *smoke* are generalized and represented by the stative predicate *be a smoker*. Since the episodic verbal predicate *smoke* is not used in (2b), it is not a habitual sentence.

While we seem to have clear intuitions about what habitual sentences should look like, the definition of habitual sentences provided in Krifka et al. does not seem to be precise enough. Intuitively, habitual sentences can be paraphrased by using the expression ‘*x has the habit of y*’. For example, *John smokes* can be paraphrased by *John has the habit of smoking*. If we are to use this test, the following sentences raise some questions.

- (3) a. Students study
 b. The sun rises from the east

The examples above are odd if we paraphrase them by using ‘*x has the habit of y*’, even though they express generalizations over specific episodes and they also contain predicates corresponding to episodic predicates. The reason (3a) does not seem to be a habitual sentence is that it is predicated of an NP with indefinite reference. When we talk about habits, we need to have a definite set of individuals in mind. Intuitively, for something to be considered a habit, episodes need to be manifested. Without any manifestation of episodes, there is no habit. If we talk about an indefinite set of individuals, it is impossible to identify individual studying episodes. The example in (3b) is very odd if we paraphrase it by saying, *The sun has the habit of rising from the east*. The source of the oddness is probably that the subject NP refers to an inanimate entity. As far as the expression ‘*x has the habit of y*’

is concerned, the subject *x* tends to be animate. If we do choose to use an inanimate subject, we see an effect of anthropomorphism. A statement such as *This computer has the habit of breaking down every month* is an example.

As the examples in (3) shows, English habitual sentences seem to be more restricted than how they are defined by Krifka et al. Although the examples in (3) fall under their definition of habitual statements, they cannot be paraphrased by using ‘*x* has the habit of *y*’. Are they habitual sentences or ‘non-habitual’ characterizing sentences? Can such a classification even be made with any confidence? Although I turn now to Japanese, the observations and claims made for Japanese sentences found in this chapter may shed some light on these issues in English as well.

2.2 Iterative and habitual *-te iru*

In the recent literature on *-te iru* as well as in Japanese language textbooks, *habitual* is the prevailing label when referring to a sentence such as (4).

- (4) John-wa maiasa zyogingu-o si-te iru
 John-TOP every.morning jogging-ACC do-*te iru*
 ‘John jogs every morning’
 (Harasawa 1994)

However, in the early literature on *-te iru*, such as Fujii (1966), Kindaichi (1976b), Takahashi (1976), and Yoshikawa (1976), a sentence such as (4) is labeled *iterative (kurikaeshi)*. Iterative *-te iru* seems to include a broad range of *-te iru*

sentence types. For example, all of the sentences in (5) are labeled *iterative* in the early literature.

- (5) a. kare-wa maiasa baiburu-o yon-de iru
 he-TOP every.morning bible-ACC read-*te* *iru*
 ‘He reads the bible every morning’
 (Kindaichi 1976b)
- b. hurui rekisi-no aru hasi-o watasi-wa mainiti
 old history-GEN exist bridge-ACC I-TOP every.day
 watat-te imasu
 cross-*te* *iru*.POLITE
 ‘I cross an old bridge with a lot of history every day’
 (Yoshikawa 1976)
- c. zitubo-o usinat-ta toozi watasi-wa mainiti nai-te
 own.mother-ACC lose-PAST at.the.time I-TOP every.day cry-*te*
 i-ta
iru-PAST
 ‘At the time when I lost my own mother, I cried every day’
 (Takahashi 1976)
- d. kono koro-wa eeyoosittyo-de hito-ga dondon
 these days-TOP malnutrition-LOC people-NOM one.after.another
 sin-de iru
 die-*te* *iru*
 ‘These days, people are dying one after another from malnutrition’
 (Kindaichi 1976b)

- e. kagakusya-tati-wa kore-wa umi-no sio-ga sin-ni
 scientist-PL-TOP this-TOP ocean-GEN salt-NOM core-DAT
 naru-no-da to it-te imasu
 become-GEN-COP that say-*te iru*.POLITE
 ‘Scientists are saying that sea salt becomes a core for this’
 (Yoshikawa 1976)

The examples in (5a)-(5c) seem to be habitual sentences. For example, paraphrasing (5a) by saying, *He has the habit of reading the bible every morning* (*kare-wa maiasa baiburu-o yomu syuukan-ga aru*) is fine. The present tense sentences in (5a) and (5b) refer to habits that obtain at the speech moment, and the past tense sentence in (5c) refers to a past habit. In contrast, (5d) and (5e) do not seem to refer to habits. It does not make sense to paraphrase (5d) by saying, *People have the habit of dying one after another these days*. Likewise, (5e) cannot be paraphrased as *Scientists have the habit of saying that sea salt becomes a core for this*. Nevertheless, all the examples in (5) are given a single label *iterative* in the early literature. The motivation for using the generalized label *iterative* to describe all the sentences in (5) is that they all refer to multiple occurrences of a single event type; i.e. multiple occurrences of bible-reading, bridge-crossing, crying, dying, and saying.

One apparent difference between (5a-c), on the one hand, and (5d&e), on the other, is the number of subjects. In (5a-c), multiple occurrences of single events are predicated of a single agent. On the other hand, in (5d&e), multiple event occurrences are predicated of multiple agents. Teramura (1984) points out that an iterative *-te iru* sentence with a singular subject is habitual. According to his definition, (5a-c) are habitual, which is a special kind of iterative. As far as the examples in (5) are

concerned, Teramura's definition seems correct. However, consider the following example in (6).

- (6) kono daigaku-no gakusee-tati-wa mainiti zyogingu-o si-te iru
 this college-GEN student-PL-TOP every.day jogging-ACC do-*te iru*
 'Students at this college jog every day'

Since *-tati* is a plural marker, the above example involves a plural subject. Thus, if we employ Teramura's definition, (6) is not a habitual sentence. However, we can paraphrase this sentence by saying, *Students at this college have the habit of jogging every day*. There is in fact no problem talking about a habit of multiple people using *-te iru*. Note that (6) does not necessarily mean that the students jog at the same time as a single group. In other words, the students do not need to be observed as a single entity. They can jog at different times and places. (6) can simply mean that students at this college share the same type of habit. Thus, (6) should be considered a habitual sentence although Teramura's definition would predict otherwise. There seems to be no problem in making a habitual statement with a plural subject.

Although Teramura's definition of habitual does not quite work, we seem at least to have a general intuition about what habitual sentences look like. To see if a sentence can be paraphrased as 'x has the habit of y' is an intuitive test that I have been using for now. However, an important question to ask is whether or not establishing the label *habitual* and distinguishing habitual *-te iru* from other types of *-te iru* (iterative, for example) reflects a formal difference as well. In fact, I claim that

sentences such as (5a-c) exhibit formal properties that are distinct from the sentences such as (5d&e). In essence, I claim in Section 3 that (5a-c) parallel experiential sentences, while (5d-e) parallel progressive sentences. As discussed in earlier chapters, experiential and progressive *-te iru* have distinct semantics and syntax. Therefore, the early attempt of categorizing all the sentences in (5) under a single label *iterative* is not a desirable one.

2.3 Existing analysis of habitual *-te iru*

Teramura (1984) and Shirai (2000), who acknowledge and discuss the category of habitual *-te iru*, provide essentially the same account of why *-te iru* allows us to make habitual statements. Acknowledging that habitual *-te iru* statements refer to multiple occurrences of the same type of event, each occurrence of an event can be viewed as ‘a point’. Multiple occurrences of events can then be viewed as ‘a line’. Although there are blank spaces between these points (i.e. time intervals), we are cognitively capable of viewing multiple occurrences of the same type of event as one single unit. In other words, it is analogous to viewing the repetition of putting one foot in front of the other and seeing it as a single, continuously progressing event of walking. For Teramura and Shirai, habitual is a kind of progressive but on a much larger scale. They claim that somehow we seem to be more forgiving of time intervals when it comes to habitual *-te iru*. If somebody jogs once a day for one hour, she is actually not jogging most of the day. However,

we are still able to use habitual *-te iru* and see multiple occurrences of jogging as one continuously progressing event.

In fact, the above analysis does not require us to recognize the category of habitual *-te iru* other than for taxonomical purposes. First, it essentially claims that habitual *-te iru* is a type of progressive *-te iru*. Second, an identical analysis can be applied to the iterative *-te iru* examples given in (5d) and (5e), which do not seem to refer to anybody's habit. Indeed, Teramura (1984) points out that iterative *-te iru* statements, where multiple occurrences of the same type of event are recognized due to a plural subject, can also be explained by saying that we view multiple events as a single continuous line. Teramura's analysis essentially treats habitual and iterative *-te iru* as the same, i.e. a type of progressive *-te iru*. Therefore, other than by stipulating that habitual *-te iru* refers to somebody's habit, there is no linguistic distinction between habitual and iterative interpretations. In fact, about a decade earlier, Yoshikawa (1976) suggested that all iterative *-te iru* sentences are a kind of progressive *-te iru*, without establishing the subcategory *habitual*. If the analysis provided by Yoshikawa (1976), Teramura (1984), and Shirai (2000) is correct, the early recognition of the inclusive category *iterative* might actually make sense.

Contrary to these existing claims, however, I argue in Section 3 that habitual *-te iru* is not a type of progressive *-te iru*. Although I agree that iterative *-te iru* can be analyzed as a kind of progressive, I argue that habitual *-te iru* should be recognized as formally distinct. Before presenting my arguments, I review what has been said about the distinction between habitual *-te iru* and simple present tense sentences in the following section.

2.4 Habitual *-te iru* vs. simple present

In Japanese, a simple present tense sentence can also be used to make a habitual statement. Teramura (1984) describes the distinction between habitual *-te iru* and simple present tense habitual statements in the following terms. With habitual *-te iru*, it is understood that the denoted habit started at some point before the speech time, and it is also understood that it will eventually end at some point in the future. In contrast, with simple present tense habitual, there is no such sense of beginning and ending. Present tense habitual merely states that the denoted event repeats periodically. For example, compare the following statements.

- (7) a. *-te iru*
 Mari-wa maiasa zyogingu-o si-te iru
 Mari-TOP every.morning jogging-ACC do-*te iru*
 ‘Mari jogs every morning’
- b. Simple present tense
 Mari-wa maiasa zyogingu-o suru
 Mari-TOP every.morning jogging-ACC do
 ‘Mari jogs every morning’

If we compare the above two examples, (7a) does sound more ‘temporary’ than (7b). If Mari has been jogging every morning for most of her life, it is probably more appropriate to use (7b). In contrast, if Mari has recently started to jog, (7a) might be more appropriate. Teramura also points out that adverbials such as *konogoro* (*lately*) and *saikin* (*recently*) occur more likely with habitual *-te iru* than with simple

present tense habitual. However, these observations do not seem to stem from rigid rules. It is in fact possible to use (7a) in a situation where Mari has been jogging every morning most of her life. Likewise, it is possible to use (7b) in a situation where Mari has recently started to jog.

We have just observed that habitual statements can be made with either *-te iru* or simple present tense sentences with slight interpretive differences. In contrast, however, in what might be called a non-habitual characterizing sentence, there is a notable difference between *-te iru* and the simple present. Non-habitual characterizing statements can only be made with simple present sentences. Thus, while Japanese simple present sentences can be used to express any characterizing statements, the use of *-te iru* is strictly limited to habitual statements. The examples given in (3) of Section 2.1 cannot be translated into Japanese using *-te iru*. Instead, they have to be stated as simple present tense sentences.

- (8) a. *gakusee-wa benkyoo si-te iru*
 student-TOP study do-*te iru*
 ‘The students study’ (not ‘Students study’)
- b. *gakusee-wa benkyoo suru*
 student-TOP study do
 ‘Students study’ / ‘The students study’
- (9) a. *#hi-wa higasi-kara nobot-te iru*
 sun-TOP east-from rise-*te iru*
 Attempted meaning: ‘The sun rises from the east’

- b. hi-wa higasi-kara noboru
 sun-TOP east-from rise
 ‘The sun rises from the east’

Both sentences in (8) are acceptable, but they have different interpretations. The NP *gakusee* (*student*) without a determiner can be interpreted as either a definite or an indefinite in Japanese. In the *-te iru* sentence in (8a), however, *gakusee* is necessarily interpreted as referring to a specific set of students, while in the simple present sentence in (8b) it can be interpreted as referring to a non-specific set of students. In short, (8a) is about a habit common to a specific set of students, while (8b) can also be a general statement about an indefinite set of students. The example in (9a) is unacceptable as a habitual statement. Habitual *-te iru* has a selectional restriction with respect to the subject. As mentioned in Section 2.1, a habit seems to be something that is predicated of an animate individual. This tendency is very prominent with habitual *-te iru*. I will return to this issue in Section 4. As the examples in (8) and (9) show, there is a clear grammatical split between habitual and non-habitual characterizing sentences in Japanese; i.e. non-habitual characterizing sentences resist the *-te iru* construction. Unlike in English, to recognize habitual sentences as a special kind of characterizing sentences seem to be justifiable in Japanese.

Since the purpose of this chapter is to investigate habitual *-te iru*, I will not present a formal account of characterizing sentences in the simple present tense. However, at least some of the observations made with respect to the contrast between

habitual *-te iru* in and simple present tense will follow from the formal account of habitual *-te iru* that I present in the next section.

2.5 Summary

Habitual sentences in general (mainly in English) do not seem to be particularly well-defined yet. Furthermore, in Japanese, the term *habitual* has been used conventionally rather than from a formal motivation. This is because formal attempts to discuss what I call ‘habitual *-te iru*’ essentially do away with the term *habitual*; rather, such sentences are recognized as ‘iterative’ or ‘a type of progressive’. On the other hand, the contrast between *-te iru* and simple present sentences shows that there is in fact something special about habitual *-te iru*, i.e. it is not the case that just any iteration of events can be expressed with *-te iru*. In the following sections, I separate habitual *-te iru* from iterative and progressive, and re-categorize it under experiential *-te iru*. I also discuss the distinction between standard experiential *-te iru* and habitual *-te iru*. I hope the discussion found in the following sections will also contribute to clarify the general definition of habitual sentences.

3. Habitual and experiential *-te iru*

3.1 Introduction

Krifka et al. (1995) points out that all characterizing sentences express regularities and properties, but they never report specific events. Viewed this way, it is not really a leap to conclude that a habitual sentence is really a kind of ILP and as such might be expected to exhibit properties of an ILP.¹ If it is indeed the case that habitual *-te iru* has individual-level properties, it immediately separates itself from progressive *-te iru* because progressive *-te iru* has stage-level properties. Rather, we might expect that habitual *-te iru* is more naturally identified with experiential *-te iru*. That is in fact exactly what I am going to argue in this section. As a result, the claims presented in this section will go against the claims made by researchers such as Yoshikawa (1976), Teramura (1984), and Shirai (2000) that habitual *-te iru* is a type of progressive *-te iru*. Furthermore, the discussion in this section will also show that the usage of the term *iterative* in the early literature to include different types of *-te iru* sentences is not desirable. This is because such a class includes formally distinct *-te iru* sentence types.

¹ Krifka et al. (1995) uses the term *stative predicate* instead of ILP. Although the set of stative predicates and the set of ILPs are not completely identical, the characteristics of the characterizing sentences that are described by Krifka et al. match the properties of ILPs. Thus, I pursue in this thesis the possibility that habitual sentences and ILPs parallel each other.

3.2 Individual-level properties of habitual *-te iru*

In Chapter 3, I presented three tests to show that experiential *-te iru* has properties of an ILP, whereas progressive and perfective *-te iru* have properties of an SLP. Below, I apply two of the three tests to the kinds of *-te iru* sentences that are labeled *iterative* in the early literature. As discussed in Section 2.2, some of these sentences do seem to be habitual and others do not. Consider the examples in (10). For simplicity's sake, the examples are slightly modified from the original iterative examples in (5).

- (10) a. Mari-wa mainiti baiburu-o yon-de iru
 Mari-TOP every.day bible-ACC read-*te iru*
 'Mari reads the bible every day'
- b. Mari-wa maiasa hasi-o watat-te iru
 Mari-TOP every.morning bridge-ACC cross-*te iru*
 'Mari crosses a bridge every morning'
- c. mura-no hitobito-wa eeyoosittyoo-de dondon
 village-GEN people-TOP malnutrition-LOC one.after.another
 sin-de iru
 die-*te iru*
 'People in the village are dying one after another from malnutrition'
- d. kagakusya-tati-wa kairyuu-de denryoku-o
 scientist-PL-TOP ocean.current-LOC electric.power-ACC
 kyookyuu-dekiru to it-te iru
 provide-POTENTIAL that say-*te iru*
 'Scientists are saying that ocean current can provide electric power'

To reiterate the discussion in Section 2.2, all the above examples are labeled *iterative* in the early literature. Sentences such as (10a) and (10b) seem to be referring to habits, while sentences such as (10c) and (10d) do not. In more recent literature, researchers such as Teramura (1984) and Shirai (2000) do call sentences such as (10a) and (10b) *habitual*, but they essentially claim that all of the sentences above are a type of progressive.

Applying the SLP/ILP tests that I used in Chapter 3, we find a formal split between (10a&b) and (10c&d). First, consider the *-wa/-ga* interpretation test below.

- (11) a. Mari-**wa** mainiti baiburu-o yon-de iru
 Mari-**wa** every.day bible-ACC read-*te iru*
 ‘Mari reads the bible every day’
 (topic *-wa* reading)
- b. Mari-**wa** maiasa hasi-o watat-te iru
 Mari-**wa** every.morning bridge-ACC cross-*te iru*
 ‘Mari crosses a bridge every morning’
 (topic *-wa* reading)
- c. mura-no hitobito-**wa** eeyoosittyo-de dondon
 village-GEN people-**wa** malnutrition-LOC one.after.another
 sin-de iru
 die-*te iru*
 ‘People in the village are dying one after another from malnutrition’
 (topic *-wa* reading)

- d. kagakusya-tati-**wa** kairyuu-de denryoku-o
 scientist-PL-**wa** ocean.current-LOC electric.power-ACC
 kyookyuu-dekiru to it-te iru
 provide-POTENTIAL that say-*te iru*
 ‘Scientists are saying that ocean current can provide electric power’
 (topic –*wa* reading)
- (12) a. Mari-**ga** mainiti baiburu-o yon-de iru
 Mari-**ga** every.day bible-ACC read-*te iru*
 ‘Mari is the one that reads the bible every day’
 (exhaustive –*ga* reading)
- b. Mari-**ga** maiasa hasi-o watat-te iru
 Mari-**ga** every.morning bridge-ACC cross-*te iru*
 ‘Mari is the one that crosses a bridge every morning’
 (exhaustive –*ga* reading)
- c. mura-no hitobito-**ga** eeyoosittyoode dondon
 village-GEN people-**ga** malnutrition-LOC one.after.another
 sin-de iru
 die-*te iru*
 ‘People in the village are dying one after another from malnutrition’
 (descriptive –*ga* reading)
- d. kagakusya-tati-**ga** kairyuu-de denryoku-o
 scientist-PL-**ga** ocean.current-LOC electric.power-ACC
 kyookyuu-dekiru to it-te iru
 provide-POTENTIAL that say-*te iru*
 ‘Scientists are saying that ocean current can provide electric power’
 (descriptive –*ga* reading)

All the *-wa* marked subjects in (11) receive topic readings. However, the *-ga* marked subjects of (12a&b) receive exhaustive readings, while the subjects of (12c&d) receive descriptive readings. This result shows that (10a&b) have one property of an ILP, while (10c&d) have one property of an SLP. As such, the *-te iru* sentences in (10a&b) are grouped together with experiential *-te iru*, while those in (10c&d) are grouped together with perfective/progressive *-te iru*.

Second, consider the *tokoro-da* test below.

- (13) a. *Mari-wa mainiti baiburu-o yon-de iru tokoro-da
 Mari-TOP every.day bible-ACC read-*te iru* place-COP
 Attempted meaning: ‘Mari reads the bible every day right at this moment’
- b. *Mari-wa maiasa hasi-o watat-te iru tokoro-da
 Mari-TOP every.morning bridge-ACC cross-*te iru* place-COP
 Attempted meaning: ‘Mari crosses a bridge every morning right at this moment’
- c. mura-no hitobito-wa eeyoosittyyoo-de dondon
 village-GEN people-TOP malnutrition-LOC one.after.another
 sin-de iru tokoro-da
 die-*te iru* place-COP
 ‘People in the village are dying one after another from malnutrition right at this moment’
- d. kagakusya-tati-wa kairyuu-de denryoku-o
 scientist-PL-TOP ocean.current-LOC electric.power-ACC
 kyookyuu-dekiru to it-te iru tokoro-da
 provide-POTENTIAL that say-*te iru* place-COP
 ‘Scientists are saying that ocean current can provide electric power right at this moment’

Whereas the expression *tokoro-da* is compatible with (13c&d), it is not compatible with (13a&b). This result again shows that (10a&b) have a property of an ILP, while (10c&d) have a property of an SLP. Just as the *-ga* interpretation test shows, (10a&b) are grouped together with experiential *-te iru*, while (10c&d) are grouped together with progressive/perfective *-te iru*.

The above test results provide evidence that there is a formal difference between (10a&b) and (10c&d). Precisely speaking, (10a&b) share properties with an ILP, while (10c&d) share properties with an SLP. To call all of the examples in (10) *iterative* fails to capture both our intuitive understanding of these sentences as well as their formal differences. The intuitive difference is that the first two examples seem to refer to habits while the latter two examples do not. The formal difference is that the first two examples have individual-level properties while the latter two have stage-level properties, and I have established distinct semantics and syntax for individual-level and stage-level *-te iru* sentences.

Even for researchers who have called sentences such as (10a&b) *habitual*, the label only served conventional and taxonomical purposes, and lacked a formal motivation. As discussed earlier, Teramura (1984) and Shirai (2000) treat all the examples in (10) as a type of progressive. Where (10c&d) are concerned, I agree with their claim that multiple occurrences of the same event type are perceived as a single progressing event. Due to the plural subjects in (10c&d), multiple occurrences of dying and saying are perceived as a large-scale single event, which is analogous to how we observe multiple occurrences of swimming strokes as a single event of swimming. Thus, I suggest that (10c&d) are to be considered a type of progressive,

which is in agreement with Teramura (1984) and Shirai (2000). The test results in (12) and (13) support this conclusion. The results show that (10c&d) have properties of an SLP, which groups them together with progressive/perfective *-te iru*. More importantly, however, (10a&b) are not progressive and they are completely distinct from (10c&d), as the test results in (12) and (13) indicate. We now have a concrete reason to separate (10a&b) from (10c&d) and to call only the examples in (10a&b) habitual.

3.3 Habitual *-te iru* as a type of experiential *-te iru*

Just as any ILP, habitual *-te iru* can now be considered to denote properties of an individual, just as experiential *-te iru* does. I suggest that the semantics and the syntax of habitual *-te iru* are identical to those of experiential *-te iru*. Essentially, habitual *-te iru* is experiential *-te iru*, as far as the syntax and the semantics are concerned. An immediate question to answer is how the meaning of habituality is derived from the semantics for experiential *-te iru*. Consider the example in (14), which is kept quite minimal with no adverbial modifiers.

- (14) Mari-wa baiburu-o yon-de iru
 Mari-TOP bible-ACC read-*te iru*
 ‘Mari is reading the bible’ / ‘Mari has read the bible’ / ‘Mari reads the bible’

Since this sentence lacks any context, it is three-way ambiguous, as the English translation indicates. It can be progressive, experiential, or habitual. One way

to disambiguate the meanings is to add modifiers such as *ima* (*now*) for progressive, *ima made-ni* (*up to now*) for experiential, and *maiasa* (*every morning*) for habitual. Semantically, (14) can be interpreted either as sets of events or sets of individuals, which is shown in (15) below.

- (15) a. Progressive
 ||Mari-wa baiburu-o yon-de iru|| (*Mari is reading the bible*)
 $= \lambda e \exists x \exists y [\text{read}'(e) \wedge R(e) \wedge \text{Mari}'(x) \wedge \text{bible}'(y) \wedge \theta_1(e,x) \wedge \theta_2(e,y)]$
- b. Experiential/Habitual
 ||Mari-wa baiburu-o yon-de iru||
 (*Mari has read the bible / Mari reads the bible*)
 $= \lambda x \exists e \exists y [\text{read}'(e) \wedge R(e) \wedge \text{Mari}'(x) \wedge \text{bible}'(y) \wedge \theta_1(e,x) \wedge \theta_2(e,y)]$

As discussed in Chapter 5, the ‘sets of events’ interpretation (shown in (15a)) results in a progressive meaning, and the ‘sets of individuals’ interpretation (shown in (15b)) results in an experiential meaning. I begin by claiming that habitual is semantically identical to experiential. Thus, habitual is also obtained from the ‘sets of individuals’ interpretation in (15b). A habit is a property of an individual, just as an experience is a property of an individual. The logical form in (15b) represents the set of individual named Mari whose property is such that she is the subject of some event of reading; the event has been realized and is predicated of the bible as the object. The same truth conditions apply to both experiential and habitual. If it is stated that Mari has the habit of reading a bible periodically, an event of reading the bible by Mari must have been already manifested. A manifestation is an essential part of

habituality. If Mari has not read the bible, we cannot quite say that she has the habit. An event manifestation is an important part of the semantics of *-te iru*, and this requirement is consistent with the observation that a habitual sentence cannot have a subject that refers to an indefinite set of individuals. If we have an indefinite set of individuals such as *students*, it is impossible to confirm the manifestation of events of which particular students are predicated.

Although I maintain that habitual and experiential *-te iru* share the same semantics and syntax, I do not wish to dismiss the label *habitual* and start calling everything *experiential*. Rather, habitual is best described as a special type of experiential. In what follows, I describe what makes habitual a special type of experiential.

Habituality essentially involves the repetition of a single event type. Although we cannot say exactly how many occurrences of this same event type are required to call something a habit, there should not be any opposition to the idea that a habit involves a repetition. Modifiers of frequency (e.g. *every morning*, *every month*), which are often used with habitual statements, convey that the denoted event repeats. In contrast, a standard experiential sentence does not have to refer to an event that has occurred multiple times. Of course, there is nothing that prevents it from referring to a repeated event, either. Therefore, habitual *-te iru* is more restricted than experiential *-te iru*; i.e. habitual *-te iru* is a special type of experiential *-te iru*.

Since there is nothing that prevents a standard experiential *-te iru* sentence from referring to an event that has repeated, use of a modifier of frequency does not

exactly disambiguate between habitual and experiential interpretations. Consider the following example.

- (16) Mari-wa maiasa baiburu-o yon-de iru
 Mari-TOP every.morning bible-ACC read-*te* *iru*
 ‘Mari reads the bible every morning’ /
 ‘Mari has read the bible every morning’

If (16) is heard without any further context, the default reading is habitual; i.e. it is understood that Mari has the habit of reading the bible every morning. However, (16) can in fact be interpreted as a standard experiential statement. In that case, it is understood that Mari has the experience of reading the bible every morning at some point in the past. In other words, it is an experience of a past habit. The difference between the habitual and ‘the experience of a past habit’ interpretations is whether or not the morning bible reading activity still takes place as of the moment of speech. In both interpretations, morning bible readings have to have happened before the speech time. In addition, with the habitual interpretation, the activity is still considered to happen periodically, i.e. another reading activity is expected to occur on the next morning, and the following morning, and so on. When a speaker uses (16) as a habitual statement, the speaker implies that the periodic occurrence of the activity still continues as of the speech moment. As a habitual statement, it carries these extra implications, and therefore habitual *-te iru* is a special type of experiential *-te iru*.

There is in fact a way to disambiguate (16) by adding extra adverbial modifiers. In order for (16) to refer exclusively to a habit, we can add a modifier such

as *konogoro* (*lately*); in order for (16) to refer exclusively to the experience of a past habit, we can add a modifier such as *kako-ni* (*in the past*) as shown below.

- (17) a. *konogoro* *Mari-wa* *maiasa* *baiburu-o* *yon-de* *iru*
 lately *Mari-TOP* every.morning bible-ACC *read-te* *iru*
 ‘Lately, Mari reads the bible every morning’
 (Habitual)
- b. *kako-ni* *Mari-wa* *maiasa* *baiburu-o* *yon-de* *iru*
 past-LOC *Mari-TOP* every.morning bible-ACC *read-te* *iru*
 ‘In the past, Mari has read the bible every morning’
 (Experiential)

By inserting the modifier *konogoro* (*lately*), (17a) conveys that the morning bible reading activity still takes place as of the moment of speech. Thus, (17a) has only a habitual interpretation. With the modifier *kako-ni* (*in the past*), (17b) explicitly refers to an experience. Precisely speaking, it expresses that Mari has the experience in the past of having a habit of reading the bible every morning. An important point to be noted here is that although (17b) makes a reference to a habit, it is not a habitual statement. It is rather an experience of a habit, and as such it is distinct from simply stating a past habit. If we wish simply to express that there was a habit in the past, the following sentence can be used.

- (18) *Mari-wa* *maiasa* *baiburu-o* *yon-de* *i-ta*
Mari-TOP every.morning bible-ACC *read-te* *iru-PAST*
 ‘Mari used to read the bible every morning’

The above is a past tense sentence. It results from simply shifting the tense in (16). Therefore, it expresses that Mari used to be engaged in a certain habit. If we further wish to specify when this past habit obtained, we can add a past modifier such as *kyonen* (*last year*) as shown below.

- (19) *kyonen* *Mari-wa* *maiasa* *baiburu-o* *yon-de* *i-ta*
 last.year *Mari-TOP* every.morning bible-ACC read-*te* *iru-PAST*
 ‘Last year, Mari used to read the bible every morning’

The above sentence shows tense agreement between *kyonen* (*last year*) and *iru*. Tense mismatch was one of the indicators that I used to identify an experiential sentence. However, where a habitual statement is concerned, tense mismatch does not occur. This is because a speaker of habitual *-te iru* necessarily implies that the habit obtains at the reference point of time. If the sentence is past tense, it refers to a past habit. Even as a past statement, such a sentence still refers to a property of an individual, indicating that the property obtained in the past. Compared to standard individual-level properties such as being tall, being smart, or having an experience, a habit may be considered less permanent. Habits change. Therefore, it is reasonable for somebody to have a habit for a while but not necessarily to continue it for the rest of her life. Nevertheless, during the time when the habit obtains, we can reasonably say that having that habit is a property of an individual.

3.4 Summary

In this section, I argued that habitual *-te iru* is best described as a special type of experiential *-te iru*. Habitual *-te iru* sentences exhibit individual-level properties just as experiential *-te iru* sentences. Thus, a habitual *-te iru* sentence denotes a property of an individual. This goes against the existing claim that habitual *-te iru* is a type of progressive *-te iru* (Yoshikawa, 1976; Teramura, 1984; Shirai, 2000).

As a special type of experiential *-te iru*, habitual *-te iru* has some restrictions that do not apply to standard experiential *-te iru* sentences. First, habitual *-te iru* necessarily makes reference to an event that repeats. Second, a speaker of habitual *-te iru* necessarily implies that the habit obtains at the reference point of time. If the sentence is in the present tense, the habit should obtain ‘now’ and should be expected to continue into the future. If the sentence is in the past tense, the habit used to obtain (and probably does not any longer). In contrast, standard experiential *-te iru* does not have such restrictions. It can refer to a property of an individual which obtains after that individual has engaged in a single event at any point in the past.

4. Animacy and *-te iru* interpretations

4.1 Introduction

In this section, I focus on *-te iru* sentences with inanimate subjects. As I discussed in Section 2.4, we do not obtain a habitual reading when the subject of a *-te iru* sentence refers to an inanimate entity. Instead, any regularity concerning an inanimate subject (e.g. *The sun rises*; *My computer breaks down every month*) needs to be expressed with a simple present tense sentence. When we see a simple present tense sentence with an inanimate subject, we do not seem to regard it as a sentence that denotes a habit of the inanimate entity. That we regard a habit as an exclusive property of an animate individual probably has to do with our general understanding of how the world works. Thus, it follows that it is not a Japanese-language specific phenomenon. In English as well, it sounds odd to say, for example, *My computer has the habit of breaking down every month*. To the extent that somebody chooses to use this sentence, there is a sense of anthropomorphism. In Japanese, however, this perception that a habit is not associated with an inanimate subject is reflected in the grammar of the language; i.e. regularities of events associated with an inanimate subject cannot be expressed with habitual *-te iru*.

4.2 *-te iru* with inanimate subjects

Although a habitual reading is not available to a *-te iru* sentence with an inanimate subject, all other readings are available; i.e. progressive, perfective, and experiential, as the following examples show.

- (20) a. titi-no kuruma-no araam-ga nat-te iru
 father-GEN car-GEN alarm-NOM blare-*te* *iru*
 ‘My father’s car alarm is blaring’
 (Progressive)
- b. hi-ga nobot-te iru
 sun-NOM rise-*te* *iru*
 ‘The sun (rose and) is up’
 (Perfective)
- c. watasi-no konpyuutaa-wa ima made-ni sankai
 I-GEN computer-TOP now up.to-LOC three.times
 koware-te iru
 break-*te* *iru*
 ‘My computer has broken down three times up to now’
 (Experiential)

If we wish to express event regularities involving inanimate subjects such as a car alarm, the sun, and a computer, simple present tense sentences have to be used as shown below.²

² The subjects of the examples in (21) are all marked with *-wa*, instead of the nominative *-ga*. This is because *-wa* is the default particle for these sentences. If we mark the subjects with *-ga*, we obtain exhaustive *-ga* readings. This in fact shows

- (21) a. titi-no kuruma-no araam-wa maiasa
 father-GEN car-GEN alarm-TOP every.morning
 hatizi-ni naru
 eight.hour-LOC blare
 ‘My father’s car alarm blares at eight o’clock every morning’
- b. hi-wa maiasa noboru
 sun-TOP every.morning rise
 ‘The sun rises every morning’
- c. watasi-no konpyuutaa-wa maituki kowareru
 I-GEN computer-TOP every.month break
 ‘My computer breaks down every month’

If we use *-te iru* instead of the simple present for the examples in (21), we find some interesting interpretive results. First, and unsurprisingly, we are able to obtain experiential readings. Second, and interestingly, we also obtain peculiar progressive/perfective readings. Consider the examples below.

that a simple present characterizing sentence has properties of an ILP. Thus, it can be argued that a simple present characterizing sentence has some traits of the syntax and the semantics of an individual-level sentence that I proposed in this thesis. However, I do not pursue this topic here, and I will leave it to future investigation.

- (22) a. titi-no kuruma-no araam-wa maiasa
 father-GEN car-GEN alarm-TOP every.morning
 hatizi-ni nat-te iru
 eight.hour-LOC blare-*te* *iru*
 ‘My father’s car alarm has blared at eight o’clock every morning’
 (Experiential)
 ‘Every morning at eight o’clock, I hear that my father’s car alarm
 is blaring’ (Progressive)
- b. hi-wa maiasa nobot-te iru
 sun-TOP every.morning rise-*te* *iru*
 ‘The sun has risen every morning’ (Experiential)
 ‘Every morning, I see that the sun is up’ (Perfective)
- c. watasi-no konpyuutaa-wa maituki koware-te iru
 I-GEN computer-TOP every.month break-*te* *iru*
 ‘My computer has broken down every month’ (Experiential)
 ‘Every month, I find that my computer is broken down’ (Perfective)

As discussed in Section 3.3, modifiers of frequency are compatible with both experiential and habitual readings. Since experiential *-te iru* allows inanimate subjects, it makes sense that the examples in (22) have experiential readings. What is interesting about the above sentences, however, is that they yield peculiar progressive/perfective readings instead of habitual readings. The second English translation of each example roughly conveys this reading. Instead of expressing ‘a habit’ of an inanimate subject, each sentence conveys a fact that is perceived by the speaker. In other words, the habit belongs to the speaker. The speaker regularly perceives that some event is in progress, or regularly observes the result of some event. As such, the denoted regularity is detached from the inanimate subject and is

re-associated with the speaker. In other words, it is not that a certain type of event involving an inanimate subject occurs regularly, but rather, the speaker ‘regularly observes’ a certain type of event involving an inanimate object.

4.3 Summary

Our perception that a habit is a unique property of an animate individual is grammatically realized in Japanese. Habitual *-te iru* is strictly predicated of an animate subject. Although it is possible to express a regularity of events involving an inanimate subject with *-te iru*, such sentences yield either experiential or progressive/perfective readings. The progressive/perfective reading is peculiar in the sense that it expresses what is perceived by the speaker. There is a sense of participation by the speaker as an observer. As a result, the denoted regularity is detached from the inanimate subject and is re-associated to the speaker.

5. Summary

In this chapter, I have argued that habitual *-te iru* is a special type of experiential *-te iru*. In other words, a habit is a property of an individual, just as an experience is a property of an individual. Thus, habitual *-te iru* is formally distinct from progressive *-te iru*, contrary to earlier claims that habitual *-te iru* is a type of progressive.

Habitual *-te iru* is a special type of experiential *-te iru* for the following reasons. First, it necessarily involves the repetition of a single event type. Second, the denoted habit must obtain at the reference point of time; i.e. if the sentence is present tense, the habit must obtain at the speech moment. Third, although habitual *-te iru* exhibits properties of an ILP, a habit is easily considered to be less permanent. In contrast, where a standard experiential property is concerned, once somebody has an experience, she will always have that experience. Lastly, our general perception that inanimate entities do not have habits is reflected in the selectional restrictions of habitual *-te iru*.

BIBLIOGRAPHY

- Aono, M. (2006). *Asupekuto "teiru" no Shinkoosoo/Kekkasoo Kaishaku to Sono Tooitsu Bunseki [Interpretations and a Uniform Analysis of the Progressive/Perfective -te iru]*. MA thesis, Nanzan University.
- Aoshima, S. (2003). Control structures and scrambling. In I. Cagri, L. Meroni & G. Tesan (Eds.), *University of Maryland Working Papers in Linguistics 12* (pp. 1-25). College Park: Department of Linguistics, University of Maryland.
- Burzio, L. (1986). *Italian Syntax: A Government and Binding Approach*. Dordrecht: Reidel Publishing Company.
- Carlson, G. N. (1977). *Reference to Kinds in English*. PhD dissertation, University of Massachusetts, Amherst.
- Carlson, G. N. (1984). On the role of thematic roles in linguistic theory. *Linguistics*, 22, 259-279.
- Chierchia, G. (1995). Individual-level predicates as inherent generics. In G. N. Carlson & F. J. Pelletier (Eds.), *The Generic Book* (pp. 176-223). Chicago: University of Chicago Press.
- Chierchia, G. (1998). Reference to kinds across languages. *Natural Language Semantics*, 6, 339-405.
- Chierchia, G. (2004). A semantics for unaccusatives and its syntactic consequences. In A. Alexiadou, E. Anagnostopoulou & M. Everaert (Eds.), *The Unaccusativity Puzzle: Studies on the Syntax-Lexicon Interface* (pp. 288-331). Oxford: Oxford University Press.
- Chomsky, N. (1981). *Lectures on Government and Binding*. Dordrecht: Foris.
- Chomsky, N. (1995). *The Minimalist Program*. Cambridge, Mass.: MIT Press.

- Chomsky, N. (2001). Derivation by phase. In M. Kenstowicz (Ed.), *Ken Hale: A Life in Language* (pp. 1-52). Cambridge, Mass.: MIT Press.
- Chung, S., & McCloskey, J. (1987). Government, barriers, and small clauses in modern Irish. *Linguistic Inquiry*, 18(2), 173-237.
- Comrie, B. (1976). *Aspect*. Cambridge: Cambridge University Press.
- Davidson, D. (1967). The logical form of action sentences. In N. Rescher (Ed.), *The Logic of Decision and Action* (pp. 81-95). Pittsburgh: University of Pittsburgh Press.
- Davies, W. D., & Dubinsky, S. (2004). *The Grammar of Raising and Control: A Course in Syntactic Argumentation*. Oxford: Blackwell Publishers.
- Diesing, M. (1992). *Indefinites*. Cambridge, Mass.: MIT Press.
- Downing, P. (1996). *Numeral Classifier Systems: The Case of Japanese*. Amsterdam: John Benjamins.
- Dowty, D. R. (1979). *Word Meaning and Montague Grammar: The Semantics of Verbs and Times in Generative Semantics and in Montague's PTQ*. Dordrecht: Reidel Publishing Company.
- Dowty, D. R. (1989). On the semantic content of the notion of 'thematic role'. In G. Chierchia, B. Partee & R. Turner (Eds.), *Properties, Types and Meaning 2* (pp. 69-129). Dordrecht: Kluwer.
- Dowty, D. R. (1991). Thematic proto-roles and argument selection. *Language*, 67, 547-619.
- Fiengo, R., & McClure, W. (2002). On how to use -wa. *Journal of East Asian Linguistics*, 11(4), 5-41.

- Fillmore, C. (1968). The case for case. In E. Bach & R. Harms (Eds.), *Universals in Linguistic Theory*. New York: Holt, Rinehart and Winston.
- Frellesvig, B. (2001). A common Korean and Japanese copula. *Journal of East Asian Linguistics*, 10, 1-35.
- Fujii, T. (1966). Dooshi + te iru no imi [The Meaning of Verb + te iru]. In *Kokugo Kenkyuushitsu 5*. Tokyo: Tokyo University.
- Fukui, N. (1986). *A Theory of Category Projection and Its Applications*. PhD dissertation, MIT.
- Fukui, N., & Takano, Y. (1998). Symmetry in syntax: merge and demerge. *Journal of East Asian Linguistics*, 7, 27-86.
- Grice, H. P. (1975). Logic and conversation. In P. Cole & J. Morgan (Eds.), *Syntax and Semantics 3* (pp. 41-58). New York: Academic Press.
- Gruber, J. (1976). *Lexical Structure in Syntax and Semantics*. New York: North Holland.
- Hamano, S. (1988). Syntactic and semantic explanation of ga/o conversion. University of California, Santa Cruz.
- Harada, S. (1976). Honorifics. In M. Shibatani (Ed.), *Syntax and Semantics 5: Japanese Generative Grammar* (pp. 499-561). New York: Academic Press.
- Harasawa, I. (1994). A pragmatic view of *V-te-i-ru* and *V-te-ar-u*. *Journal of Pragmatics*, 22, 169-197.
- Hasegawa, Y. (1996). *A Study of Japanese Clause Linkage: The Connective te in Japanese*. Palo Alto: CSLI
- Higginbotham, J. (1985). On semantics. *Linguistic Inquiry*, 16(4), 547-593.

- Higginbotham, J., & Ramchand, G. (1997). The stage-level/individual-level distinction and the mapping hypothesis. In *Oxford University Working Papers in Linguistics, Philology & Phonetics 2* (pp. 53-83). Oxford: Oxford University.
- Hoji, H. (1985). *Logical Form Constraints and Configurational Structures in Japanese*. PhD dissertation, University of Washington.
- Hole, D. (2005). Reconciling "possessor" datives and "beneficiary" datives - toward a unified account of dative binding in German. In C. Maienburg & A. Wöllstein (Eds.), *Event Arguments: Foundations and Applications* (pp. 213-242). Tübingen: Niemeyer.
- Ikegami, Y. (1985). 'Activity' - 'Accomplishment' - 'Achievement' - A language that can't say 'I burned it, but it didn't burn' and one that can. In A. Makkai & A. K. Melby (Eds.), *Linguistics and Philosophy: Essays in Honor of Rulon S. Wells*. Amsterdam: John Benjamins.
- Inoue, K. (1976). *Henkee Bunpoo to Nihongo [Transformational Grammar and Japanese]*. Tokyo: Taishukan.
- Inoue, K. (1989). Shugo no imi-yakuwari to kaku-hairetsu [The semantic roles of subject and case alignment]. In S. Kuno & M. Shibatani (Eds.), *Nihongogaku no Shintenkai [New Developments in Japanese Linguistics]* (pp. 79-101). Tokyo: Kuroshio.
- Jackendoff, R. (1972). *Semantic Interpretation in Generative Grammar*. Cambridge, Mass.: MIT Press.
- Jacobsen, W. (1992). *The Transitive Structure of Events in Japanese*. Tokyo: Kuroshio.
- Kageyama, T. (1989). The place of morphology in the grammar. In G. Booij & J. V. Marle (Eds.), *Yearbook of Morphology 2* (pp. 73-94). Dordrecht: Foris.

- Kageyama, T. (1993). *Bunpoo to Gokeese* [Grammar and Word Formation]. Tokyo: Hitsuji Shobo.
- Kageyama, T. (1996). *Dooshi Imiron* [Semantics of Verbs]. Tokyo: Kuroshio.
- Kageyama, T. (1999). Word formation. In N. Tsujimura (Ed.), *The Handbook of Japanese Linguistics* (pp. 297-325). Oxford: Blackwell Publishers.
- Kato, Y. (1994). Negative polarity and movement. In M. Koizumi & H. Ura (Eds.), *MIT Working Papers in Linguistics 24* (pp. 101-120). Cambridge, Mass.: Department of Linguistics and Philosophy, MIT.
- Kindaichi, H. (1976a). Kokugo dooshi no ichibunrui [Classification of Japanese verbs]. In H. Kindaichi (Ed.), *Nihongo Dooshi no Asupekuto* [Aspect in Japanese Verbs] (pp. 5-26). Tokyo: Mugi Shobo.
- Kindaichi, H. (1976b). Nihongo dooshi no tensu to asupekuto [Tense and aspect in Japanese verbs]. In H. Kindaichi (Ed.), *Nihongo Dooshi no Asupekuto* [Aspect in Japanese Verbs] (pp. 27-61). Tokyo: Mugi Shobo.
- Kratzer, A. (1995). Stage-level and individual-level predicates. In G. N. Carlson & F. J. Pelletier (Eds.), *The Generic Book* (pp. 125-175). Chicago: The University of Chicago Press.
- Kratzer, A. (1996). Severing the external argument from its verb. In J. Rooryck & L. Zaring (Eds.), *Phrase Structure and the Lexicon* (pp. 109-137). Dordrecht: Kluwer.
- Krifka, M. (1989). Nominal reference, temporal constitution and quantification in event semantics. In R. Bartsch, J. v. Benthem & P. Boas (Eds.), *Semantics and Contextual Expressions* (pp. 75-115). Dordrecht: Foris.

- Krifka, M. (1992). Thematic relations as links between nominal reference and temporal constitution. In I. Sag & A. Szabolcsi (Eds.), *Lexical Matters* (pp. 29-53). Palo Alto: CSLI.
- Krifka, M. (1995). Common nouns: a contrastive analysis of English and Chinese. In G. N. Carlson & F. J. Pelletier (Eds.), *The Generic Book* (pp. 398-411). Chicago: The University of Chicago Press.
- Krifka, M., Pelletier, F. J., Carlson, G. N., ter Meulen, A., Link, G., & Chierchia, G. (1995). Genericity: an introduction. In G. N. Carlson & F. J. Pelletier (Eds.), *The Generic Book* (pp. 1-124). Chicago: University of Chicago Press.
- Kuno, S. (1973). *The Structure of the Japanese Language*. Cambridge, Mass.: MIT Press.
- Kuno, S. (1983). *Shin Nihon Bunpoo Kenkyuu [New Studies in Japanese Grammar]*. Tokyo: Taishukan.
- Kuno, S. (2005). On the non-canonical double nominative construction in Japanese. *Studies in Language*, 29, 285-328.
- Kuroda, S.-Y. (1965). *Generative Grammatical Studies of the Japanese Language*. PhD dissertation, MIT.
- Kuroda, S.-Y. (1978). Case marking, canonical sentence patterns, and counter equi in Japanese. In J. Hinds & I. Howards (Eds.), *Problems in Japanese Syntax and Semantics* (pp. 30-51). Tokyo: Kaitakusha.
- Kuroda, S.-Y. (1983). What can Japanese say about government and binding. In M. Barlow, D. P. Flickinger & M. T. Wescoat (Eds.), *Proceedings of WCCFL 2* (pp. 153-164). Palo Alto: Stanford Linguistics Association.
- Kuroda, S.-Y. (1988). Whether we agree or not. In W. J. Poser (Ed.), *Japanese Syntax* (pp. 103-143). Palo Alto: CSLI.

- Kusumoto, K. (2003). The semantics of -teiru in Japanese. In P. Clancy (Ed.), *Japanese/Korean Linguistics 11* (pp. 367-380). Palo Alto: CSLI.
- Levin, B. (2000). Aspect, lexical semantic representation, and argument expression. In L. Conathan, J. Good, D. Kavitskaya, A. Wulf & A. Yu (Eds.), *Proceedings of the 26th Annual Meeting of the Berkeley Linguistics Society* (pp. 413-429). Berkeley: Berkeley Linguistics Society.
- Machida, K. (1989). *Nihongo no Jisee to Asupekuto [Japanese Tense and Aspect]*. Tokyo: Aruku.
- Martin, S. E. (1975). *A Reference Grammar of Japanese*. New Haven: Yale University Press.
- Matsumoto, Y. (1990). Constraints on the 'intransitivizing' resultative *-te aru* construction in Japanese. In H. Hoji (Ed.), *Japanese/Korean Linguistics 1* (pp. 269-283). Chicago: The University of Chicago Press.
- Matsumoto, Y. (1992). *On the Wordhood of Complex Predicates in Japanese*. PhD dissertation, Stanford University.
- Matsumoto, Y. (1996). *Complex Predicates in Japanese: A Syntactic and Semantic Study of the Notion "Word"*. Palo Alto: CSLI.
- May, R. (1977). *The Grammar of Quantification*. PhD dissertation, MIT.
- May, R. (1985). *Logical Form: Its Structure and Derivation*. Cambridge, Mass.: MIT Press.
- McCawley, J. (1971). Tense and time reference in English. In C. Fillmore & D. T. Langendoen (Eds.), *In Studies in Linguistic Semantics* (pp. 96-113). New York: Holt, Rinehart and Winston.

- McCawley, J., & Momoi, K. (1986). The constituent structure of -te complements. In S.-Y. Kuroda (Ed.), *Working Papers from the First SDF Workshop in Japanese Syntax* (pp. 97-116). La Jolla: Department of Linguistics, UC San Diego.
- McClure, W. (1995). *Syntactic Projections of the Semantics of Aspect*. Tokyo: Hitsuji Shobo.
- McClure, W. (1999). Japanese floating classifiers. In J. Alexander, N.-R. Han & M. M. Fox (Eds.), *U. Penn Working Papers in Linguistics 6.1* (pp. 111-125). Philadelphia: University of Pennsylvania.
- McClure, W. (2007). Japanese *iru* is not a copula: consequences for the progressive. In M. Keleşir & B. Öztürk (Eds.), *Proceedings of WAFL 2: Workshop on Altaic Formal Linguistics* (pp. 245-258).
- Michaelis, L. (1994). The ambiguity of the English present perfect. *Journal of Linguistics*, 30, 111-158.
- Milsark, G. (1974). *Existential Sentences in English*. PhD dissertation, MIT.
- Miyagawa, S. (1989). *Syntax and Semantics 22: Structure and Case Marking in Japanese*. San Diego: Academic Press.
- Miyagawa, S., & Babyonyshev, M. (2004). The EPP, unaccusativity, and the resultative constructions in Japanese. *Scientific Approaches to Language*, 3, 159-185.
- Miyajima, A. (2002). Wa & ga, stage & individual,thetic & categorical. In *Proceedings of Sophia University Linguistic Society 17* (pp. 48-71). Tokyo: Sophia University Linguistic Society.

- Montague, R. (1973). The proper treatment of quantification in ordinary English. In K. Hintikka, J. Moravcsik & P. Suppes (Eds.), *Approaches to Natural Language* (pp. 221-242). Dordrecht: Reidel Publishing Company.
- Moriyama, T. (1988). *Nihongo Dooshi Jutsugobun no Kenkyuu [Investigations of Japanese Verbal Predicates]*. Tokyo: Meiji Shoin.
- Muraki, M. (1978). The sika-nai construction and predicate restructuring. In J. Hinds & I. Howard (Eds.), *Problems in Japanese Syntax and Semantics* (pp. 155-177). Tokyo: Kaitakusha.
- Nakatani, K. (2003). Analyzing -te. In W. McClure (Ed.), *Japanese/Korean Linguistics 12* (pp. 377-387). Chicago: The University of Chicago Press.
- Nishigauchi, T. (1993). Long distance passive. In N. Hasegawa (Ed.), *Japanese Syntax in Comparative Grammar* (pp. 79-114). Tokyo: Kuroshio
- Ogihara, T. (1998). The ambiguity of the *-te iru* form in Japanese. *Journal of East Asian Linguistics*, 7, 87-120.
- Ogihara, T. (1999). Tense and aspect. In N. Tsujimura (Ed.), *The Handbook of Japanese Linguistics* (pp. 326-348). Oxford: Blackwell Publishers.
- Pancheva, R. (2003). The aspectual makeup of perfect participles and the interpretations of the perfect. In A. Alexiadou, M. Rathert & A. Stechow (Eds.), *Perfect Explorations*. Berlin and New York: Mouton de Gruyter.
- Parsons, T. (1990). *Events in the Semantics of English*. Cambridge, Mass.: MIT Press.
- Perlmutter, D. M. (1978). Impersonal passives and the unaccusative hypothesis. In C. Chiarello, H. Thompson, F. Ackerman, O. Gensler, J. Kingston, E. C. Sweetser, et al. (Eds.), *Proceedings of the 4th Annual Meeting of the Berkeley Linguistics Society* (pp. 157-189). Berkeley: Berkeley Linguistics Society.

- Quine, W. V. O. (1960). *Word and Object*. Cambridge, Mass.: MIT Press.
- Rothstein, S. (1999). Fine-grained structure in the eventuality domain: the semantics of predicate adjective phrases and be. *Natural Language Semantics*, 7, 347-420.
- Rothstein, S. (2004). *Structuring Events: A Study in the Semantics of Lexical Aspect*. Oxford: Blackwell Publishers.
- Saito, M. (1985). *Some Asymmetries in Japanese and Their Theoretical Implications*. PhD dissertation, MIT.
- Schwarzschild, R. (to appear). Stubborn distributivity, multiparticipant nouns and the count/mass distinction. In *Proceedings of the 39th North East Linguistics Society*. Amherst: GLSA Publications.
- Sells, P. (1990). VP in Japanese: evidence from -te complements. In H. Hoji (Ed.), *Japanese/Korean Linguistics 1* (pp. 319-334). Chicago: The University of Chicago Press.
- Shibatani, M. (1978). *Nihongo no Bunseki [Analysis of Japanese]*. Tokyo: Taishukan.
- Shirai, Y. (2000). The semantics of the Japanese imperfective -teiru: an integrative approach. *Journal of Pragmatics*, 32, 327-361.
- Soga, M. (1983). *Tense and Aspect in Modern Colloquial Japanese*. Vancouver: University of British Columbia Press.
- Takahashi, T. (1976). Sugata to mokuromi [Aspect and purpose]. In H. Kindaichi (Ed.), *Nihongo Dooshi no Asupekuto [Aspect in Japanese Verbs]*. Tokyo: Mugi Shobo.

- Takubo, Y. (2003). *Counterfactual Conditionals in Japanese: The Case of Tokoro-da Conditionals*. Paper presented at the ESSLLI 15 Workshop on Conditional and Unconditional Modality.
- Takubo, Y. (2008). Tense and aspect in Japanese: the case of tokoro-da as a reference point marker. *Journal of the Association of Japanology in East Asia*, 25, 5-20.
- Talmy, L. (1985). Lexicalization patterns: semantic structure in lexical forms. In T. Shopen (Ed.), *Language Typology and Semantic Description 3: Grammatical Categories and the Lexicon* (pp. 57-149). Cambridge: Cambridge University Press.
- Talmy, L. (1991). Path to realization: a typology of event conflation. In C. Johnson, R. Shields & L. A. Sutton (Eds.), *Proceedings of the 17th Annual Meeting of the Berkeley Linguistics Society* (pp. 480-519). Berkeley: Berkeley Linguistics Society
- Tateishi, K. (1989). Subjects, SPEC, and DP in Japanese. In J. Carter & R.-M. Dechaine (Eds.), *Proceedings of the 19th North East Linguistics Society* (pp. 405-418). Amherst: GLSA Publications.
- Tateishi, K. (1994). *The Syntax of 'Subjects'*. Palo Alto: CSLI.
- Tenny, C. (1994). *Aspectual Roles and Syntax-Semantics Interface*. Dordrecht: Kluwer.
- Teramura, H. (1984). *Nihongo no Shintakusu to Imi [The Syntax and Semantics of Japanese]*. Tokyo: Kuroshio
- Tsujimura, N. (1996). *An Introduction to Japanese Linguistics*. Oxford: Blackwell Publishers.

- Tsujimura, N. (2003). Event cancellation and telicity. In W. McClure (Ed.), *Japanese/Korean Linguistics 12* (pp. 388-399). Chicago: The University of Chicago Press.
- Vendler, Z. (1967). *Linguistics in Philosophy*. Ithaca: Cornell University Press.
- Verkuyl, H. J. (1993). *A Theory of Aspectuality*. Cambridge: Cambridge University Press.
- Verkuyl, H. J. (1999). *Aspectual Issues: Studies in Time and Quantity*. Palo Alto: CSLI.
- Washio, R. (1997). Resultatives, compositionality and language variation. *Journal of East Asian Linguistics*, 6, 1-49.
- Yoshikawa, T. (1976). Gendai nihongo dooshi no asupekuto no kenkyuu [Study of aspect in modern Japanese verbs]. In H. Kindaichi (Ed.), *Nihongo Dooshi no Asupekuto [Aspect in Japanese Verbs]* (pp. 155-327). Tokyo: Mugi Shobo.