SITUATION ASPECT AND VIEWPOINT ASPECT: FROM SALISH TO JAPANESE

by

MASARU KIYOTA

B.A., University of Fukuoka, 1998

A THESIS SUBMITTED IN PARTIAL FULFILMENT OF
THE REQUIREMENTS FOR THE DEGREE OF

DOCTOR OF PHILOSOPHY

in

THE FACULTY OF GRADUATE STUDIES

(Linguistics)

THE UNIVERSITY OF BRITISH COLUMBIA

(Vancouver)

March 2008

Abstract

This thesis investigates lexical and grammatical aspect in two unrelated languages, Sənčáθən (the Saanich dialect of Straits Salish) and Japanese. In particular, the main focus is on how various perfect readings are derived in the two languages, which show striking similarities in this respect.

In Sənčáθən, a particle *kʷɬ* yields various readings depending on the situation aspect and viewpoint aspect of the predicate with which it occurs (Kiyota 2006b). These various readings include an inceptive reading, an on-going situation reading, and a completion reading. The Japanese aspectual marker *-tei-* also induces a range of different readings: a progressive reading, a resultant state reading, and a perfect reading (Ogihara 1998a, Nishiyama 2006, a.o.).

To account for these various readings, I propose that both *kʷɬ* in Sənčáθən and *-tei-* in Japanese are perfect markers. However, the actual semantic function of each is different: *kʷɬ* in Sənčáθən introduces a *perfect time span* (Pancheva 2003), whereas *-tei-* in Japanese denotes an anteriority relation between an *event time* and a *reference time* (Reichenbach 1947, Klein 1992, 1994), where the event time can be the time interval of a sub-event of a larger event. *-Tei-* also has a pragmatic component (or presupposition), just as Portner (2003) claims for the English perfect.

Aspectual properties of predicates also play a crucial role in yielding the range of different readings. Therefore, this thesis also proposes a new aspectual classification of predicates in Sənčáθən and Japanese, which departs from the common classification of predicates based on Indo-European languages.

In Sənčáθən, various readings are derived by interaction between the semantics of verbal predicates (i.e. lexical aspect), the semantics of the grammatical aspect (perfective or imperfective), and the semantics (and possibly pragmatics) of the perfect. In Japanese, the range of interpretations is due to interaction between the semantics of verbal aspect, the function of an adverb, and the semantics and pragmatics of the perfect. In other words, the same factors enter into my analysis of both Sənčáθən and Japanese, though there is one striking difference between the two languages: the perfective/imperfective opposition is involved in Sənčáθən, but not in Japanese.

Table of Contents

List of Tables

List of Figures

List of Abbreviations

Sənčáθən

1	=	first person
2	=	second person
3	=	third person
ACC	=	accompanying
ACT	=	actual
AUX	=	auxiliary
CAUS	=	causative
CHAR	=	characteristic
CMD	=	command
CMDL	=	control middle
CONJ	=	conjunction
CONTMP	=	contemporaneous
CTR	=	control transitive
D	=	demonstrative/determiner
FUT	=	future
IMPF	=	imperfective
INF	=	informative
MUT	=	mutative
NEG	=	negation
NCMDL	=	non-control middle
NCTR	=	non-control transitive
OBL	=	oblique
OPT	=	optative
PASS	=	passive
PAST	=	past
pl	=	plural
POS	=	possessive
Q	=	question marker
sg	=	singular
STAT	=	stative
SUB	=	subordinator

Japanese

1	=	first person
2	=	second person
3	=	third person
ACC	=	accusative
CAUS	=	causative
CONJ	=	conjunction
D	=	demonstrative
DAT	=	dative
FUT	=	future
GEN	=	genitive
IMP	=	imperfective
LOC	=	locative
NEG	=	negation
NOM	=	nominative
PASS	=	passive
PAST	=	past
PRES	=	present
pl	=	plural
PLT	=	polite
POSS	=	possessive
Q	=	question marker
sg	=	singular
SUB	=	subject
TOP	=	topic

Acknowledgements

Because it has been a long time since I came to the University of British Columbia as a graduate student, I owe a huge debt of gratitude to many people.

First of all, my utmost thanks go to my supervisor Lisa Matthewson. Until I took a semantics course with her several years ago, I did not think about writing a dissertation on semantics. However, her enthusiasm and perspective on semantics drew me into this interesting field. Since I decided to write a thesis in semantics, she has always been supportive, patient and encouraging to me. Without her generous help and encouragement, I honestly doubt I could have made it this far.

I am also immensely indebted to Mrs. Stella Wright, who was the only Sənčáθəɲ speaker with whom I worked. She was always generous and patient in sharing her language with me. Her attitude toward her own language, culture, and people always inspired me. She was wonderful not only as a language consultant but also as a person of sincerity.

I am also indebted to the late M. Dale Kinkade. I met Professor Kinkade for the first time when I visited UBC Linguistics in 1997. He said to me "You must come here!" His encouraging word determined me to study at UBC. When I finally became a member of UBC Linguistics in 1999, I found that I could not study or conduct research under his direct guidance because he had already retired at that time. In 2004, however, he gave me the first and last chance to write a joint paper with him for the 39th International Conference on Salish and Neighbouring Languages. I was incredibly excited about that, but at that time, he had already suffered from cancer. I had deepest sorrow when he passed away several months later.

I would also like to express my special thanks to two other committee members, Henry Davis and Hotze Rullmann. Since I came to UBC, Henry has been helpful and encouraging to me all the time. His amazing knowledge of the Salish languages as well as linguistics in general truly helped me. Hotze has also been very supportive and inspiring to me all the time. His profound knowledge in semantics has helped me a lot. Thank you for pushing me to think about semantics very carefully.

I would also like to thank my thesis defense examiners, Toshiyuki Ogihara, Laurel Brinton, and Martina Wiltschko, for their useful and helpful comments on my dissertation.

Thanks also to the audience at my defense for their useful and helpful questions and comments.

I have also benefited from discussions with many scholars whom I met at various conferences. Especially, I would like to thank Donna Gerts, Timothy Montler, Suzanne Urbanczyk, Claire Turner, Janet Leonard, and many others for sharing their insights.

I also owe so much to our incredible secretary, Edna Dharmaratne. Her generous help always made my life easier at UBC.

Thanks to all the faculty members at UBC over the years. I really enjoyed studying and/or working as a teaching/research assistant with Rose-Marie Déchaine, Doug Pulleyblank, Pat Shaw, and Bryan Gick, Gunnar Hansson, Eric Vatikiotis-Bateson, Joseph Stemberger, and Guy Carden. I learned a lot from all of them.

I would also like to thank all the current and previous students at UBC Linguistics for their kindness and friendship, including Ad Ruangjaroon, Scott Shank, Kayono Shiobara, Ian Wilson, Leora Bar-el, Carrie Gillon, Rachel Wojdak, Peter Jacobs, Solveiga Armoskaite, James Thompson, Jason Brown, Tyler Peterson, Yunhee Chung, Sonja Thoma, Ryan Waldie, Karsten Koch, Noriko Yamane-Tanaka, Marion Caldecott, Mario Chavez-Peon, Shujun Chin, Atsushi Fujimori, Yoko Ikegami, Kristin Johannsdottir, Jeff Muehlbauer, Clare Cook, Yumiko Nakamura, Randy Sharp, Amelia Silva, Olga Steriopolo, Oladiipo Ajiboye, Suzanne Gessner, Andrea Gormley, Eun-sook Kim, Soo-mee Kim, and many others.

Finally, my deepest thanks go to my wife, Keiko Kiyota, who allowed and encouraged me to do what I really wanted to do 15 years ago. Without her infinite support, I could not come this far. Thank you so much.

Chapter 1 Introduction

1 Goals of this thesis

In this thesis, I investigate lexical and grammatical aspect in two unrelated languages, Sənčáθən (also known as the Saanich dialect of Straits Salish) and Japanese. In particular, the main focus will be on how various perfect readings are derived in the two languages, because these two languages show striking similarities in terms of the various readings the perfect constructions induce.

In Sənčáθən, a prepredicate particle *kʷɬ* yields apparently disparate readings depending on the situation type and viewpoint aspect of the predicate with which it occurs (Kiyota 2006b). These various readings include an inceptive reading which expresses a beginning or a coming about of a situation, an on-going situation reading which expresses that a situation is in progress, and a completion reading which expresses that a situation has been completed. The Japanese *-tei-* construction is also an interesting puzzle because the same morpheme induces a range of different readings: a progressive reading, a resultant state reading, and an experiential perfect reading (Ogihara 1998a, Nishiyama 2006, a.o.). Although the perfect in English can yield various readings as well, such as the experiential perfect, the perfect of recent past, and the perfect of result (Iatridou at al. 2001, 2003), all of these readings assert that the event described by an event is complete[1]. Thus it cannot yield an inceptive reading like its Sənčáθən and Japanese counterparts.

[1] There is another reading, the universal perfect reading, in which the event described by a verb is on-going. However, this reading is possible only if it combines with a state or with the progressive form of a non-stative predicate (Iatridou et al. 2000).

To account for these various readings, I propose that the particle *k*^{w}*ɬ* in Sənčáθən and the marker -*tei*- in Japanese are perfect aspect markers whose semantic function is to relate two time intervals. However, the two time intervals related by the two perfect markers differ: -*tei*- relates an *event time* and a *reference time* (Reichenbach 1947, Klein 1992, 1994), while *k*^{w}*ɬ* relates two different reference times (Pancheva 2003). I also claim that -*tei*- in Japanese (possibly *k*^{w}*ɬ* in Sənčáθən as well) has a pragmatic component or presupposition, as Portner (2003) proposes for the English perfect.

The aspectual properties of verbs/predicates also play an important role in yielding the range of different readings. Therefore, this thesis also proposes a new aspectual classification of predicates in Sənčáθən and Japanese, both of which have five predicate classes: *homogeneous states, activities, accomplishments, achievements,* and *inchoative states*. This classification is crucially different from the common four-way classification of verbs/predicates based on Indo-European languages in having a class of inchoative states.

I shall show that in Sənčáθən, the various perfect readings are derived by interaction between the semantics of verbal predicates (i.e. lexical aspect), the semantics of the grammatical aspect (perfective or imperfective), the function of an adverb, and the semantics (and possibly pragmatics) of the perfect. In Japanese, the range of interpretations is due to interaction between the semantics of lexical aspect, the function of an adverb, and the semantics and pragmatics of the perfect. In other words, the same factors enter into my analysis of both Sənčáθən and Japanese. However, there is one striking difference between the two languages: the universal

perfect reading requires *k^{w}ɬ* with the imperfective in Sənčáθən, but it requires only *-tei-* in Japanese.

In section 2 of this chapter, I will briefly preview the aspectual classification of verbs/predicates and semantics of each class in Sənčáθən and Japanese. Section 3 will discuss background assumptions and proposals for viewpoint aspects (perfective/imperfective) and perfect aspect in the two languages.

2 Aspectual classification of predicates

Lexical aspect, or the aspectual classification of verbs (predicates), refers to the types of situations described by a verb or a verb phrase (or more generally a predicate). It is also variously called by different researchers *aktionsart* and *situation aspect* (Smith 1997). Lexical aspect is an intrinsic property of lexical meaning independent of context. One of the major divisions (in English at least) among the aspectual classes is between stative and non-stative, and non-statives are further divided into atelic (activities) vs. telic events (accomplishments and achievements) (Dowty 1979 a.o.). Vendler (1967) was the first to classify English verbs into the four classes, *states* (1), *activities* (2), *accomplishments* (3), and *achievements* (4)[2].

(1) States
   a. John was tired.
   b. I love coffee.
   c. Mary has a son.

[2] Smith (1997) also proposes a fifth class *semelfactives*, which is usually treated as a sub-category of activities.

(2) Activities

a. Jack ran.

b. Mary pushed a stroller.

c. I drove a car.

(3) Accomplishments

a. John painted a picture.

b. I drew a circle.

c. Mary pushed a stroller to the store.

(4) Achievements

a. John arrived.

b. Mary lost her purse.

c. I recognized the picture.

Both states, as in (1), and activities, as in (2), are standardly assumed to be atelic: they do not entail a natural endpoint. However, these two classes differ from each other in that activities are dynamic but states are not (Smith 1997). Accomplishments, as in (3), and achievements, as in (4), are standardly assumed to be telic: i.e., they have natural endpoints in their denotations. These two classes, however, differ in that accomplishments contain a process part which has some duration, while achievements are near-instantaneous and do not have a process (Smith 1997)[3].

Whether or not a predicate has some natural endpoint has an effect on interpretations when the predicates are in the past perfective (the simple past in English). Telic predicates have to have been completed but atelic ones do not. This is shown in (5):

(5) a. John ran and is still running.

b. # John painted a picture but he did not finish it.

c. # John arrived and is still arriving. (Bar-el 2005: 3)

[3] The instantaneousness of achievements is controversial (Verkuyl 1989). I will come back to this issue in Chapter 2.

The contrast in (5) shows that an atelic (activity) event, as in (5a), does not need to culminate because it does not have a natural endpoint, whereas telic ones like (5b) and (5c) do need to culminate due to the entailed natural endpoint. This is standardly assumed based on the English facts.

Vendler's four-way classification is used to classify verbs in many languages (Dowty 1979, Smith 1997, Rothstein 2004). However, I will show that it is not universal, and that in fact, Sənčáθən and Japanese have five verbal classes. I propose a classification of predicates for Sənčáθən in Chapter 2, and for Japanese (Kiyota 2006b) in Chapter 4. Although I follow the terminology for the four verb classes from (1) through (4) above, I propose, in contrast, that Sənčáθən and Japanese have five predicate classes, homogeneous states, inchoative states, activities, accomplishments, and achievements (Kiyota 2006a, Kiyota 2006b)[4]. Some examples for the proposed classes in Sənčáθən are shown in (6) through (10).

(6) Homogeneous states

a. k'^{w}amk'^{w}əm tiʔə Jack
strong D Jack
'Jack is strong.'

b. čiq tiʔə nə sqexəʔ
big D my dog
'My dog is big.'

c. sexsəx tsə Jack
lazy D Jack
'Jack is lazy.'

[4] Turner (2006) proposes four verb classes for Sənčáθən: activity, accomplishments, achievements, and inchoative states, but she does not discuss homogeneous states as one of the verb/predicate classes.

(7) Inchoative states

a. łčík^{w}əs tə Jack
get.tired D Jack
'Jack is tired. / Jack got tired.'

b. híləkʷ tə Jack
get.happy D Jack
'Jack is happy. / Jack got happy.'

c. téčəq tiʔə Jack
get.mad D Jack
'Jack is mad. / Jack got mad.'

(8) Activities

a. t'ǐləm ləʔ tə Jack
sing PAST D Jack
'Jack sang.'

b. qékʷ-əŋ ləʔ tiʔə Jack
rest-CMDL PAST D Jack
'Jack had a rest.'

c. kʷənéŋ-ət ləʔ sən kʷθə nə tén
help-CTR PAST 1.sg D my mother
'I helped my mother.'

(9) Accomplishments

a. ləʔə sən kʷəʔ lət'$^{\theta}$-át tˢə nə sqʷátən
AUX 1.sg INF get.filled-CTR D my bucket
'I filled up my bucket.'

b. ləʔə sən kʷə lé-t tˢə nə snáxʷəł
AUX 1-sg INF get.fixed-CTR D my canoe
'I fixed my canoe.'

c. ləʔə sən kʷə q'ép'-ət tˢə laplaš
AUX 1-sg INF get.tied-CTR D lumber
'I tied the lumber.'

(10) Achievements

a. q'^{w}áy tə Jack
die D Jack
'Jack died.'

b. téčəl sən
arrive 1.sg
'I arrived.'

c. xə́ɬ tə nə q'^{w}áləŋ
get.hurt D my ear
'I hurt my ear / my ear got hurt.'

As discussed in detail in Chapter 2, this classification is based upon both standard and language-internal diagnostics, such as the interpretation of out-of-the-blue sentences, interpretation with punctual clauses and adverbials, interpretation with *k^{w}ɬ* (perfect) and interpretation with *čəlel* and *x^{w}eləq* 'almost'.

For Japanese, Kindaichi (1955) and his successors propose that Japanese verbs are classified into three core classes, *stative verbs (joutai dooshi)*, *durative verbs (keizoku dooshi)* (which roughly corresponds to activities and accomplishments in Vendler's classification), and *instantaneous verbs (shunkan dooshi)* (which corresponds to achievements).[5] This class of *instantaneous verbs* is also called *inchoative verbs* (Ogihara 1998a) or *change-of-state verbs* (*henka dooshi*) (Fujii 1976). However, I propose a new classification of predicates in Japanese, which is identical to that in Sənčáθən. This is shown in (11).

[5] These authors also add a fourth marginal category, which does not fall into the other three classes. I will discuss this category in Chapter 4.

(11) Lexical aspect in Japanese

Homogeneous states	*iru* 'be/exist', *aru* 'be/exist', *dekiru* 'be able to do s.t.'
Inchoative states	*tukareru* 'get tired', *okoru* 'get mad', *kumoru* 'get cloudy'
Activities	*aruku* 'walk', *hataraku* 'work', *benkyoosuru* 'study'
Accomplishments	*naosu* 'repair s.t.', *tateru* 'build s.t.', *tukuru* 'make s.t.'
Achievements	*tuku* 'arrive', *todoku* 'reach', *mitukaru* 'get found'

This classification is also based upon both standard and language-internal diagnostics, including interpretation with the aspectual marker *-tei-* (Kindaichi 1955), interpretation with two adverbial phrases *~kan* (for) and *~de* (in), interpretation with *moosukoside* ('almost' or 'just about'), and interpretation with *tuini* ('finally'), all of which reveal temporal properties of Japanese predicates.

The results of these diagnostics also lead me to propose a semantics or event representation of each class for each language. I adopt a neo-Davidsonian theory of event representation (Dowty 1979, Rothstein 2004, Bar-el 2005). Before reviewing my proposal for Sənčáθən and Japanese, let us consider a somewhat simplified version of the event representations for English predicates, as given in (12).

(12) Event representations in English

a. States: $\lambda e.P(e)$

b. Activities: $\lambda e.(DO(P))(e)$

c. Achievements: $\lambda e.(BECOME(P))(e)$

d. Accomplishments: $\lambda e. \exists e_1 \exists e_2[e =^{S} (e_1 \cup e_2) \wedge (DO(P))(e_1) \wedge (BECOME(P))(e_2)]$

These representations are a reinterpretation of verbal templates in Dowty (1979) and Rothstein (2004), abstracting away from any arguments. P is a variable for an arbitrary predicate; it

represents the lexical content of the element in question. Thus, states, as shown in (12a), are bare event predicates with no operator: they denote timeless predication. The template for activities in (12b) includes the operator DO, which applies to a bare predicate. The precise semantics of DO is not spelled out by Dowty (1979), though he mentions that "state under the unmediated control of the agent" may be the best description of the DO operator[6] (1979: 118). Reinterpreting his statement, the DO is an aspectual operator identifying the event as a process with an agent in control.

(12c) is the representation for achievements, which are bare predicates under the scope of a BECOME operator. According to Dowty (1979: 122), the BECOME operator captures the intuition of English speakers that an achievement is a near-instantaneous change of state. He assumes that time is discrete: for any moment, there is a unique moment that most immediately follows it. The set of times is identified as the set of positive and negative integers and zero, and thus the time immediately preceding a time t can be referred to as $t - 1$. The truth conditions of the BECOME operator are defined as "BECOME ϕ is true at t iff ϕ is true at t and false at $t - 1$."

However, Dowty (2002) later claims that the truth conditions of BECOME should denote an extended change of state, since there are some achievement verbs that can be modified by durative adverbials, such as *the door opened slowly* (2002: 264). In this thesis, however, I will argue that in Sənčáθən and Japanese, instantaneous change of state events are classified as achievements, whereas non-instantaneous change of state events are inchoative states.

[6] Rothstein (2004) sometimes uses ACTIVITY interchangeably with DO.

As shown in (12d), accomplishments are complex event predicates that are the sum (represented by the superscript *s*) of two sub-events, a DO event and a BECOME event. In Dowty's original truth condition, there is also an operator CAUSE in the representation of accomplishments. This operator links together the two sub-events, the DO and the BECOME, in a causal relation. Rothstein (2004), in contrast, argues that a causal relation does not capture the whole picture of accomplishments in English, and proposes that DO and BECOME are related by an incremental relation. However, Dowty and Rothstein agree that accomplishment events are the sum of two events DO and BECOME.[7] I follow both of them in this respect.

Let us now briefly preview my proposals for Sənčáθən and Japanese. The proposed event representations for Sənčáθən are shown in (13), and those for Japanese in (14).

(13) Event representations in Sənčáθən

a. Homogeneous states: $\lambda e.P(e)$
b. Inchoative states: $\lambda e.\exists e_1 \exists e_2[e =^{S} (e_1 \cup e_2) \wedge (\text{BECOME}(P))(e_1) \wedge P(e_2)]$
c. Activities: $\lambda e.\exists e_1 \exists e_2[e =^{S} (e_1 \cup e_2) \wedge (\text{BECOME}(P))(e_1) \wedge (\text{DO}(P))(e_2)]$
d. Accomplishments: $\lambda e[(\text{DO}(P))(e) \,\&\, [\forall w'[w' \text{ is an inertia world w.r.t w at the beginning of e} \rightarrow [\exists e'[e' \text{ is a culmination of e in w' \& e causes e'in w'}]]]]$
e. Achievements: $\lambda e.(\text{BECOME}(P))(e)$

[7] The relation between DO and BECOME is not relevant for the purpose of this thesis, since the relation does not affect my analysis of the perfect constructions in the two languages. See Dowty (2002) and Rothstein (2004) for details of their proposals.

(14) Event representations in Japanese

a. Homogeneous states: $\lambda e.P(e)$

b. Inchoative states: $\lambda e.\exists e_1 \exists e_2[e =^{S} (e_1 \cup e_2) \wedge (\text{BECOME}(P))(e_1) \wedge P(e_2)]$

c. Activities: $\lambda e.\exists e_1 \exists e_2[e =^{S} (e_1 \cup e_2) \wedge (\text{BECOME}(P))(e_1) \wedge (\text{DO}(P))(e_2)]$

d. Accomplishments: $\lambda e.\exists e_1 \exists e_2[e =^{S} (e_1 \cup e_2) \wedge (\text{BECOME}(P))(e_1) \wedge (\text{DO}(P))(e_2)$ & [∀w'[w' is an inertia world w.r.t w at the beginning of e → [∃e'[e' is a culmination of e in w' & e causes e'in w']]]]

e. Achievements: $\lambda e.(\text{BECOME}(P))(e)$

There are striking similarities between the two languages. First, both languages have five verb classes, as opposed to four classes in English, due to the additional class of *inchoative states*. Second, activities are complex events: they contain an initial transition event (a BECOME event) as their first sub-event in both languages, which may not be the case in English.[8] Another point that makes the two languages strikingly similar is that there is no culmination requirement unlike English. Instead, as will be discussed in Chapter 2 and Chapter 4, the culmination effect of accomplishments is an implicature in both languages (Matthewson 2004, Bar-el 2005, Bar-el et al 2005). There is only one difference between the two languages: I will argue that Sənčáθən accomplishments do not contain an initial transition (i.e. BECOME), while Japanese accomplishments do.

[8] It has been standardly assumed that English activities are simplex process events (i.e., DO) (Dowty 1979, Rothstein 2004, a.o.). However, Smith (1997) includes an inherent initial point in her English activity template. Bar-el (2005) also claims that English activities have an initial point.

3 Viewpoint and perfect aspect

In Chapter 3 and Chapter 5, I provide new analyses of perfect constructions in Sənčáθən and Japanese. I assume that aspect relates a property of an eventuality to a time interval (Klein 1994, von Stechow 2002, Chang 2003), and more precisely I adopt Kratzer's (1998) idea that aspect is an operator that maps properties of events into properties of times.

(15) Kratzer (1998: 17)

a. Imperfective: $\lambda P.\lambda t.\exists e [\ t \subseteq \text{time}(e)\ \&\ P(e)]$
'reference time included in event time'

b. Perfective: $\lambda P.\lambda t.\exists e [\text{time}(e) \subseteq t\ \&\ P(e)]$
'event time included in reference time'

c. Perfect: $\lambda P.\lambda t.\exists e [\text{time}(e) < t\ \&\ P(e)]$
'event over by reference time'

However, as discussed in Chapter 3, the semantics of imperfective, perfective, or perfect in Sənčáθən differs from the standard semantics of each shown in (15). Likewise, the semantics of the perfect in Japanese proposed in Chapter 5 is different from that in (15c). What is even more striking in Japanese is that a perfective-imperfective opposition is not at play for the various perfect readings.

Chapter 3 is dedicated to investigating the perfect construction in Sənčáθən. In that chapter, I provide a compositional analysis of the perfect construction in that language. Montler (1986) suggests that the particle *kʷɬ* basically means 'already' but he also notes that it is often used where the 'already' reading is inappropriate. However, my fieldwork has established that

kʷɬ yields an event completion reading as in (16), an on-going situation reading as shown in (17), and an inceptive reading as in (18).

(16) Event completion reading

a. ləʔə sən kʷəʔ **kʷɬ** le-t tsə nə snəxʷəɬ
AUX 1.sg INF PERF[9] get.fixed-CTR D my car
'I have already fixed my car./ I have fixed my car before.'

b. **kʷɬ** qʼʷəl-ət sən tsə sčeenəxʷ
REAL cook-CTR 1.sg. D salmon
'I have cooked the salmon already. / I have cooked a salmon before.'

c. ləʔə sən kʷəʔ **kʷɬ** təlʼ-nəxʷ tsə nə sčəsəqʷ
AUX 1.sg INF PERF get.found-NCTR D my hat
'I have already found my hat.'

d. ləʔə sən kʷəʔ **kʷɬ** kʷən-nəxʷ tə Jack
AUX 1.sg INF PERF get.seen-NCTR D Jack
'I have met Jack already./ I have met Jack before.'

(17) On-going situation reading:

a. **kʷɬ** łčíẃs sən
PERF tired (IMPF)[10] 1.sg
'I am tired already/now.'

b. ʔełtiʔ **kʷɬ** łəḿxʷ
AUX PERF rain(IMPF)
'It is raining already/now.'

c. ʔełtiʔ **kʷɬ** čé-ʔ-iʔ tiʔə Jack
AUX PERF work(IMPF) D Jack
'Jack is working already/now.'

[9] Montler (1986) glosses *kʷɬ* as 'realized'. Since I claim it is a perfect marker, however, I gloss it as PERF (perfect).
[10] The morpheme glossed as 'IMPF' here is what Montler (1986) calls the 'actual'. It has three allomorphs: CV reduplication, stress shift, and glottal stop infixation (Montler 1986, Kiyota 2004a, Turner 2005).

d. ləʔətə **k^{w}ɬ** šə́t-əŋ tsə nə qeq
AUX PERF walk(IMPF)-CMDL D my baby
'My baby has been walking.'

(18) Inceptive reading: coming about of a situation.

a. **k^{w}ɬ** čéy tiʔə Jack
PERF work D Jack
'Jack has started working.'

b. **k^{w}ɬ** št-əŋ tsə nə qeq
PERF walk-CMDL D my baby
'My baby has started walking.'

c. **k^{w}ɬ** ɬčik^{w}əs tə Jack
PERF get.tired D Jack
'Jack has started feeling tired / Jack is getting tired.'

d. **k^{w}ɬ** ƛečəq tiʔə Jack
PERF get.mad D Jack
'Jack has started feeling mad / Jack is getting mad.'

The data presented here show not only that *k^{w}ɬ* does not just mean 'already', but also that it yields three apparently contradictory readings: the completion reading which picks out the end of a situation, the on-going situation reading which means that the situation is in progress, and the inceptive reading which focuses on the beginning of a situation. That is, it seems that the particle can pick out three different stages of an event, initial, middle, or final. To account for the various readings, I propose that the particle is an aspectual marker. More specifically, I argue that it is a perfect marker[11] which introduces the perfect time span (PTS) (Iatridou et al. 2001), in a version of the "extended now (XN)" theory (McCoard 1978, von Stechow 1999 a.o.). I further propose a

[11] The perfect marker in Yoruba has the basic interpretation 'already' (Dahl 1985).

unified account for these various readings: they are analyzed as sub-types of the perfect reading yielded by the interaction between lexical aspect, viewpoint aspect, and *kʷɬ* as a perfect marker.

The semantics I will propose in Chapter 3 for the two viewpoint aspects in Sənčáθən are as shown in (19).

(19) a. [[Imperfective]] = λP.λ*i*.∃e.[*i* ⊆ τ(e) & P(e)] (Kratzer 1998, Bar-el 2005)

b. [[Perfective]] = λP.λ*i*.∃e.∃e'[e'⊑ e & τ(e')⊂ *i* & P(e)]

The meaning of the particle *kʷɬ* as a perfect marker is proposed as shown in (20).

(20) [[*kʷɬ*]] = λP.λ*i*.∃*i'*.[PTS(*i'*: *i*) & P(*i'*)]
where *i* = reference time (= introduced by tense); *i'* = PTS (perfect time span)
PTS(*i'*: *i*) iff *i* is a final subinterval of *i'*. (c.f. Pancheva 2003)

In Chapter 3, then, I shall show that the observed range of interpretations with *kʷɬ* is actually due to interaction between lexical aspect, the semantics of one of the viewpoint aspects in (19), and the semantics of the perfect in (20).

In Chapter 5, I investigate the *-tei-* construction in Japanese and propose that the *-tei-* part of *-teiru* is a perfect marker. As mentioned above, *-tei-* induces a strikingly wide range of readings. The reading is that of an on-going process (progressive) with both kinds of process verbs: activities, as shown in (21), and accomplishments, as shown in (22).

(21) a. Taroo-ga soto-o arui-*tei*-ru.
Taroo-NOM outside-ACC walk-TEI-PRES
'Taroo is walking outside (now).'

b. Jiroo-ga odot-tei-ru
Jiroo-NOM dance-TEI-PRES
'Jiroo is dancing (now).'

c. Hanako-ga hahaoya-o tetudat-tei-ru
Hanako-NOM mother-ACC help-TEI-PRES
'Hanako is helping her mother (now).'

(22) a. Taroo-ga kuruma-o naosi-*tei*-ru.
Taroo-NOM car-ACC fix-TEI-PRES
'Taro is fixing a/the car (now).'

b. Jiroo-ga ie-o tate-tei-ru
Jiroo-NOM house-ACC build-TEI-PRES
'Jiroo is building a/the house (now).'

c. Hanako-ga seetaa-o an-dei-ru
Hanako-NOM sweater-ACC knit-TEI-PRES
'Hanako is knitting a/the sweater (now).'

In contrast, the -*tei*- yields a resultant state (resultative) reading with two kinds of change of state verbs: achievements, as shown in (23), and inchoative states, as shown in (24).

(23) a. Ano-tegami-ga todoi-tei-ru
that-letter-NOM arrive-TEI-PRES
'That letter has arrived (and is here now).

b. Hanako-ga saifu-o nakusi-tei-ru
Hanako-TOP purse-ACC lose-TEI-PRES
'Hanako has lost her purse (and she doe not have it now).

c. Taroo-ga ano-hon-o mituke-tei-ru
Taroo-TOP that-book-ACC find-TEI-PRES
'Taroo has found that book (and he knows where it is).

(24) a. Taroo-wa tukare-tei-ru.
Taroo-TOP get tired-TEI-PRES
'Taro is tired.'

b. Tokei-ga koware-tei-ru
clock-NOM break-TEI-PRES
'The clock is broken.'

c. Mado-ga kumot-tei-ru
window-NOM get foggy-TEI-PRES
'The window is foggy.'

It is a very well-known, interesting fact that *-tei-* can also induce an experiential perfect reading with any eventive verb type; this is illustrated in (25).

(25) a. Taroo-wa izen kono-kooen-o arui-tei-ru. (Activity)
Taroo-TOP before this-park-ACC walk-TEI-PRES
'Taro has walked in this park before.'

b. Taroo-wa nandomo kuruma-o naosi-tei-ru. (Accomplishment)
Taroo-TOP many times car-ACC fix-TEI-PRES
'Taro has fixed cars many times.'

c. Taroo-wa itido saifu-o nakusi-tei-ru. (Achievement)
Taroo-TOP once purse-o lose-TEI-PRES
'Taroo has lost his purse once.'

d. kono-kuruma-wa itido koware-tei-ru. (Achievement)
this-car-TOP once break down-TEI-PRES
'This car has broken down once.'

The progressive is generally regarded as a type of imperfective, which expresses incompleteness, while resultative and experiential perfect readings are associated with perfective aspect, which encodes the completion of an event. A puzzle, therefore, is why *-tei-* can yield this varied range of readings.

In order to account for this fact, much previous research has assumed that *-tei-* is ambiguous between imperfective and perfect meanings (Kudo 1995, Ogihara 1998a, Shirai 2000).[12] Nishiyama (2006) and McClure (1996), in contrast, argue that *-tei-* is monosemous. Nishiyama, for example, claims that the apparent ambiguity of the *-tei-* construction is due to two operators, imperfective and bounding (MAX). Although I agree with Nishiyama that *-tei* is not ambiguous, I argue that *-tei-*does not contain these two operators. Instead, I claim that *-tei-* as a whole is a perfect marker, and the various interpretations are derived by interaction between lexical aspect, the perfect, and potentially the semantics of a temporal adverb. Furthermore, following Portner's (2003) analysis of the English perfect, I propose that *-tei-* as a perfect marker also contains a pragmatic component, in which the pragmatics (presupposition) of the perfect contributes to the different readings. The semantics and pragmatics of *–tei-* are shown in (26) and (27) respectively.

(26) $[[\text{-}tei\text{-}]] = \lambda P.\lambda e.\lambda t.\exists e'[\, e' \sqsubseteq e \,\&\, \tau(e') < t \,\&\, P(e)]$

[12] Kusumoto (2004) even claims that the *-te-* part of *-tei-* has four distinct meanings.

(27) A sentence S of the form TEI(ϕ) presupposes:

$\exists q[ANS(q) \& \mathbf{P}(p, q)]$

where ANS is true of any proposition which is a complete or partial answer to the discourse topic at the time S is uttered, and the default topic or question is 'What is happening now?'

In (26), '⊑' represents a part-relation: *e'* ⊑ *e* means that *e'* is sub-component of *e*. '<' is a temporal relation: τ(*e'*) < *t* means 'the run time of *e'* precedes *t*.' The logical translation in (26) says that a sentence containing *P-tei* is true of an event *e* and a time *t* iff *e* is a P-event and there is an eventuality *e'* such that *e'* is an eventuality (sub-event) included in *e*, and the run time of *e'* precedes *t*. The actual function of the semantic and pragmatic components of *–tei-* will be elucidated in Chapter 5.

The surface similarities and differences in terms of the functions and meanings of the perfect in the two languages can be captured partly by the difference in the semantics of the perfect. The semantics of *–tei-* shown in (26) is quite different from that of *k*^{w}*ɬ* shown in (20) in that the former indicates an anteriority relation between the runtime of an event *τ(e')* and the reference time *t*, whereas the latter introduces the perfect time span (PTS) *i* which is a sort of reference time, and relates it to the reference time *i'*. In other words, *-tei-* is a function from a set of events to a set of intervals, whereas *k*^{w}*ɬ* is a function from a set of intervals to another set of intervals.

This difference in the semantics of the perfect also correlates with the other striking difference between the two languages. The various readings of the *k*^{w}*ɬ* construction depend on both a lower viewpoint aspect (i.e. perfective or imperfective) and situation aspect, whereas the

various readings of the *-tei-* construction depend directly on the situation aspect of the predicate.

The thesis is concluded in Chapter 6, where I discuss some cross-linguistic consequences and implications of my proposals by comparing with other languages: Indo-European (including English and Icelandic) and Salishan (including Sḵwx̱wú7mesh and St'át'imcets).

4 The current situation of the two languages

Sənčáθən, which is spoken on the Saanich Peninsula north of Victoria and neighboring islands, is a dialect of Northern Straits Salish. Northern Straits Salish is a member of the Coast Salish language group, a sub division of the Salish language family.[13] The other dialects of Northern Strait Salish include Sooke, spoken around Sooke Basin, Songish, spoken around Victoria, and Lummi, spoken around Bellingham, USA, and neighbouring islands (Montler 1986).

Sənčáθən, as is the case for many other Salish languages, is an endangered and under-represented language. There were only some twenty fluent Sənčáθən speakers left as of 1986 (Montler 1986), and currently the number of fluent speakers of the entire Northern Straits Salish language is less than twenty, most of whom are in their 60s or older (Gordon 2005).

There have been some efforts for revitalization of the language. Sənčáθən was preserved only in oral form until 1967, when one of the fluent speakers developed a unique orthography, and the people started recording the language in written form. Currently, the Saanich community has been working, in the effort of passing their language on to younger generations, on the development of software that enables students to create multimedia presentations using text,

[13] The Salish language family consists of 23 languages. See Czaykowska-Higgins and Kinkade (1998) for details about the other Salish languages.

audio, and video (Brand et al. 2002).

Only a few studies have been done on aspect in Sənčáθən previously, none of which is a formal study. Among the previous studies are part of Montler (1986), which is a general descriptive study of phonology and morphology in Sənčáθən, and Turner (2007), which is also a descriptive study of the imperfective aspect in Sənčáθən. I will discuss these studies as relevant in Chapters 2, 3, and 6.

Japanese, in contrast, is one of the major languages of the world with over 140 million speakers mostly living in Japan.[14] It is a well studied language in terms of all the core areas of linguistics. Half of this thesis deals with the aspectual system in Japanese, which has also been a major interest for a number of linguists such as Kindaichi (1950), Fujii (1978), Kudo (1995), Ogihara (1998a, b), and Nishiyama (2006), among others. Details of previous research on aspect in Japanese will be discussed in Chapter 4 and Chapter 5.

5 Research methods

Although this dissertation presents formal linguistic research, most of the data that this thesis is based on are from my original fieldwork. For collecting Sənčáθən data, I have been conducting fieldwork with a Saanich elder, Mrs. Stella Wright from the East Saanich Reserve, who is one of only a few fluent Sənčáθən speakers left. When I started the fieldwork with her in spring 2004, she was already in her late 80s.

[14] According to Statistics Bureau and Statistical Research and Training Institute (2005). Retrieved on 2008-02-26.

The data collection in my fieldwork involved the elicitation and recording of new language data including simple words, phrases, and sentences. Some of the words, phrases, and sentences were also taken from Montler (1986) or Montler (1991), and presented to the speaker. This was done by requesting the speaker to answer any of the following questions:

(28) a. I presented an English word, phrase, or sentence, and requested the speaker to translate it into Sənčáθən.
b. I presented a Sənčáθən word, phrase, or sentence, and requested the speaker to translate it into English.
c. I presented a Sənčáθən sentence with a certain context, and asked to the speaker for a felicity judgment.
d. I presented more than one Sənčáθən sentence, and asked the speaker to judge which one is the most appropriate depending on the context.

The elicitation sessions were usually attended by Mrs. Wright and me alone, and occasionally by an additional UBC student who asked questions for her/his own research.

The fieldwork with Mrs. Wright was not just data collection, but also a rare opportunity to learn about the Saanich people's traditional life, culture, and heritage, which I really enjoyed. I hope that the results of my research will benefit not only the academic community, but also the Saanich community as a whole.

Chapter 2 Aspectual classification and properties of verbs in Sənčáθən

1 Introduction

As discussed in Chapter 1, much previous work on the aspectual classification of verb phrases has proposed four classes of verb phrases, based primarily on English facts: states, activities, accomplishments, and achievements (Vendler 1967, Dowty 1979). These classes differ in the temporal properties of dynamism, durativity, and telicity as shown in (1).

(1) a. States: static, durative, atelic
know, believe, have, desire, love
b. Activities: dynamic, durative, atelic
laugh, walk, sing, stroll in the park
c. Accomplishments: dynamic, durative, telic
paint a picture, make a chair, draw a circle
d. Achievements: dynamic, instantaneous, telic
recognize, spot, find, lose, reach, die

These four different classes of English verb phrases are distinguished by many standard tests in the previous literature. Among these, the *progressive test* is used to distinguish statives from non-statives, the *in an hour / for an hour* test distinguishes telic and atelic verbs, and the *almost test* is invoked to examine distinctions between accomplishments and activities.

However, these tests are not necessarily applicable to other languages, making it impossible to classify all verb phrases based on these tests alone. Among the languages in which these tests do not work are Japanese (Kiyota 2003c), Dëne Sųłiné (Wilhelm 2003), St'át'imcets

(Matthewson 2004) and Sḵwx̱wú7mesh (Bar-el 2005)[1]. Wilhelm shows that common diagnostics sensitive to telicity like the *in an hour/for an hour* test and the *stop/finish* tests are not applicable to Dëne Sųłiné since the language does not lexically distinguish 'in an hour' from 'for an hour' or 'finish' from 'stop' (Wilhelm 2003). Similar facts have been observed in St'át'imcets (Matthewson 2004) and Sḵwx̱wú7mesh (Bar-el 2005).

As with many languages, most standard tests are inapplicable to verbs in Sənčáθən. Thus some language-internal diagnostics are required. I have found at least three language-specific diagnostics which make it possible to classify different aspectual classes of Sənčáθən verbs: the interpretation of out-of-the-blue sentences with no overt tense marking, interpretation with the particle *k^{w}ɬ*, and the availability or unavailability of the stative prefix *s*-.

In this chapter I invoke standard tests as well as language-internal tests. Based on the results of the tests, I propose that Sənčáθən verbs are divided into five aspectual classes, as shown in (2).

(2) Situation aspect in Sənčáθən
   a. Homogeneous states
   b. Inchoative states
   c. Activities
   d. Achievements
   e. (Non-culminating) accomplishments

[1] Dëne Sųłiné, also known as Chipewyan, is a Northern Athapaskan language spoken in the Northwest of Canada, St'át'imcets or Lillooet Salish is an Interior Salish language spoken in Interior BC (Matthewson 2004), and Sḵwx̱wú7mesh or Squamish Salish is a Coast Salish language traditionally spoken in the Squamish Valley, Howe Sound, and Vancouver area (Bar-el 2005).

As shown in (2), there are two kinds of states in Sənčáθən: homogeneous states and inchoative states (Huang et al. 2000 for Chinese, Bar-el 2005 for Sḵwx̱wú7mesh). Homogeneous states are truly static eventualities, which are unbounded situations that do not contain any inherent endpoint. The majority of this class are individual-level states which express inherent, permanent properties of an individual, but some of them are stage-level states. Inchoative states, on the other hand, entail an initial point. These express temporary, transitory properties of an individual and thus represent typical stage-level states with an additional initial change-of-state. Activities express dynamic events that entail an initial point followed by a process. Achievements entail only a change of state; most of these are unaccusative verbs. Non-control transitives are also included in this class[2]. Lastly, predicates which correspond to accomplishments in English are non-culminating in Sənčáθən. Most of them are derived from unaccusatives that may be categorized as achievements (Kiyota 2004a, 2004b, 2004c). As discussed in Chapter 6, my findings largely parallel Bar-el's (2005) for Skwxwú7mesh though, based on partially different diagnostics.

2 Classifying Sənčáθən verbs

In this section, I invoke the following diagnostics to examine the temporal properties of Sənčáθən verbs. In examining the temporal properties of verbs, I use the term 'endpoints' or 'points' to refer to changes of state. Specifically, an initial point refers to an initial change-of-state, while a final point refers to a final change-of-state or culmination point (Bar-el 2005).

[2] Detailed anlysis of non-control transitives as achievements will be given in Section 2.4.

(3) Tests for initial and final points
   a. Interpretation of out-of-the-blue sentences
   b. Interpretation with punctual clauses and adverbials
   c. Interpretation with *kʷɬ*
   d. Interpretation with *čəlel* and *xʷeləq* 'almost'

2.1 Diagnosing presence/absence of a final point

In this subsection, I show how we can distinguish telic/bounded events from atelic/unbounded events (Smith 1997) in Sənčáθən. Atelic/bounded events are events that do not contain an inherent final point, such as states and activities in English. Telic/bounded events are events that do contain an inherent end point: in English, this kind of event includes accomplishments and achievements (Dowty 1979, Smith 1997, among others).

In order to distinguish telic from atelic predicates in Sənčáθən, I adopt one aspectual test used in the previous literature, namely the *out-of-the-blue sentence interpretation test* (see Matthewson 2004 for St'át'imcets, Bar-el 2005 for Skwxwú7mesh). The other test is a language-internal test: *interpretation with the pre-predicate particle kʷɬ.*

2.1.1 Out-of-the-blue sentence interpretation

The first diagnostic invoked is the out-of-the-blue sentence interpretation test. Sənčáθən is a so-called 'tenseless language'. This does not mean that there is no way to distinguish past from present, however. The language does have tense markers for past and future, but tense marking is optional. In normal speech, the time of the event is indicated by adverbial phrases and/or context. When a tense is not clearly indicated in these ways, it is interpreted by the temporal properties of

the verb phrases. Thus, readings of out-of-the-blue sentences without overt tense marking manifest differences between different types of verbs.

I presented tenseless sentences to my consultant and asked her to volunteer an English gloss for each sentence. The result of this test shows that the aspectual class of predicates influences tense interpretations (Bohnemeyer and Swift 2004, Matthewson 2006). Sentences with states are interpreted as present states. Activities are also translated as present, in this case as present progressive events. Achievement and accomplishment sentences, in contrast, are interpreted as past events.

In an out-of-the-blue context, states are normally interpreted as describing a present state, as illustrated in (4) and (5).

(4) a. k'^{w}amk'^{w}əm tiʔə Jack
strong D Jack
'Jack is strong.'

b. čəq tiʔə nə sqeẋ̣əʔ
big D my dog
'My dog is big.'

c. sex^{w}səx^{w} tsə Jack
lazy D Jack
'Jack is lazy.'

d. sk'^{w}ati tə Jack
crazy D Jack
'Jack is crazy /stupid.'

(5) a. łčík^{w}əs[3] tə Jack
get.tired D Jack
'Jack is tired.'

b. hílək^{w} tə Jack
get.happy D Jack
'Jack is happy.'

c. téčəq tiʔə Jack
get.mad D Jack
'Jack is mad.'

d. k'^{w}əy tə Jack
get.hungry D Jack
'Jack is hungry.'

These readings are the default when the sentences are presented out-of-the-blue. Note that an inchoative reading is also available for the stative sentences in (5) in specific contexts. For instance, (5a) can be used to mean "Jack got tired." Note also that it is possible to use the same stems in (5) in the imperfective (the "actual" in Montler's 1986 terms) form to describe the current state reading, as shown below[4]:

[3] The underlying form of the labio-velar plosive [k^{w}] is /w/, which surfaces as the plosive in some phonological environments (Montler 1986).

[4] For an inchoative habitual reading, the perfective form is used. Thus:

(i) nəčex̣^{w} ʔiʔ čen' sən ʔəw' łčík^{w}əs
sometimes ACC really 1SUB CONTMP get tired
'I sometimes get really tired.'

(ii) nəčex̣^{w} ʔiʔ čen' sən ʔəw' t'éčəq
sometimes ACC really 1SUB CONTMP get mad
'I sometimes get really mad.'

(6) a. łčíw'əs[5] tə Jack
get.tired(IMP) D Jack
'Jack is tired.'

b. hí-ʔə-ləkʷ tə Jack
get.happy(IMP) D Jack
'Jack is happy.'

c. t'ə-t'éy'əq tiʔə Jack
get.mad(IMP) D Jack
'Jack is mad.'

However, there are differences in meaning between the sentences in (5) and (6). First, the inchoative states in the imperfective in (6) do not have inceptive readings. Second, each sentence without the imperfective morphology in (5) implies that the subject has just begun to feel tired/happy/mad. In contrast, each sentence with the imperfective morpheme in (6) implies that the subject has been tired/happy/mad for a while at the utterance time.

The states in (4), on the other hand, do not occur in the imperfective form. The majority of this class have already undergone a radical morphological process, *characteristic* reduplication (Montler 1986). These data provide evidence that Sənčáθən has two kinds of states, and this issue will be addressed in more detail in section 2.2.

The data in (7) show that achievements are consistently interpreted as past events. They are never interpreted as events that are presently on-going. In fact, my consultant rejected present interpretations for these examples.

[5] There are three primary forms of imperfective in Sənčáθən: a glottal stop infixation, a CV reduplication, and a stress shift/metathesis (Montler 1986), all of which also involve glottalization of a non-initial resonant. (6a) shows the glottal stop infixation which is realized as a glottalization of the underlying /w/; (6b) also shows the glottal stop infixation; and (6c) shows the CV reduplication plus glottalization of a resonant /y/. Compare the imperfective forms in (6) and their non-imperfective (perfective) counterparts in (5).

(7) a. q'^{w}áy tə Jack
die D Jack
'Jack died.'

b. téčəl sən
arrive 1.sg
'I arrived.'

c. xə́ɬ tə nə-q'^{w}áləŋ
get.hurt D my-ear
'I hurt my ear / my ear got hurt.'

d. ɬít'^{θ} t^{s}ə nə-séləs
get.cut D my-hand
'I cut my hand / my hand got cut.'

e. q'^{w}és t^{s}ə nə–sélas
get.burnt D my-hand
'I burned my hand / my hand got burned.'

f. ləʔə[6] k^{w}əʔ tə́k^{w} tsə nə-sə́nəʔ
AUX INF get.broken D my-feet
'I broke my feet / my feet got broken.'

Accomplishments are also interpreted as past events, unless a specific situation is given; my consultant rejected a present interpretation in an out-of-the-blue context.

(8) a. ləʔə sən k^{w}əʔ lət'^{θ}-át tsə nə-sq^{w}átən
AUX 1.sg INF get.filled-CTR D my-bucket
'I filled up my bucket.'

[6] The auxiliary *ləʔə* with a clitic *k^{w}əʔ* 'informative' is optional: a sentence without these words means exactly the same according to my consultant. This auxiliary, as with the other one *ʔeɬəʔ*, seems to have some spacial/temporal deictic function, but the analysis of these auxiliaries is beyond the scope of this dissertation.

b. ləʔə sən kʷəʔ lé-t tˢə nə-snə́xʷəɬ
AUX 1.sg INF get.fixed-CTR D my-canoe
'I fixed my canoe.'

c. ləʔə sən kʷəʔ qʼépʼ-ət tˢə laplaš
AUX 1.sg INF get.tied-CTR D lumber
'I tied the lumber.'

d. ləʔə sən kʷəʔ tʼ$^{\theta}$ékʷ-ət tˢə nə-ɬənəptən
AUX 1.sg INF get.washed-CTR D my-floor
'I cleaned my floor.'

e. ləʔə ɬta kʷəʔ čán-ət kʷs Jack
AUX 1.pl INF get.buried-CTR D Jack
'We buried Jack.'

Among the non-statives, only activities behave differently from other types of non-statives. For this type, the past reading is not available in an out-of-the-blue context without the past marker or some other signal of a past event. Although Montler (1986) claims that the past marker *ləʔ* is not obligatory and is usually used for the emphatic past tense, it is evident that, according to my consultant, past readings are not available for activities without the past particle, as the examples in (9) illustrate.

(9) a. ləʔə tə tʼǐ́ləm tə Jack
AUX D sing D Jack
'Jack is singing. / *Jack sang.'

b. qékʷ-əŋ tiʔə Jack
rest-CMDL D Jack
'Jack is resting. / *Jack rested.'

c. kʷənéŋ-ət sən kʷθə nə-tén
help-CTR 1.sg D my-mother
'I am helping my mother. / *I helped my mother.'

In (9), all three sentences were translated as present progressive sentences, and a past interpretation was not available to my consultant.[7] To obtain the past reading, the past marker must be supplied as shown in (10).

(10) a. t'ǐləm ləʔ tə Jack
sing PAST D Jack
'Jack sang.'
b. qékʷ-əŋ ləʔ tiʔə Jack
rest-CMDL PAST D Jack
'Jack had a rest.'
c. kʷənéŋ-ət ləʔ sən kʷθə nə tén
help-CTR PAST 1.sg D my mother
'I helped my mother.'

The results of the first diagnostic, the interpretation of out-of-the-blue tenseless sentences, are summarized in Table 2.1. For out-of-the-blue tenseless forms, states are interpreted as present states, as shown in (4) and (5). Achievements and accomplishments, on the other hand, pattern

[7] Montler (p.c.) observes that there are a number of cases where activities without the past marker can reasonably be translated with the English past tense. For example, he gives two English glosses for the following sentence in Montler (1986: 177):

(i) qékʷ-əŋ sən
rest-CMDL 1.sg
'I rested. / I am resting.'

However, the first gloss was rejected by my consultant, and she said that the past particle was required to express the past reading.

with each other: they are all interpreted as past events. As for activities, they are interpreted as present progressive events and a past interpretation is not available without the past marker.

Table 2.1 Summary of the out-of-the-blue tenseless sentence test

		Present	Past
Atelic	States	√	*
	Activities	√	*
Telic	Accomplishments	*	√
	Achievements	*	√

This result suggests that in a language like Sənčáθən, in which tense-marking is optional, there is a correlation with the aspectual properties of verb classes. That is, (a)telicity or culmination is related to the temporal interpretation of predicates. More specifically, the present reading for states and activities is because these two classes are atelic/unbounded: they do not contain a final/telic/culmination point in their meaning. In contrast, accomplishments and achievements always yield the past reading. However, as elucidated in Section 2.4., there is a crucial difference between these two classes in telicity. Achievements contain a final/telic/culmination point in their meaning, and thus they are telic/bounded. Accomplishments, on the other hand, do not contain a culmination point in their semantic representation. The culmination requirement of accomplishments in Sənčáθən is an implicature (Bar-el et al. 2005, Matthewson 2006), and this is why all the perfective sentences in an out-of-the-blue context are interpreted as the past events. In this sense, accomplishments in Sənčáθən are quasi-telic.

2.1.2 Interpretations with the particle *kʷɬ*

The pre-predicate particle *kʷɬ* in Sənčáθən can also be used as a diagnostic to classify verbs in terms of aspectuality[8]. Montler (1986) glosses this particle as *realized* and he suggests that it means *already* in most cases. The *already*-like function of the particle has been observed in my fieldwork, but I have also found an interesting correlation between the aspectuality of a predicate and the interpretation of a sentence containing *kʷɬ*.[9] *kʷɬ* induces an inceptive reading with inchoative states, as shown in (11), and activities, as shown in (12).

(11) a. kʷɬ ɬčík^{w}əs tə Jack
PERF get.tired D Jack
'Jack has begun to feel tired.'

b. kʷɬ t'éčəq tiʔə Jack
PERF get.mad D Jack
'Jack has begun to feel mad.'

c. kʷɬ híləq tiʔə Jack
PERF get.happy D Jack
'Jack has begun to feel happy.'

(12) a. ləʔətə kʷɬ náč-əŋ
AUX PERF laugh-CMDL
'He has begun to laugh.'

b. ʔəɬtiʔ kʷɬ x^{w}áŋ
AUX PERF cry
'He has begun to cry.'

[8] This diagnostic, which is language-specific, was discovered in the course of my primary fieldwork on Sənčáθən.
[9] Detailed analysis of the *kʷɬ* construction is one of the major goals of this thesis; it will be discussed extensively in Chapter 3.

c. ləʔətə kʷɬ čéy tiʔə nə snáxʷəɬ
AUX PERF work D my car
'He has started to work on my car.'

With achievements and accomplishments, in contrast, the entire sentence is translated using the present perfect, which asserts completion of the event, as shown in (13) and (14).

(13) a. kʷɬ qʷəy θə speʔəθ
PERF die D bear
'The bear has died.'
b. kʷɬ téčəl sən
PERF arrive 1.sg
'I have (already) arrived / I am here.'

(14) a. ləʔə sən kʷəʔ kʷɬ léʔ-ət tsə nə-látem
AUX 1.sg INF PERF get.fixed-CTR D my-table
'I have already fixed my table.'
b. kʷɬ ləṯ'$^{\theta}$-át sən tsə nə-skʷátən
PERF get.filled-CTR 1.sg D my-bucket
'I have filled up my bucket already.'

Notice also that the inceptive/inchoative readings of states and activities in (11) and (12) are also cases of the present perfect, as indicated by the translation 'has begun' etc. In Chapter 3, I will provide a detailed analysis of the semantics of the particle *kʷɬ*, and its interaction with perfective/imperfective aspect as well as situation aspect.

The result of the second language-internal diagnostic is summarized in Table 2.2.

Table 2.2 Summary of the interpretation of *kʷɬ* test

		Inception	Completion
Atelic	States	√	*
	Activities	√	*
Telic[10]	Accomplishments	*	√
	Achievements	*	√

As shown in the table, this test draws the same boundary between the atelic predicates (states and activities) and the telic predicates (achievements and accomplishments) as the previous one. Thus we can conclude at this point that states and activities on the one hand and achievements and accomplishments on the other hand form two natural classes. In the reminder of this section, I will examine each class and propose a more specific classification for Sənčáθən predicates.

2.1.3 (Un)availability of the stative prefix s-

The third language-internal test that I invoke is the availability or unavailability of the stative prefix *s*- with different verb classes (c.f., Burton and Davis 1996 for St'át'imcets, and Bar-el 2003 for Sḵwx̱wú7mesh). This prefix indicates that the subject is in a state characterized by, or the result of which is indicated in the stem (Montler 1986)[11].

This prefix occurs most commonly with achievements. The examples of derived states ('resultives' in Montler's 1986 terms) in (15) are all derived from unaccusative roots which are analyzed as achievements.

[10] I actually do not analyse accomplishments as telic. See discussion in 2.4.1.

[11] This prefix (abbreviated as STAT) often occurs with the durative (DUR) suffix -əɬ and/or resultive (RES) which is marked with reduplication and change of /ə/ to [a] or [e] (Montler 1986). According to Turner (2006), the suffix does not add the meaning of 'durative', but presence or absence of the suffix is predictable phonologically. I follow Turner in this respect.

(15) a. s-x^{w}áy-əɬ tiʔə Jack
STAT-wake.up-DUR D Jack
'Jack is awake.'

b. s-ták^{w}-əɬ tə sčéyaʔ
STAT-get.broken-DUR D stick
'The stick is broken'

c. ləʔətə k^{w}ɬ s-lé-ləʔ tə látem
AUXD PERF STAT-RES-get.fixed D table
'The table has been fixed.'

d. ləʔə k^{w}əʔ s-lét'$^{\theta}$-əɬ t^{s}ə ne-sk^{w}átən
AUX INF STAT-get.filled-DUR D my-bucket
'My bucket is full.'

These unaccusative roots are also bases for accomplishments as shown in (16).

(16) a. ləʔə sən k^{w}əʔ x^{w}áč-ət tə Jack
AUX 1.sg INF wake.up-CTR D Jack
'I woke up Jack.'

b. ləʔə sən k^{w}əʔ tk^{w}-ə́t tə sčéyaʔ
AUX 1.sg INF get.broken-CTR D stick
'The stick is broken'

c. ləʔə sən k^{w}əʔ lé-t tə látem
AUX 1.sg INF get.fixed-CTR D table
'I fixed the table.'

d. ləʔə sən k^{w}əʔ lət'$^{\theta}$-át tsə nə-sq^{w}átən
AUX 1.sg INF get.filled-CTR D my-bucket
'I filled up my bucket.'

However, this does not show that the stative prefix can co-occur with accomplishments because

the roots in (16) are achievements. Accomplishments are derived from these roots but I have not tested the prefix with the derived accomplishments yet.[12] However, since there is no example of accomplishments with the stative prefix in Montler (1986) or Montler (1992) at all, I assume that derived accomplishments cannot co-occur with the stative prefix.

Activities and inchoative states cannot take this prefix as shown in (17).[13]

(17) a. ɬčík^{w}əs k^{w}s Jack
tired D Jack
'Jack is tired.' *s-ɬčík^{w}əs k^{w}s Jack
Consultant's comment: We never say the word with the prefix.

b. q'^{w}íiliš tiʔə Jack
dance D Jack
'Jack is dancing' *s-q'^{w}iiliš tiʔə Jack
Consultant's comment: It doesn't make sense to say s-q'^{w}iiliš.

c. x^{w}ít-əŋ tə Jack
jump-CMDL D Jack
'Jack jumped' *s- x^{w}ítəŋ tə Jack
Consultant's comment: You have to say x^{w}ítəŋ tə Jack.

The result of this language-internal test is summarized as follows.

[12] The relation between achievements and derived accomplishments will be elucidated in Section 2.4.
[13] Homogeneous states are not considered here. The majority of homogeneous states are marked with the characteristic (CVC) reduplication of the root without the stative prefix.

Table 2.3 Summary of the stative prefix test

	Availability of the stative form
States	*
Activities	*
Accomplishments	*
Achievements	√

This test shows that only achievements can take the stativizer *s*-, while states, activities, and accomplishments pattern with each other.

A summary of the three language-internal diagnostics is given in Table 2.4.

Table 2.4 Summary of the three language-internal diagnostics

Type of verb	Tenseless sentence	kʷɬ	Stative prefix
States	Present	Inception	No
Activities	Present	Inception	No
Accomplishments	Past	Completion	No
Achievements	Past	Completion	Yes

In the next sub-section, I will present evidence that Sənčáθən has two kinds of states.

2.2 Two kinds of states: inchoative states and homogeneous states

In this subsection, I argue that states in Sənčáθən must be further subdivided into two classes, which I call *inchoative states* (Bar-el 2005) and *homogeneous states*. Inchoative states are stative events that contain an initial change-of-state point in their meaning, while homogeneous states are simple states that have neither an inherent initial point nor an inherent final point.

In order to distinguish these two states, two diagnostics are invoked. The first diagnostic is the punctual clause test (Bar-el 2005). Smith (1997) uses punctual clauses and adverbials as evidence that the English imperfective viewpoint does not entail endpoints. Extending her idea, Bar-el proposes that this test can also be used to test the availability of initial points in Squamish Salish. Following Bar-el, I adopt this diagnostic to examine the presence or absence of initial points in Sənčáθən predicates. That is, I will interpret an inceptive reading as evidence for an initial change of state, and a terminative reading as evidence for a final change of state.

As discussed in section 2.1., states tend to be translated in the present with the out-of-the-blue sentence test, as repeated below.

(4) a. k'^{w}ámk'^{w}əm tiʔə Jack
strong D Jack
'Jack is strong.'

b. čəq tiʔə nə sqeχ̣əʔ
big D my dog
'My dog is big.'

c. séx^{w}səx^{w} tsə Jack
lazy D Jack
'Jack is lazy.'

d. sk^{w}ati tə Jack
crazy D Jack
'Jack is crazy /stupid.'

(5) a. łčík^{w}əs tə Jack
get.tired D Jack
'Jack is tired.'
b. hílək^{w} tə Jack
get.happy D Jack
'Jack is happy.'
c. t'éčəq' tiʔə Jack
get.mad D Jack
'Jack is mad.'
d. k'^{w}əy tə Jack
get.hungry D Jack
'Jack is hungry.'

The two sets of examples in (4) and (5) pattern with each other for the test in 2.1. However, notice that the English translation of every predicate in (4) is an individual-level predicate, while that in (5) is a stage-level predicate. Roughly speaking, individual-level predicates express, more or less, permanent or inherent properties of the subject, whereas stage-level predicates express temporary properties of the subject (Carlson 1977). In Chinese, stage-level states and individual-level states behave distinctly in many ways. For example, stage-level states are compatible with the aspect marker *le*, but individual-level states are usually not (Chang 2003). Though I will not discuss the details of his analysis in this thesis, Chang argues in a nutshell that Chinese individual-level states denote permanent properties, and do not contain an initial point or an end point. Stage-level states, on the other hand, do contain an initial point. Likewise, Huang et al. (2000) divide Chinese statives into two subclasses: inchoative states and homogeneous states, based on the different behaviours that different types of states show.

Do these two kinds of states behave differently from each other in Sənčáθən? The result of the punctual adverbial test suggests that the states must be sub-divided into two sub-classes based on the presence/absence of an initial point. Bar-el (2005) uses this diagnostic to determine whether different classes of verbs in Sḵwx̱wúmesh have an initial point. I adopt her way of using this test to see whether Sənčáθən verbs have an initial point.

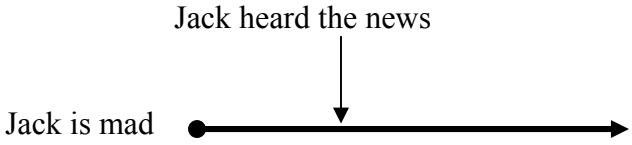
With this test, the set of verbs in (4) can be distinguished from (5). Consider the following:

(18) t'ečəq' tə Jack k^ws $k^wɬ$ təl-nəx^w-s tə $sq^wəl'q^wəl'$
mad D Jack SUB PERF hear-NCTR-3.sg D news
'Jack was mad when he heard the news.'

Figure 2.1 An inchoative state with a punctual clause

a. √Jack was not mad before, but he became mad because of the news.

b. *Jack was already mad when he heard the news.



For the utterance in (18), the only available reading is (a) in Figure 2.1, which is an inceptive interpretation. That is, it describes a change of state from not being mad to being mad, that takes place at the time when Jack hears the news. The interpretation (b) in Figure 2.1 is not available.

In order to obtain this translation, the main verb must be in the imperfective form as shown in (19).

(19) t'ə-t'ey'əq' tə Jack kʷs kʷɬ təl-nəxʷ-s tə sqʷəl'qʷəl'
IMP-get.mad D Jack SUB PERF hear-NCTR-3.sg. D news
* 'Jack got mad when he heard the news (a).'
√ 'Jack was (already) mad when he heard the news (b).'

All the examples in (5) pattern the same way. In contrast, the states in (4) show different behaviour with this test. Consider (20).

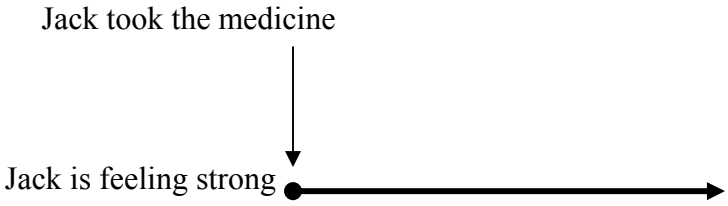
(20) #k'ʷámk'ʷəm tə Jack kʷs kʷɬ kʷə́n-ət-əŋ-s tə stél'ŋəxʷs
strong D Jack SUB PERF take-CTR-PASS-3.sg D medicine
'Jack felt strong when he took the medicine.'

The sentence in (20) is infelicitous according to my consultant. This is presumably because the main predicate in (20) is a state which cannot express a temporary property of an individual. To express the reading in (20), an additional morpheme, the reflexive suffix *–sat* must be added, as shown in (21).

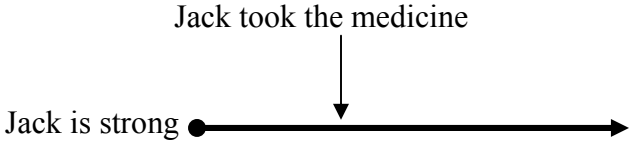
(21) k'^{w}ámk'^{w}əm-sat tə Jack k^{w}s k^{w}ɬ k^{w}ə́n-ət-əŋ-s tə stél'ŋəx^{w}s
strong-REFL D Jack SUB PERF take-CTR-PASS-3.sg D medicine
'Jack felt strong when he took the medicine.'

Figure 2.2 A homogeneous state with a punctual adverbial

a. √Jack was not feeling well, but he felt strong because of the medicine.



b. *Jack was already feeling strong when he took the medicine.



As shown in Figure 2.2, only the inceptive reading (a) is available. The main predicate *k'^{w}amk'^{w}amsat* consists of two morphemes *k'^{w}amk'^{w}am* 'strong' and -*sat*, the reflexive marker (Montler 1989). For all the examples in (4), to obtain an inchoative reading, additional morphology is required. Some of them take the reflexive suffix –*sat* to obtain the inchoative reading, as shown below.

(22) a. k'^{w}ámk'^{w}əm-sat tə Jack
strong-REFL D Jack
'Jack became strong.'

b. ʔiʔ-sat yəq sx^{w}
good-REFL OPT 2SUBJ
'I hope you'll get better.'

c. kʷɬ ʔiʔ pəq'-sa(ʔ)ət
PERF ACC white-REFL(ACT)
'She's been getting gray (hair).'

There are also some states which take a different affix *txʷ(ə)- mutative* (Montler 1986, Kinkade and Kiyoita 2004) to express a change into a certain state (cf. Jacobs 2007). The state in (4c) is an example: its derived form is shown in (23).

(23) txʷə-séxʷsəxʷ tsə Jack
MUT-lazy D Jack
'Jack got lazy.'

Note that this prefix is also compatible with derived states with the stative prefix *s-*, as shown below:

(24) a. txʷə-s-x̣éɬ-əɬ sən ʔə tiʔə kʷəčil
MUT-STAT-get.hurt-DUR 1SUBJ OBL D morning
'I got sick this morning.'
b. txʷə-s-náw'-əɬ
MUT-STAT-get.inside-DUR
'He got inside.' (Montler 1989)
c. ləʔə tə txʷə-s-lé-ləʔ tsə nə snəxʷəɬ
AUX COMP MUT-STAT-get.fixed-DUR D my canoe
'My canoe got fixed.'

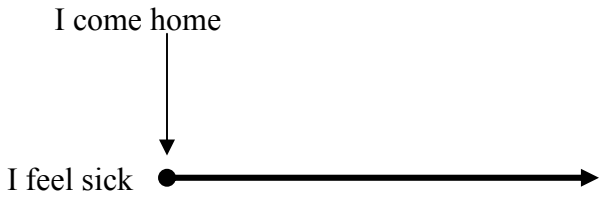
The bases to which the prefix *tx*^{w}- is attached in (24) are not individual-level states. They are derived stage-level states that express temporary properties of individuals. They are called *resultive*s (Montler 1986), and are derived from unaccusative verbs by affixing the stative prefix *s*- and the durative suffix -*əɬ* to the root with the *resultive* morpheme[14]. Turner (2007) argues that the resultive form of Sənčáθən verbs contains the imperfective morpheme, but not the resultive. Extending Turner, I argue that the imperfective does not view any boundary (culmination point) that the unaccusative roots inherently contain. Thus, these derived states are derived homogeneous states, rather than inchoative states. This is the reason why these derived states require the mutative prefix to obtain the inchoative reading. This is evident in the example in (25).

(25) s-x̣éɬ-əɬ sən k^{w}ə nə-s -ʔeɬəʔ č'əŋ'
STAT-get hurt-DUR 1.sg SUB my-S-here come.home
'I was sick when I came home.'

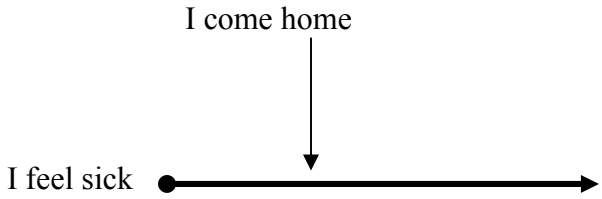
[14] The resultive (Montler 1986) is indicated with the substitution from ə to e in (24a), that from ə to a in (24b), and reduplication in (24c).

Figure 2.3 A derived (homogeneous) state with a punctual adverbial

a. *I got sick when I came home.



b. √I was already feeling sick when I came home



Since the Sənčáθən states show very similar patterns to their Chinese counterparts (Huang et al. 2000, Chang 2003), I conclude that the states in (4) form a separate class from those in (5). I propose that the states in (4) are *homogeneous states* which do not contain an initial point or an end point, while the states in (5) are *inchoative states* which contain an initial point. The proposed event structures are shown in (26).

(26) a. Homogeneous states: $\lambda e.P(e)$

b. Inchoative states: $\lambda e.\exists e_1 \exists e_2[e =^{S} (e_1 \cup e_2) \wedge (\text{BECOME}(P))(e_1) \wedge P(e_2)]$

Recall from Chapter 1 that I adopt Rothstein's (2004) version of neo-Davidsonian theory of event representation. As shown in (26a), the homogeneous state is a simplex event with the predicate P, while the inchoative state in (26b) is an event consisting of two sub-events, a

BECOME event and the simple P event. Sənčáθən patterns with Sḵwx̱wú7mesh (Bar-el 2005) in terms of the event structure of inchoative states.[15]

2.3 Activities and inchoative states

The goal of this section is to present evidence that activities and inchoative states are separate classes. As discussed above, activities pattern with states (inchoative states) for the out-of-the-blue sentence interpretation test. In both cases, the default reading is the on-going situation reading (i.e., a present state or a present progressive reading). As shown below, activities also pattern with inchoative states for the punctual clause test. Activities yield the inceptive reading with a punctual clause, as do inchoative states. Consider (27).

(27) a. xʷáŋ tə Jack kʷs kʷɬ téčəl-s θə Mary
cry D Jack SUB PERF arrive-3.sg D Mary
√ 'Jack cried when Mary arrived.'
* 'Jack was crying when Mary arrived.'
Speaker's comment: Mary arrived, and then Jack cried.

b. t'íləm sən kʷs kʷɬ téčəl-s tə Jack
sing 1sg. SUB PERF arrive-3.sg D Jack
√ 'I sang when Jack arrived.'
* 'I was singing when Jack arrived.'
Speaker's comment: You started singing because he came…

[15] Bar-el (2005) does not consider homogeneous states in Sḵwx̱wú7mesh.

c. néč-əŋ sən kʷs kʷɬ téčəl-s tə Jack
laugh-CMDL 1.sg. SUB PERF arrive-3.sg D Jack
√ 'I laughed when Jack arrived.'
* 'I was laughing when Jack arrived.'
Speaker's comment: Jack looked funny so you started laughing when he arrived.

For all these three situations, only the inceptive reading was possible, but not the on-going situation reading. To obtain the on-going situation reading, each main predicate must be in the imperfective form as shown in (28).

(28) a. xʷə-ʔ-əŋ' tə Jack kʷs kʷɬ téčəl-s θə Mary
cry(IMP) D Jack SUB PERF arrive-3.sg D Mary
* 'Jack cried when Mary arrived.'
√ 'Jack was crying when Mary arrived.'
b. t'ə-t'íl'əm' sən kʷs kʷɬ téčəl-s tə Jack
IMP-sing 1sg SUB PERF arrive-3.sg D Jack
* 'I sang when Jack arrived.'
√ 'I was singing when Jack arrived.'
c. nə-néy'-əŋ' sən kʷs kʷɬ téčəl-s tə Jack
IMP-laugh-CMDL 1.sg SUB PERF arrive-3.sg D Jack
* 'I laughed when Jack arrived.'
√ 'I was laughing when Jack arrived.'

The activities in the imperfective form with a punctual clause result only in the medial reading as shown in (28). The inceptive reading is not available.

Finally, the event-termination reading is not available for activities with a punctual clause either. In order to derive the event-termination reading a phrase *kʷɬ hay* 'stop/finish' must be used as shown in (29).

(29) kʷɬ hay sən kʷ-nə-s t'ə-t'íl'əm' kʷs kʷɬ téčəl-s tə Jack
PERF stop 1.sg SUB-my-S IMP-sing SUB PERF arrive-3.sg D Jack
'I stopped singing when Jack arrived.'

I argue that this is evidence that activities do not contain a final point or a culmination point.

Based on the available interpretations with punctual clauses, I conclude that Sənčáθən activities contain an initial punctual sub-event followed by a process sub-event but not a final culmination point. Thus I propose the event structure in (30).

(30) Activities: $\lambda e.\exists e_1 \exists e_2 [e =^{S} (e_1 \cup e_2) \wedge (\text{BECOME}(P))(e_1) \wedge (\text{DO}(P))(e_2)]$

Notice that the denotation of activities is very similar to that of inchoative states, the only difference being the second sub-event: DO(P) as opposed to P. The diagnostics we have invoked thus far cannot empirically distinguish these two classes. Moreover, many of the standard tests also cannot distinguish these two classes. For example, the progressive test which distinguishes stative verbs from non-stative verbs, at least in English, is not a good test to distinguish inchoative states and activities in Sənčáθən because the imperfective form, the closest Sənčáθən counterpart of the English progressive, is available even with inchoative states.

The aspectual category in Sənčáθən closest to the English progressive is 'imperfective (or 'actual' in Monter's (1989) terminology),' which indicates that "the action, state, or other reference of the predicate is actually occurring at an indicated time (Montler: 111)." The ability to occur in the imperfective form can distinguish homogeneous states from the other classes, but does not distinguish inchoative states from activities, because both can occur in the imperfective.

There are three primary forms for the Sənčáθən imperfective: *Cə* reduplication, *ʔ*-infix (or glottalization of resonants), and metathesis (or stress shift). The sentence in (31a) is an example of the plain (or perfective) form of an inchoative state, *ɬčikʷəs* 'tired', and (31b) shows its imperfective counterpart *ɬčíw̓əs*, a case of glottalization of stem resonants (/w/ here).

(31) a. ɬčíkʷəs sən
get.tired 1.sg
'I am/got tired (situation: I am walking, and tell you ….).'

b. ɬčíw̓əs sən
get.tired(IMP) 1.sg
'I am already tired (situation: I am sitting here already tired and say to you).'

Thus, it is difficult to distinguish activities and inchoative states aspectually. One way is to invoke a quite standard diagnostic, though not a quite temporal/aspectual one: the imperative form test, which may actually be more a test for agentivity. The imperative form is available with non-stative predicates, but not with states. The example below is taken from Dowty (1979).

(32) a. *Know the answer!

b. Run!

There are two types of imperative construction in Sənčáθən: using the plain (perfective) form of a verb, or using a post-predicate particle *čə* 'command'.[16] The former is the most common way, while the latter is used as an emphatic imperative (Montler 1986). Examples of plain forms are shown in (33). The plain activities are ambiguous between an imperative interpretation and an on-going process reading.

(33) a. t'ə́ləm
sing
'Sing! / He is singing.'

b. qékʷəŋ
rest-CMDL
'Take a rest! / She is resting.'

c. qʷə́iləš
dance
'Dance! / He is dancing.'

For inchoative states, on the other hand, the current situation reading is more natural than the imperative reading when they occur in the plain (perfective) form. This is shown in (34).

[16] Test results with this particle will be given in section 5 of Appendix.

(34) a. ɬčík^{w}əs
get.tired
? ‘Get tired!” / √“She is tired.’

b. híləkʷ
get.happy
? ‘Be happy!” / √“She is happy.’

c. téčəq
get.mad
? ‘Be mad!” / √“She is mad.’

d. k’^{w}əy
get.hungry
? ‘Be hungry!” / √“She is hungry.’

Given the common understanding that states in general are non-agentive, I suggest that the marginality of the states (inchoative states) as imperatives in (34) is due to the absence of agentivity. Since agentivity is an important component of a DO (process) event (Dowty 1979), I conclude that the second sub-event of inchoative states differs from that of activities. More specifically, inchoative states contain a simple P as their second sub-event, while activities contain a DO operator as their second sub-event.

2.4 Achievements and accomplishments

As shown in 2.1., Sənčáθən achievements and accomplishments appear to form a natural class as telic predicates. However, telicity is actually a crucial issue to be discussed to distinguish the two kinds of predicates. As discussed extensively in the previous literature on the closely related Salish languages St’át’imcets and Sḵwx̱wú7mesh (Matthewson 2004, Bar-el, Davis and

Matthewson 2005, Bar-el 2005), accomplishments in Salish languages are not really telic. See also Davis (1978) and Watanabe (2003) on Sliammon (Mainland Commox). Similar facts are also found and discussed in some previous studies on Japanese (Tsujimura 2003, Kiyota 2006). That is, accomplishments need not culminate, which is also the case for Sənčáθən accomplishments.

In this subsection, I adopt the culmination cancellation test used in Matthewson (2004), Bar-el, Davis and Matthewson (2005), and Bar-el (2005). First, however, I will introduce some relevant background regarding the transitivity status of achievements and accomplishments in Sənčáθən.

2.4.1 Two kinds of transitives: accomplishments or achievements?

Salish languages encode a systematic contrast between two classes of transitive verbs: control transitives, where the agent is in control of the event, vs. non-control transitives, where the event happens without intent or after difficulty (Davis 1978, Thompson 1979, Watanabe 2003). In this sub-section, I argue that unaccusatives and non-control transitives form a natural class as achievements, whereas control transitives are (non-culminating) accomplishments. This conclusion is based on two well-motivated diagnostics, the culmination cancellation test (Bar-el et al. 2005) and the *almost* test (Dowty 1979, Smith 1992, Bar-el 2005).

In Sənčáθən, control transitives are derived from a bare root with the control transitivizer –(*ə*)*t*. The presence of this suffix indicates that there is a patient object and an agent subject

which exerts conscious control over the activity expressed by the predicate (Montler 1986). A sentence with this transitivizer is translated as 'x P-ed y (intentionally)' as shown in (35).

(35) Control transitives *-ət*

a. ləʔə sən kʷəʔ qʷə́č-**ət** θə spéʔəs
AUX 1.sg INF die-CTR D bear
'I killed the bear (intentionally).'

b. ləʔə sən kʷəʔ lé-**t** tsə latem
AUX 1.sg INF get fixed-CTR D table
'I fixed the table (intentionally).'

c. ləʔə sən kʷəʔ kʷə́n-**ət** θə spéʔəs
AUX 1.sg INF get seen-CTR D bear
'I looked at the bear.'

The non-control transitives are derived from unaccusative roots[17] with the non-control transitivizer *–nax*^{w}. The presence of this suffix implies a patient object and an agent subject which does NOT exert conscious control over the activity expressed by the predicate (Montler 1986). A sentence with this transitivizer is translated either 'x accidentally P-ed' or 'x finally managed to P' as shown in (36).

(36) Non-control transitiviser *-nax*^{w}[18]

a. ləʔə sən kʷəʔ qʷə́y-**nəxʷ** tə spéʔəs
AUX 1.sg INF die-NCTR D bear
'I (unintentionally) killed the bear.'

[17] Davis (1996, 1997) argues that all bare roots in St'át'imcets are unaccusatives.
[18] There are four surface forms for this suffix: *-náx*^{w}, *-nəx*^{w}, *-ná,* and *-n.* The underlying vowel appears only when it is stressed (Montler 1986).

b. ləʔə sən kʷəʔ léʔ-**nəxʷ** tsə latem
AUX 1.sg INF get fixed-NCTR D table
'I finally managed to fix the table / I accidentally fixed the table.'

c. ləʔə sən kʷəʔ kʷə́n-**nəxʷ** θə spéʔəs
AUX 1.sg INF get seen-CTR D bear
'I saw the bear.'

(35) illustrates that the actions denoted by the verb roots are intentionally or willfully done by the subject (agent), while the actions denoted by the verbs in (36) are done unintentionally, accidentally, or after great effort (i.e., the managed-to reading). The action 'to look at s.t.' in (35c), for example, is an intentional action by the subject, while the action in (36c) 'to see s.t.' does not necessarily mean that the action is intentional.

In Kiyota (2004), I argued that accomplishments (control transitives) are derived from unaccusative roots that are inherently achievements, and that accomplishments are not a primitive class. That is, many achievements and accomplishments share roots. Consider the following data.

(37) a. xʷəy tə Jack
wake.up D Jack
'Jack woke up.'

b. ləʔə sən kʷəʔ xʷəč-**ət**[19] kʷs Jack
AUX 1.sg INF wake.up-CTR D Jack
'I woke up Jack.'

[19] The glide /y/ changes into the affricate /č/ intervocalically due to a phonological rule existing in Sənčáθən.

In (37a), the main predicate is an intransitive verb meaning ‘wake up’, while in (37b), the main verb is a transitive verb which means ‘wake someone up’. That is, there are a huge number of such pairs comprising an underived unaccusative intransitive form and a derived transitive form. This is a general property of the Salish language family. A few more examples are given in (38).

(38)

Intransitive root		Root + transitiviser	
q’^{w}əy	‘die’	q’^{w}əč-**ət**	‘kill s.o.’
q^{w}əl	‘get cooked’	q^{w}əl-**ət**	‘cook s.t.’
tək^{w}	‘get broken’	tk^{w}-**ət**	‘break s.t.(long material)’

Based on this fact, I argue that accomplishment (transitive) verbs are derived from unaccusative roots that are achievements (Davis 1996, 1997).

2.4.2 The culmination cancellation test

Having shown in the previous subsection that unaccusatives, control transitives, and non-control transitives share the same roots, I apply the culmination cancellation test in this subsection, and show that unaccustives and non-control transitives pattern with each other, while control transitives behave differently with respect to telicity.

The culmination cancellation test relies on the notion of entailments. Since an entailment is a relation that must hold in all possible worlds, it cannot be cancelled. If the truth of one sentence requires the truth of the other, then the latter is an entailment of the former. For example, the sentence (39b) is true if the sentence in (39a) is true. Therefore, (39c) results in a contradiction.

(39) a. The dog was killed.
b. The dog is dead.
c. #The dog was killed, but it is not dead.

In English, the culmination entailment of accomplishments cannot be cancelled, as shown in (40).

(40) # John fixed the car but he has not finished yet.

Let us examine unaccusatives and the two kinds of transitives in Sənčáθən. First, as expected, Sənčáθən unaccusatives which are analyzed as achievements do not allow cancellation of the culmination requirement. Thus, culmination cancellation results in a contradiction, as shown in (41).

(41) a. # qʷə́y tə spéʔəs ʔiʔ ʔawa s-qʷá-qʷi
die D bear ACC NEG STAT-IMP-die
'The bear died but it is not dead.' – Contradiction!
b. # ləʔə tə t'əs tsə sk'ʷənəsən ʔiʔ ʔawa t'əs
AUX D break D window ACC NEG break
'The window broke but it is not broken (did not get broken).' – Contradiction!

In contrast, the culmination requirement can be cancelled without contradiction in the case of control transitives as shown in (42).

(42) a. ləʔə sən kʷəʔ lé-t tsə latem ʔiʔ ʔawa sən šəq-naxʷ
AUX 1.sg INF get.fixed-CTR D table ACC NEG 1.sg complete-NCTR
'I fixed the table, but I didn't finish it.'

b. čan-ət sən tsə sqexəʔ ʔiʔ ʔawa sən hay-naxʷ
get.buried-CTR 1.sg D dog ACC NEG 1.sg finish-NCTR
'I buried the dog but I didn't finish it.'

c. ləʔə sən kʷəʔ łənəqʷ-t tsə speʔəs ʔiʔ qʷixʷ-ət sən
AUX 1.sg INF get.shot D bear ACC miss-CTR 1.sg
I shot the bear but I missed it.'

d. ləʔə sən kʷəʔ xʷəc̓-ət kʷs Jack ʔiʔ ʔawa kʷs-xʷəy-s
AUX 1.sg INF wake.up-CTR D Jack ACC NEG SUB-wake.up-3.sg
'I woke up Jack but he would not wake up.'

However, non-control transitives do not allow the culmination cancellation; in this, they pattern just like unaccusatives. This is shown in (43).

(43) a. ləʔə sən kʷəʔ qʷə́y-nəxʷ tə spéʔəs ʔiʔ ʔawa sqʷəy
AUX 1.sg INF die-NCTR D bear ACC NEG S-die
'I (accidentally) killed the bear but it didn't die.' – Contradiction!

b. ləʔə sən kʷəʔ lé-nəxʷ tsə latem ʔiʔ ʔawa sən šəq-naxʷ
AUX 1.sg INF get.fixed-NCTR D table ACC NEG 1.sg complete-NCTR
'I (managed to) fix the table, but I didn't finish it.' - Contradiction

The summary of the culmination cancellation test is given in Table 2.5.

Table 2.5 Summary of the culmination cancellation test

	Culmination cancellation
Unaccusatives	*(contradiction)
Control transitives	√
Non-control transitives	*(contradiction)

The contrast shows that unaccusatives and control transitives do not pattern with each other in terms of the culmination requirement, thus suggesting that these two classes are aspectually distinct from each other. On the other hand, unaccusatives and non-control transitives do pattern with each other. This result may suggest that they are the same aspectual class, the only difference being the transitivity.

2.4.3 The *almost* test

The aspectual distinction between unaccusatives, control transitives, and non-control transitives can also be captured with the *almost* test (Dowty 1979, Smith 1997, Bar-el 2005). The English adverb *almost* can be used to distinguish accomplishments from achievements (Dowty 1979, Smith 1997, Rothstein 2004). First, let us consider the English examples in (44).

(44) a. Jack almost painted a picture.

b. Jack almost noticed the painting.

The accomplishment example in (44a) is ambiguous: it has two possible readings. One is an event cancellation reading; that is, the entire painting event did not happen at all. The other

possible reading is that Jack actually started painting the picture, but stopped just before the completion of the picture. This reading is called the event non-completion reading (Bar-el 2005). The achievement example in (44b), on the other hand, does not induce such ambiguity: only the event cancellation reading is available. Bar-el invokes this test to argue that Sḵwx̱wú7mesh accomplishments do not have a final end point. I extend this test to see whether events in Sənčáθən have an initial and/or final end point.

In Sənčáθən, there are at least two lexical items which correspond to English *almost*: *čəlel* and *xʷeləq* (Montler 1986). They do not exactly mean *almost* because they are translated in various ways such as *almost, nearly,* and *just about*. My fieldwork has also revealed that there is an important difference between *čəlel* and *xʷeləq*. *čəlel* behaves like English *almost* because it induces ambiguity with (control) accomplishments. On the other hand, *xʷeləq* does not pattern with English *almost* because it does not induce ambiguity even with the accomplishments. It induces only the event-cancellation reading.

However, I assume, following Bar-el (2005) and Morczycki (2002), that these different adverbial modifiers appear in the same syntactic position, and that they impose similar restrictions on the predicate they modify. Thus I assume that these two lexical items have similar, but not quite identical, effects to English *almost*.

2.4.3.1 Interpretations with *čəlel*

čəlel does not induce ambiguity with unaccusatives (achievements): the only available reading is the event cancellation reading. Consider (45).

(45) a. čəlel ʔiʔ ləṯ'$^{\theta}$ tsə nə-sq^{w}ətən
almost ACC get.full D 1sg.POS-bucket
'My bucket was almost full.'
Situation: The filling up event stopped just before the bucket got full.

c. čəlel sən ʔiʔ tas
almost 1.sg ACC arrive.there
'I almost arrived there.'
Situation: The speaker was heading for her destination, and just about reached there.

d. čəlel ʔiʔ q'^{w}ə́y tsə nə-pus
almost ACC die D 1.sg.POS-cat
'My cat almost died.'
Situation: The cat was seriously sick, and the speaker thought that it was going to die.

As the situation of each sentence indicates, the sentence must be uttered during the previous stage for the event described by the predicate. The speaker of the example (45a), for example, must have seen that the bucket filling up event started. If the bucket is empty, then the sentence is infelicitous in Sənčáθən, while it is felicitous in English since a predicate like *get filled* is an accomplishment rather than achievement in English. In this sense, one might claim that these sentences are cases of the event non-completion reading.

However, I argue that these sentences are the cases of the event-cancellation reading because there is no evidence for the previous stage to be conceptually included in the meaning of the achievement predicates in Sənčáθən. As discussed in Chapter 3, Turner (2007) claims that achievements in Sənčáθən can be in the imperfective only when the subject is in the plural or when the predicate expresses a repetitive event. I have not elicited an example of achievements in the imperfective without its subject being in the plural or the event being repetitive, either. I

take this as evidence that Sənčáθən achievements do not entail a previous (process) stage of the event.[20]

In contrast, *čəlel* with a control transitive produces ambiguity: both the event-cancellation reading and the event-non-completion reading are possible depending on the situation. This is shown in (46).

(46) a. čəlel sən ʔiʔ xə́l-ət tsə nə sx̣^{w}iʔém'
almost 1.sg ACC get.written-CTR D my story
'I almost wrote my story.'
Reading: √I didn't start writing my story / √I started writing my story but didn't finish.

b. čəlel sən ʔiʔ le-t tsə latem
almost 1.sg ACC get.fixed-CTR D table
'I almost fixed the table.'
Reading: √I didn't start fixing the table / √I started fixing the table, but didn't finish.

c. čəlel sən ʔiʔ ləṯ'^{θ}-át tsə nə sq^{w}ətən
almost 1.sg ACC get.full-CTR D my bucket
'I almost filled my bucket.'
Reading: √I didn't start filling my bucket / √I started filling my bucket, but didn't finish.

In contrast, *čəlel* does not yield ambiguity with non-control transitives: only the event cancellation reading is available. Consider (47).

(47) a. čəlel sən ʔiʔ le-nəx^{w} t^{s}ə nə snəx^{w}əɬ
almost 1.sg ACC get.fixed-NCTR D my canoe
'I almost fixed (up) the canoe.'
Reading: *I didn't start fixing my canoe / √I started fixing my canoe, but didn't finish it.

[20] More detailed discussion on this conceptual issue of achievements is given in 2.6.2.

b. čəlel sən ʔiʔ ẋəl-nəx^{w} k^{w}sə nə sẋ^{w}iʔém’
almost 1.sg ACC get.written-NCTR D my story
‘I almost wrote my story.’
Reading: *I didn’t start writing my story / √I started writing my story, but didn’t finish it.

c. čəlel sən ʔiʔ čəq^{w}-nəx^{w} tsə sčaaɬ
almost 1.sg ACC get.burned-NCTR D wood
‘I almost burned the wood.’
Reading: *I didn’t start burning the wood / √I started burning the wood, but didn’t finish it.

Table 2.6 summarizes the results of the *čəlel* test:

Table 2.6 Summary of the *čəlel* test

	Event cancellation reading	Event non-completion reading
Unaccusatives	√	*
Control transitives	√	√
Non-control transitives	√	*

As the table shows, unaccusatives and non-control transitives pattern with each other with respect to the (un)availability of the two readings, while control transitives behave differently.

2.4.3.2 Interpretation with *x^{w}eləq*

Though *x^{w}eləq* is also usually translated as English ‘almost’, its function is slightly different from that of *čəlel*. Firstly, *x^{w}eləq* is not compatible with an unaccusative: neither interpretation is available with this adverb. This is shown in (48).

(48) a. *xʷeləq sən ʔiʔ tečal
almost 1.sg ACC arrive.here
'I almost arrived here.'
b. *xʷeləq sən ʔiʔ tas
almost 1.sg ACC arrive.there
'I almost arrived there.'

The effect of *xʷeləq* on control transitives also differs from that of *čəlel*: only the event-cancellation reading is available, as shown in (49).

(49) a. xʷeləq sən ʔiʔ xə́l-ət tsə nə sx̣ʷiʔém'
almost 1.sg ACC get.written-CTR D my story
'I almost wrote my story.'
Reading: √I didn't start writing my story / *I started writing my story, but didn't finish.
b. xʷeləq sən ʔiʔ le-t tsə latem
almost 1.sg ACC get.fixed-CTR D table
'I almost fixed the table.'
Reading: √I didn't start fixing the table / *I started fixing the table, but didn't finish.

Lastly, *xʷeləq* is not compatible with the non-control transitives, as was the case with unaccusatives.

(50) a. * xʷeləq sən ʔiʔ le -nəxʷ tsə latem
almost 1.sg ACC get.fixed-NCTR D table
Intended: I almost fixed the table.
b. * xʷeləq sən ʔiʔ x̣əl-nəxʷ tsə nə sx̣ʷiʔém'
almost 1.sg ACC get.written-NCTR D my story
Intended: I almost wrote my story.

Table 2.7 summarizes the results of the *xʷeləq* test.

Table 2.7 Summary of the *xʷeləq* test

	Event cancellation reading	Event non-completion reading
Unaccusatives	*	*
Control transitives	√	*
Non-control transitives	*	*

Though the pattern of available interpretations is different from the *čəlel* test, the *xʷeləq* test confirms that unaccusatives and non-control transitives must be grouped together as well.

2.4.4 Semantics of unaccusatives and the two kinds of transitives

All the diagnostics discussed in this sub-section (the culmination cancellation test and the two kinds of *almost* test) revealed that unaccusatives and non-control transitives pattern with each other, while control transitives do not. Based on the results, I argue that control transitives and non-control transitives are aspectually distinct classes: control transitives are (non-culminating) accomplishments (c.f. Bar-el et al. 2005, Bar-el 2005) and non-control transitives are (transitive) achievements. I thus argue that unaccusatives and non-control transitives are achievements, the only difference being that the former are intransitive and the latter transitive. The proposed temporal semantics for each class is shown in (51).

(51) a. Unaccusatives (intransitive achievements):

λx.λe.[(BECOME(P))(e) ∧ Th(x, e)]

b. Non-control transitives (transitive achievements):

λx.λy.λe.[(BECOME(P))(e) ∧ Ag(y, e) ∧ Th(x, e)]

c. Control-transitives (non-culminating accomplishments):

λx.λy.λe[(DO(P))(e) ∧ Ag(y,e) ∧ Th(x, e) ∧ [∀w'[w' is an inertia world w.r.t w at the beginning of e → [∃e'[e' is a culmination of e in w' & e causes e'in w']]]]

Control transitives are non-culminating accomplishments because the control transitiviser *-t* not only supplies an agent with conscious control and a process event DO, but also moves culmination from the actual world to inertia worlds (cf. Bar-el et al. 2005). In contrast, their non-control counterparts are transitive achievements, as the non-control transitiviser *-nax*^{w} supplies an agent with no conscious control, without a DO event, and it does not move culmination from the actual world to inertia worlds.

Unaccusatives and non-control transitives entail a final BECOME event, which represents the culmination of an event. Due to this entailment, culmination cancellation is not allowed for unaccusatives and non-control transitives. Since these two classes entail only a BECOME event but not a DO event, *čəlel* induces only the event non-completion reading[21]. As for the infelicity with *x*^{w}*eləq*, I suggest that this adverb picks out only the DO event (or agentivity). Since unaccusatives and non-control transitives do not contain a DO, the adverb is not compatible with these two kinds of constructions.

[21] It is not quite clear at this stage why the event cancellation reading is out. I postulate that it has something to do with the absence of a DO sub-event. Further research is required.

In contrast, control transitives do not result in a contradiction with the culmination cancellation test because the culmination is not an entailment, but an implicature, as shown in (51). The basic idea in (51c) is that if an event culminates in all inertia worlds, the hearer assumes that it culminated. This is because, in the normal case, the actual world is an inertia world. However, it is only an implicature since sometimes unusual things happen which block the culmination.

Since this type of sentence entails a DO event, both *čəlel* and *xʷeləq* are compatible, yielding the event cancellation reading. The event non-completion reading is also available for *čəlel* in an appropriate context due to the culmination implicature.

2.5 Classification of Sənčáθən verbs: summary of the diagnostics

Based on the results of all the diagnostics discussed in the previous subsections, I propose the following five verbal predicate classes in Sənčáθən.

(52) Homogeneous states
Inchoative states
Activities
Achievements
Non-culminating accomplishments

As discussed above, these five classes are generally divided into two groups: the obviously atelic group (homogeneous states, inchoative states, and activities) and telic/quasi-telic ones (achievements and non-culminating accomplishments).

Among the atelic situations, the difference between homogeneous states and inchoative states is the presence/absence of an initial point: homogeneous states do not contain either an initial or a final point, while inchoative states contain an initial point. Activities are distinct from inchoative states in that they imply agentivity.

Achievements (unaccusatives and non-control transitives) and non-culminating accomplishments (control transitives) are all derived from the same (unaccusative) roots. However, these two classes differ aspectually. Non-culminating accomplishments are quasi-telic because the culmination requirement can be cancelled without contradiction. Both unaccusatives and non-control transitives are telic: the culmination cancellation test results in contradiction.

The following section provides a formal analysis of these five predicate classes.

2.6 Temporal properties and semantics of the aspectual classes

Having concluded that there are five aspectual classes of verbs/predicates in Sənčáθən in the previous section, we are now in a position to consider the meaning of each verb class in terms of aspectuality. I first show the temporal properties of each verbal class in the following subsections.

2.6.1 Homogeneous states and inchoative states

Let us first review the properties of states based on English facts in Smith (1997). Smith claims that states are static, durative, and atelic. They are stable situations which may hold for a moment or an interval, with an arbitrary endpoint. They consist of an undifferentiated period and they do not change of themselves. The temporal schema Smith proposes is given in (53).

(53) Temporal schema for states (Smith: 37)

(I)_____ (F)

The line in the middle represents the period the stative event holds which cannot be divided into stages. The initial endpoint which is a change into the state and the final endpoint which is a change out of the state are both outside of the period. In other words, they are not part of the state. This property is represented with the parentheses. This representation captures both stage-level states as well as individual-level states in English. However, it cannot capture all the states in Sənčáθən.

As discussed in the previous section, Sənčáθən has two kinds of states: homogeneous states and inchoative states. The representation in (53) may capture the homogeneous states since this class includes individual-level states, and derived stage-level states that appear not to have any boundaries (end points), which is the conclusion that we made based on the diagnostics in the previous sections. For example, the punctual-adverbial test cannot yield the inceptive reading with the homogeneous states, but it can with the inchoative states. This is crucial evidence that the former do not contain an initial point but the latter do. The example of an inchoative state (18) and that of a homogeneous state (20) in the previous section are repeated below.

(18) t'ečəq' tə Jack $k^{w}s$ $k^{w}ɬ$ təl-nəx^{w}-s tə sq^{w}əl'q^{w}əl'
get.mad D Jack SUB PERF get.heard-NCTR-3.sg D news
√ 'Jack got mad when he heard the news (i.e., because of the news).'
* 'Jack was (already) mad when he heard the news (i.e., not because of the news).'

As shown in (18), only the inceptive reading is available with a punctual clause for the inchoative states. In contrast, a homogeneous state with a punctual clause is infelicitous, as shown in (20).

(20) #k'^{w}amk'^{w}əm tə Jack k^{w}s k^{w}ɬ k^{w}ə́n-ət-əŋ-s tə st'élŋəx^{w}s
strong D Jack SUB PERF get.taken-CTR-PASS-3.sg D medicine
'Jack felt strong when he took the medicine.'

In order to obtain an inceptive reading, the reflexive suffix *–sat* (or the mutative prefix *tx^{w}-*, depending on the stem) must be attached to the stative root as shown in (21) again.

(21) k'^{w}amk'^{w}əm-sat tə Jack k^{w}s k^{w}ɬ k'^{w}ə́n-ət-əŋ-s tə st'élŋəx^{w}s
strong-REFL D Jack SUB PERF take-CTR-PASS-3.sg D medicine
'Jack felt strong when he took the medicine.'

I take this contrast as evidence that inchoative states contain an initial point but homogeneous states do not, as each name suggests.

Homogeneous states and inchoative states pattern with each other in that both classes do not contain a final endpoint. This conclusion is based on the interpretation of out-of-the-blue sentences and the interpretation with the particle *k^{w}ɬ*. For the out-of-the-blue sentence test, the current situation reading is available for both homogeneous states and inchoative states as discussed in 2.1.1.

The fact that the past inceptive reading is also possible for inchoative states can also be evidence for their inchoative nature. As shown in 2.1.2, inchoative states are interpreted as (perfect) inceptives when they occur with the morpheme *k^{w}ɬ*. In contrast, *k^{w}ɬ* is not readily compatible with homogeneous states. Consider (54).[22]

(54) a. ʔ k^{w}ɬ k'^{w}amk'^{w}əm tə Jack
PERF strong D Jack
'Jack has become strong.'

b. ʔk^{w}ɬ čəq tiʔə nə sqeχ̣əʔ
PERF big D my dog
'My dog has become big.'

c. ʔk^{w}ɬ sex^{w}səx^{w} tsə Jack
PERF lazy D Jack
'Jack has become lazy.'

Just like the punctual adverbial test, the acceptability pf the examples in (54) will improve if the reflexive suffix or the mutative prefix is added to the homogensous states. I argue that a punctual adverbial or *k^{w}ɬ* is not usually compatible with homogeneous states since there is no initial or final endpoint for the adverbial or the particle to focus on in this predicate class. This is why the addition of the reflexive suffix or the mutative prefix is required for the inception reading: the affixes supply an initial point but not an endpoint.

[22] According to my consultant, these sentences are acceptable when a specific context is presented. For instance, (54a) is acceptable if Jack used to be weak but he is strong now, in which case the sentence may be translated as 'Jack has been strong.' So the judgement for (54) may be a matter of the consultant's preference.

Since homogeneous states do not contain either endpoint, I adopt the semantic representation of states proposed in the previous literature (Dowty 1979, Smith 1997, Rothstein 2004, among others).

(55) Homogeneous states: $\lambda e.P(e)$ The set of events with the property P

Homogeneous states have a simplex event structure. In contrast, inchoative states do contain an initial point, but not a final point. Since Sənčáθən inchoative states are inceptives and the resulting situation persists, the semantic structure of Sənčáθən states is complex. An inchoative state consists of two stages: the first part is a change of state which is just like an achievement, and the second part is a normal state which is a result of the change. Thus the temporal schema for this kind of states is proposed as shown in (56). This is exactly the denotation of inchoative states Bar-el (2005) proposed for Sḵwx̱wú7mesh.

(56) Inchoative states: $\lambda e.\exists e_1 \exists e_2[e =^{S} (e_1 \cup e_2) \wedge (\text{BECOME}(P))(e_1) \wedge P(e_2)]$

This template means that a stative event *e* is the sum of e_1 and e_2 such that e_1 is a change of state and e_2 is the result of the change. It shows that the Sənčáθən state is a semantically complex predicate with a BECOME event followed by P (= result of change).

Let us look at an example.

(57) ɬčík^{w}əs tə Jack ‘Jack is tired’

a. / ɬčík^{w}əs /: the root for ‘tired’

[[ɬčík^{w}əs]] → λx.λe. ∃ e_1 ∃ e_2[e=^{S}(e_1 ∪ e_2) ∧ BECOME-TIRED(e_1) ∧ TIRED(e_2) ∧ Th(e) = x]

b. ‘Jack is tired.’

[[ɬčík^{w}əs tə Jack]] →λe. ∃ e_1 ∃ e_2[e=^{S}(e_1 ∪ e_2) ∧ BECOME-TIRED(e_1) ∧ TIRED(e_2)∧ Th(e) = JACK][23]

The root has the meaning shown in (a). (b) is the interpretation for ‘Jack is tired,’ in which Jack, which is the subject (and the theme) of the predicate, is added.

2.6.2 Activities

It is standardly assumed that activities in English are dynamic, durative, and atelic events, and that they denote an event that has no inherent final point (Smith 1997). However, Smith also argues that English activities contain an initial point, contra the standard assumption that verbs of this class do not contain an inherent initial point (Dowty 1979 among others). The temporal schema that I propose for Sənčáθən activities is very similar to that of English activities proposed by Smith, as shown in (58).

(58) Temporal schema for Sənčáθən activities

I_____ (F)

[23] This is not the full proposition, but basically the denotation of the VP.

The initial point, I, is included in the period during which the event holds but the final point, F, is not[24] as the schema indicates.

Evidence that Sənčáθən activities have an initial point but not a final point comes from some of the language internal tests discussed in 2.1. The presence of an initial point is evident due to the result of interpretations with the particle *k*^{w}*ɬ* as discussed in 2.1.2. This particle yields the inception reading that is translated as "have begun to ~" when it appears with activity verbs. The absence of a final point is evident due to the result of the out-of-the-blue test discussed in 2.1.1. The activity sentences are systematically translated as present (progressive), in contrast with other eventive predicates such as achievements and accomplishments which are systematically interpreted as past events. The result suggests that activities are atelic in Sənčáθən.

The results of these two diagnostics raise a question for the template for the event representation of activities proposed by Rothstein (2004) based on Dowty (1979). The template is shown in (59).

(59) Activities (Dowty 1979, Rothstein 2004): λe.(DO(P))(e)

The problem for this template is that it does not say anything about the existence of the initial point, contrary to Smith's temporal schema (1997) and the facts in Sənčáθən[25]. Thus some

[24] In Smith's temporal schema for English activities, the final point F is represented as 'F_{Arb}', which indicates that the final point is arbitrary. But I use (F) to mean that it is not inherent.
[25] Also see Bar-el (2005) for the same facts in S<u>k</u>w<u>x</u>wú7mesh Salish.

modification of the template is necessary. To account for the facts with the Sənčáθən activities, I adopt the following template originally proposed by Bar-el (2005) for Sḵwx̱wú7mesh activities.

(60) Template for Sənčáθən activities

$$\lambda e.\, \exists\, e_1\, \exists\, e_2[e =^{S} (e_1 \cup e_2) \wedge (\text{BECOME}(P))(e_1) \wedge (\text{DO}(P))(e_2)]$$

The event representation of Sənčáθən activities is complex and very similar to that of inchoative states. In both classes, the entire event can be divided into two sub-events. The only difference between the two classes is the second sub-event: the simple P for inchoative states and DO(P) for activities. As discussed in the previous subsection, the difference between P and DO(P) is that DO entails agentivity but P does not. This proposal explains the similar properties observed between inchoative states and activities in the previous sections, as well as accounting for the difference between the two predicate-types with respect to the imperative test.

The example in (61) shows the derivation of an activity verb *štəŋ* 'walk'.

(61) štəŋ tiʔə Jack 'Jack is singing.'

a. $[[\text{štəŋ}]] = \lambda x.\lambda e.\, \exists\, e_1\, \exists\, e_2[e =^{S} (e_1 \cup e_2) \wedge \text{BECOME-WALK}(e_1) \wedge \text{DO-WALK}(e_2)]$

b. $[[\text{štəŋ tiʔə Jack}]] = \lambda e.\, \exists\, e_1\, \exists\, e_2[e =^{S} (e_1 \cup e_2) \wedge \text{BECOME-WALK}(e_1) \wedge \text{DO-WALK}(e_2) \wedge \text{Ag}(e) = \text{JACK}]$

2.6.3 Achievements

Achievements are standardly assumed to be instantaneous events. They are telic events which result in a change of state such as *break* (intransitive), *arrive*, and *leave*. In an achievement event, initial and final points occur simultaneously according to Smith (1997), as shown in the temporal schema in (62).

(62) Temporal schema of English achievements (Smith 1997)

..... I (R).....
F

The 'R' with parentheses indicates the result of the change, and dotted lines indicate preliminary and resultant stages that are separated from the event itself conceptually (Smith 1997). However, the results of the language-internal tests discussed in the previous sections suggest that some of the Sənčáθən achievements have a different temporal schema from that of English achievements.

Sənčáθən achievements pattern with their English counterparts in that they are telic: they must culminate. With the out-of-the-blue tenseless sentence test, for example, all the achievement sentences are systematically interpreted as past events as discussed in 2.1.1. The test with the particle *kʷɬ* discussed in 2.1.2 also indicates that achievements are telic: with this particle, all the perfective achievement predicates are translated in a way that indicates that the events denoted by the verbs have culminated. Furthermore, I have shown in 2.4.2 that Sənčáθən

achievements do not allow cancellation of the culmination requirement: the culmination cancellation results in a contradiction.

However, Sənčáθən achievements differ from English achievements in that they can be either instantaneous or non-instantaneous. Some verb phrases that are treated as accomplishments in English pattern as achievements in Sənčáθən. The verb phrase *get filled* in English, for example, is standardly assumed to contain a process part or a DO event, as it is assumed to be an accomplishment. However, this process part comes into the representation only with the control transitiviser -*ət* in Sənčáθən as discussed in 2.4. The *čəlel* 'almost' test invoked in 2.4.3 shows that an unaccusative verb root such as *ləthθ* 'get filled' and its control transitive counterpart *ləthθát* 'fill s.t.' are aspectually distinct. The unaccusative root *ləthθ* is an achievement, since *čəlel* does not yield ambiguity: it yields only the event cancellation reading. The control transitive verb *ləthθát* is an accomplishment, since *čəlel* induces ambiguity between the event cancellation reading and the event non-completion reading, just like with English accomplishments.

However, this raises an interesting question: why is the verb like *ləthθ* 'get filled' patterns as an achievement in Sənčáθən, unlike in English, in which, its counterpart *get filled* is assumed to be an accomplishment (Lisa Matthewson p.c.)? I argue that this is because in Sənčáθən, instantaneousness is not a defining property of achievements. Instead, what distinguishes achievements from accomplishments (as well as the other aspectual classes) is the culmination, but not the durativity/instantaneousness (c.f. Bar-el et al. 2005). I further argue that the initial

point and the process part are arbitrary for Sənčáθən achievements, based on the fact that the imperfective form of unaccusatives or non-control transitives is extremely rare.[26]

The other evidence that unaccusatives are achievements whose aspectual property is solely culmination and that the control transitiviser supplies a process comes from the verb root *q'ʷay* 'get killed/die', whose English counterpart is generally assumed to be an achievement. In its bare unaccusative form, which is an achievement, the culmination cancellation test results in contradiction. This is also the case with its non-control transitivbe form *q'ʷaynəxʷ*. However, cancellation of the culmination does not result in contradiction with its control transitive form *q'ʷačət*. The unaccusative and the non-control transitive behave as achievements which must culminate, whereas the control transitive form does not.

The temporal schema that I propose for Sənčáθən achievements is shown in (63).

(63) Temporal schema of Sənčáθən achievements

..... (I____) F (R)…..

'I' in the schema represents the initial point of the event, and the line the process part, both of which are arbitrary (indicated with the parentheses). Likewise, the arbitrary resultant state is indicated with the bracketed 'R'.

[26] Montler (1986: 137) reports that no forms involving the co-occurrence of the non-control transitive and the imperfective have been documented in Səčáθən. Watanabe (2003), likewise, reports that the co-occurrence of the non-control transitive and the imperfective is limited to only a few roots in Sliammon, Mainland Comox Salish.

Based on the temporal properties of Sənčáθən achievements discussed here, I propose the semantic representation of Sənčáθən achievements as shown in (64).

(64) Semantic template for Sənčáθən achievements

λe.(BECOME(P))(e)

As the template indicates, the semantic structure of achievements is simplex as contrasted with the other two classes. It is a single eventuality denoted by the BECOME operator, which represents the culmination of an achievement event. This should not be confused with the standard use of BECOME, where the eventuality is near-instantaneous. However, the BECOME operator that I assume merely represents the culmination of an event.

An example derivation is given in (65):

(65) téčəl tiʔe Jack 'Jack has arrived'

a. [[téčəl]] → λx.λe.[ARRIVE(e) ∧ Th(e)=x]

b. [[téčəl tiʔe Jack]] → λe.[ARRIVE(e) ∧ Th(e) = JACK]

2.6.4 Non-culminating accomplishments and achievements

As discussed in 2.4.1, there are two kinds of transitives in Sənčáθən: non-control transitives and control transitives. I concluded that the control transitives are non-culminating accomplishments because they do not need to culminate as the culmination cancellation test does not induce a contradiction. Relevant data is repeated in (66):

(66) a. ləʔə sən kʷəʔ q'ʷə́č-ət tə spéʔəθ ʔiʔ ʔawa s-q'ʷəy
AUX 1.sg INF die-CTR D bear ACC NEG STAT-die
'I killed the bear but it didn't die.'

b. ləʔə sən kʷəʔ lé-t tsə latem ʔiʔ ʔawa sən šəq-naxʷ
AUX 1.sg INF get.fixed-CTR D table ACC NEG 1.sg complete-NCTR
'I fixed the table, but I didn't finish it.'

Why does the culmination requirement with unaccusative roots disappear in the control transitive form? Bar-el et al. (2005) argue that in St'át'imcets and Sḵwx̱wú7mesh, accomplishments do not need to culminate because the culmination requirement of unaccusative roots to which the control transitiviser is suffixed is cancelled. They propose that the control transitivisers in St'át'imcets and Sḵwx̱wú7mesh introduce an agent in control over the event and move the culmination requirement from the actual world to inertia worlds. That is, the culmination of an event is merely an implicature.

Adopting their proposal, I propose the following template for non-culminating accomplishments in Sənčáθən.

(67) Non-culminating accomplishment:
λe[(DO(P))(e) & [∀w'[w' is an inertia world w.r.t w at the beginning of e →
[∃e'[e' is a culmination of e in w' & e causes e'in w']]]]

In contrast, I claimed in 2.4.4 that non-control transitives are (transitive) achievements. This conclusion is based on two tests: first, the culmination cancellation test results in a contradiction. Second, non-control transitives pattern with unaccusatives (achievements) with respect to the

two kinds of 'almost' test. This conclusion is further supported by the fact that many of the non-control transitive sentences are translated as transitive achievements in the English sense as shown in (68).

(68) a. ləʔə sən kʷəʔ qʼʷə́y-nəxʷ tə spéʔəs
AUX 1.sg INF die-NCTR D bear
'I (accidentally) killed the bear.'

b. ləʔə sən kʷəʔ xʷíl-nəxʷ kʷsə nə sčáseq
AUX 1.sg INF get.lost-NCTR D my hat
'I lost my hat.'

c. ləʔə sən kʷəʔ kʼʷə́n-nəxʷ kʷsə nə sčáseq
AUX 1.sg INF get.seen-NCTR D my hat
'I found my hat.'

If this view of non-control transitives is right, then their denotation is basically a simple BECOME event, as was proposed for unaccusatives in (64) above. In other words, non-control transitives are identical to unaccusatives in terms of aspectuality. The various translations of non-control transitives, such as 'accidentally ~" or "finally managed to ~" are due to pragmatics.[27] However, these two classes are not completely equivalent: they differ in transitivity as well as the control part of the semantics. Since the goal of this chapter is to identify the aspectual properties of different event types, I will not pursue details of the semantics of control further.

Let us consider an example of a transitive achievement in (69).

[27] Previous formal analyses of non-control transitives or out-of-control transitives in Salish languages include Davis and Demirdache (2000) and Davis, Matthewson, and Rullmann (to appear) for St'át'imcets, and Jacobs (2007) for Sḵwx̱wú7mesh.

(69) ləʔə sən $k^wəʔ$ $k'^wə́nnəx^w$ $k^wsə$ nəsčáseq 'I found my hat.'

a. [[$k'^wə́nnəx^w$]] → λx.λy.λe.[FIND(e) ∧ Ag(y, e) ∧ Th(x,e)][28]

b. [[$k'^wə́nnəx^w$ $k^wsə$ nəsčáseq]] → λy.λe.[FIND(e) ∧ Ag(y, e) ∧ Th(e) = MY HAT]

c. [[ləʔə sən $k^wəʔ$ $k'^wə́nnəx^w$ $k^wsə$ nəsčáseq]]
→ λe.[FIND(e) ∧ Ag(e) = I ∧ Th(e) = MY HAT]

As shown in (76), the non-control transitive supplies an agent without a DO, whose crucial meaning is control over an event.

3 Conclusion

In this chapter, various diagnostics were invoked to classify Sənčáθən verbs. Based on the results of these diagnostics, I proposed the following classification and denotations for each class.

(70) Templates for verbal classes in Sənčáθən

Homogeneous states: $\lambda e.P(e)$

Inchoative States: $\lambda e.\exists e_1 \exists e_2[e =^S (e_1 \cup e_2) \wedge (\text{BECOME}(P))(e_1) \wedge P(e_2)]$

Activities: $\lambda e.\exists e_1 \exists e_2[e =^S (e_1 \cup e_2) \wedge (\text{BECOME}(P))(e_1) \wedge (\text{DO}(P))(e_2)]$

Achievements: $\lambda e.(\text{BECOME}(P))(e)$

(Non-culminating) accomplishments:
λe[(DO(P))(e) & [∀w'[w' is an inertia world w.r.t w at the beginning of e → [∃e'[e' is a culmination of e in w' & e causes e'in w']]]]

It is proposed that there are two kinds of states: homogeneous states and inchoative states. The former is a simple state which does not have boundaries, while the latter is a complex event containing a initial BECOME event plus a state P. Activities have a very similar structure to

[28] I am abstracting away from Kratzer's (1994) claim that the agent is introduced by a functional head.

inchoative states, having a BECOME event as their initial sub-event. However, they differ in the second sub-event: a state for inchoative states but a DO event for activities. Achievements are a simplex eventuality BECOME. This class includes unaccusatives as well as non-control transitives. Finally, accomplishments in Sənčáθən have an initial DO event, and give rise to a culmination implicature.

Chapter 3 Viewpoint aspect and perfect aspect in Sənčáθən

1 Introduction

This chapter is dedicated to considering viewpoint aspects (the perfective and the imperfective), as well as the perfect aspect in Sənčáθən. The perfective is unmarked; no overt affix is attached to a stem, while the imperfective is marked with a morpheme glossed as *actual* (Montler 1986). The perfect construction has never been considered previously. However, my fieldwork has revealed that a prepredicate particle *kʷɬ* yields various perfect readings. These disparate readings depend on the situation type and viewpoint aspect of the predicate with which *kʷɬ* occurs. They include an inceptive reading, which expresses a beginning or a coming about of a situation, an on-going situation reading, and a completion reading, which expresses that a situation has been completed. Montler (1986) suggests that the particle *kʷɬ* basically means *already*, but he also notes that it is often used when a translation with *already* is inappropriate. I argue that it is a perfect marker which introduces the perfect time span (PTS) (Iatridou et al. 2001, Pancheva 2003), in a version of the extended now (XN) theory (McCoard 1978, von Stechow 1999, a.o.). I further propose a unified account for these various readings of *kʷɬ*: they are analyzed as sub-types of the perfect reading yielded by the interaction between the temporal semantics of *kʷɬ* as a perfect marker, the semantic representations of event types, and adverbs or pragmatics.

2 Viewpoint aspect and situation types

2.1 The perfective-imperfective opposition

In this section, viewpoint aspect in Sənčáθən is considered. Sənčáθən has a perfective-imperfective opposition. Examples of the perfective/imperfective opposition for all situation classes are given in this section. The perfective aspect is unmarked, as shown in (1) for accomplishments, while the imperfective aspect is overtly marked with one of the three allomorphs (Montler 1986), as shown in (2).

(1) a. le-t sən tsə latem
get.fixed-CTR 1.sg D table
'I fixed the table.'

b. čə́n-ət sən tsə nə sqéx̣əʔ
get.buried-CTR 1.sg D my dog
'I buried my dog.'

c. ləṯ'$^{\theta}$-át sən tsə sq^{w}ətəŋ ʔə tsə q^{w}əʔ
get.filled-CTR 1.sg D bucket OBL D water
'I filled up my bucket.'

(2) a. le-lə-t sən tsə latem
IMP-get.fixed-CTR 1.sg D table
'I'm fixing the table.'

b. čə́n'-t sən tsə nə sqéx̣əʔ
get.buried(IMP)-CTR 1.sg D my dog
'I'm burying my dog.'

c. ʔeɬəʔ sən ləṯ'$^{\theta}$-t tiʔə nə sq^{w}ətəŋ
AUX 1.sg get.full(IMP)-CTR D my bucket
'I am filling up my bucket.'

All the examples in (1) and (2) are (non-culminating) accomplishment sentences, which are marked with the control transitive marker *–(ə)t*. The examples in (2) show the three primary forms of the imperfective, the CV reduplication in (2a), the glottal stop infixation in (2b), and the stress shift in (2c). The accomplishment predicates with no imperfective marking in (1) are all translated as the simple past reading, which in English corresponds to the perfective aspect. The accomplishment predicates with the imperfective in (2), on the other hand, are all translated into the progressive in English, a sub-type of imperfective[1].

Examples of perfective activities and inchoative states are a little tricky because their unmarked form (perfective) can be translated as the current situation reading, as discussed in Chapter 2. However, it is still possible to distinguish the unmarked form from the marked form semantically. As shown in (3), activities and inchoative states in the perfective can denote the past inception of a situation, as well as the current situation.

(3) a. čéy sən ʔə tsə latem
work 1.sg OBL D table
'I am working on a table. / I started working on a table.'

b. št-áŋ tsə nə-qeq
walk-CMDL D my-baby
'My baby is walking. / My baby began to walk.'

c. łčík^{w}əs sən
get.tired 1.sg
'I'm tired. / I got tired.'

[1] The imperfective is also used for a habitual reading in Sənčáθən.

d. t’éčəq’ tiʔə Jack
get.mad D Jack
‘Jack is mad. / Jack got mad.’

In contrast, the same predicates in the imperfective yield only an on-going situation reading. The predicates in the imperfective imply that the situation expressed has persisted for a while, as shown in (4).

(4) a. čeʔ-iʔ sən ʔə tsə latem
work(IMP) 1.sg OBLD table
‘I am making a table (I have been for a while).’
b. šát-əŋ tsə nə qeq
walk(IMP)-CMDL D my baby
‘My baby is walking (she/he has been for a while).’
c. łčíw’s sən
get.tired(IMP) 1.sg
‘I’m tired (I have been for a while).’
d. ɬə-téy’əq’ tiʔə Jack
IMP-get.mad D Jack
‘Jack is mad (he has been for a while).’

It appears that achievement predicates do not pattern with the other predicate classes in terms of imperfective morphology. That is, they cannot simply take the imperfective: they need some other morphology present. In English, a subset of achievements can be in the progressive, not to express that the event itself is in progress, but refer to a stage leading up to the initial point of an event (Smith 1997). For instance, *the train was arriving at the station* views a preliminary stage

before *the train arrived at the station*. Rothstein (2004a) argues that although English achievements are near-instantaneous, some of them can be in the progressive due to a shift operation, which turns the event structure of achievements into a structure smilar to that of accomplishments.[2] Although the imperfective in Sənčáθən is used to indicate that a situation is in process, as does the English progressive, achievements in the imperfective with no other morphology appear to be impossible in Sənčáθən. There is no example of an achievement in the imperfective in Montler (1986) or Kiyota (2005). The only example Turner (2007) has observed is shown in (5).

(5) ʔeɬti tə-le-ʔə-čəl tθə ʔən sče-lə-čə
AUX arrive(PL-ACT) D your friend (PL)
"Your friends are arriving." (Turner 2007: 68)

Turner observes that the achievement predicate in this case is in the plural form, and suggests that, although the verb *tečəl* cannot be in the imperfective, its plural form can because the plurality is associated with durativity. I suppose Turner's intuition is that the sentence in (5) actually expresses a repetitive event (hence durative): i.e., it actually means that your friends are arriving one after another.

In any case, this is the only example of an achievement in the imperfective, and it occurs with the plural. Thus, I conclude that Sənčáθən achievements alone cannot be in the imperfective because, as discussed in Chapter 2, this class of verbs entail a culmination point but

[2] See Rothstein (2004a) for a detailed analysis of progressive achievements in English.

not a durative portion: the initial point and a process up to the culmination point are not inherent properties of achievements. This is why they can take the imperfective only when it occurs along with another morpheme such as plural which supplies durativity. This also suggests that Sənčáθən lacks the shift operation that Rothstein argues for progressive achievements in English.

Sənčáθən homogeneous states cannot occur in the imperfective either. We do not have any examples of a homogeneous state in the imperfective, though there are two possible candidates in Montler (1986). He presents two cases of the characteristic reduplication, which is a common form among Sənčáθən homogeneous states, co-occurring with the 'resultive' reduplication. This is shown in (6).

(6) a. séy'-sə-siʔ sən (séy'siʔ sən 'I'm afraid.')
CHAR-IMP-get.scared 1.sg
'I'm scared.' (Montler 1986: 97)

b. x̣íʔ-x̣ə-x̣əʔ sən. (x̣íʔx̣əʔ sən 'I'm embarrassed.')
CHAR-IMP-get.embarrassed 1.sg
'I'm embarrassed.' (Montler 1986: 97)

Montler (1986) claims that the resultive, whose two primary forms are Cə reduplication and ablaut (1986: 130), and the imperfective are two distinct morphemes in Sənčáθən. However, Turner (2007) argues that the reduplication or the ablaut for resultives in Sənčáθən is actually the imperfective. She proposes that the resultive construction is formed from unaccusatives by the combination of the imperfective with the stative prefix *s*-. If her claim that Montler's

resultive reduplication or ablaut is actually the imperfective is correct, then the examples in (6) could be cases of the imperfective on homogeneous states.

However, the results of my fieldwork suggest that the predicate in (6a) is actually an inchoative state and not a homogeneous state. This is shown in (7).

(7) a. séy'-siʔ sən
CHAR-get.scared 1.sg
'I got scared.'

b. séy'-sə-siʔ sən
CHAR-IMP-get.scared 1.sg
'I'm scared / afraid.'

(8) a. x̣íʔ-x̣əʔ sən
CHAR-get.embarrassed 1.sg
'I got embarrassed.'

b. x̣íʔ-x̣ə-x̣əʔ sən
CHAR-IMP-get.embarrassed 1.sg
'I am embarrassed.'

Both (7) and (8) are collected from my Sənčáθən consultant. According to my consultant, the (a) examples are used as soon as the speaker starts to feel scared or embarrassed. The (b) examples, in contrast, are used in a situation where the speaker has been feeling scared or embarrassed for a while. That is, the former is a case of inceptive reading yielded due to the semantics of the verb itself (i.e., inchoative states), while the latter is an on-going situation reading which is derived by the imperfective.

In summary, the imperfective form is compatible with inchoative states, activities, and accomplishments, but not with homogeneous states or achievements in Sənčáθən. On the other hand, the perfective is available with every situation type.

2.2 Semantics of the perfective/imperfective

I propose the following semantics for the perfective and imperfective in Sənčáθən.

(9) a. [[Imperfective]] = $\lambda Q.\lambda i.\exists e.[\ i \subseteq \tau(e)\ \&\ Q(e)]$ (Kratzer 1998, Bar-el 2005)

b. [[Perfective]] = $\lambda Q.\lambda i.\exists e.\exists e'[e' \sqsubseteq e\ \&\ \tau(e') \subset i\ \&\ Q(e)]$

The semantics of the imperfective as in (9a) is a standard one, in which the reference time is included in the event time. On the other hand, that of the perfective is different. The semantics of perfective that is commonly assumed is that an entire event is included within the reference time. That is, the eventuality is viewed completely from outside. However, the denotation proposed here says that only one of the sub-events is included within the reference time, leaving the possibility that some sub-event is outside the reference time.

The symbol used here $\sqsubseteq$ indicates a special atomic part-of relation. $a \sqsubseteq b$ says that a is an atomic sub-event of an event b. That is, it is not just any sub-part. For example, a cannot be some sub-part of the DO event in an activity event, but it must be the whole BECOME event, the whole DO event, or the entire activity event. In contrast, in the relation $a \subseteq b$, a could be any sub-part of b. For example, it could be a part of the BECOME event or a part of the DO event.

(10) e' $\sqsubseteq$ e iff e' $\in$ {e_1, e_2 … e_n} & e' $\not\subset$ e" where e" $\in$ {e_1, e_2 … e_n} & e = ^{s}($e_1 \cup e_2 \cup \ldots e_n$)

The reason why this special atomic part-of relation is required will be elucidated below. The denotations in (9) are proposed based on the facts discussed in the previous subsection. The formal definition of '$\sqsubseteq$' in (10) ensures that *e'* is not a random subpart of *e*, but one of the atomic sub-events of *e*.

The following tests confirm that these truth conditions are correct. For the imperfective, a situation was given to my consultant: the consultant's house had some problem and she had to fix it by herself. It took three days from Tuesday to Thursday. Given this situation, a question was given:

(11) Q. What did you do on Wednesday?

A.(a) če-ʔ-iʔ ləʔ sən ʔə kʷsə nə ʔeʔləŋ ʔə tsə sɬixʷs
work(IMP) PAST 1.sg OBL D my house OBL D Wednesday
'I was working on my house on Wednesday.'

(b) #čey ləʔ sən ʔə kʷsə nə ʔeʔləŋ ʔə tsə sɬixʷs
work PAST 1.sg OBL D my house OBL D Wednesday
'I worked on my house on Wednesday.'

The speaker's comment: (b) sounds strange because your working on your house took three days and Wednesday is only a part of it. You should use *čeʔiʔ* instead of *čey*.

The contrast and the speaker's comment suggest that the verb in the imperfective does not require the initial or the final point of the whole event to be included within the reference time.

This is consistent with the predictions of the meaning of the imperfective in (11a). This conclusion is confirmed by the logical translation of the sentence given in (12).

(12) $\lambda i.\exists e.\exists e_1.\exists e_2[\ i \subseteq \tau(e)\ \&\ (e =^s (e_1 \cup e_2)\ \&\ \text{BECOME-WORK}(e_1)\ \&\ \text{DO-WORK}(e_2))\ \&\ i < \text{now}\ \&\ i = \text{Wednesday}]]$

The logical translation in (12) says that there is a reference time *i* such that *i* is included in the run time of *e* which is a sum of e_1 and e_2, and *i* is last Wednesday. In other words, the time of the working event last Wednesday, *i,* is part of the run time of the whole event *e*. This is the correct interpretation for the situation in (11). Likewise, the denotation for the perfectvie in (9b) correctly explains why (11b) is out.

The perfective must be able to view a sub-event of an event because, in Sənčáθən, there are various readings depending on the situation type: an inceptive reading with inchoative states and activities, and a completive reading with accomplishments and achievements. The inceptive reading arises when only the initial part of an event is viewed, while the completive reading arises when only the final part of an event or the entire event is viewed.

The same situation as above was used to test the meaning of the perfective aspect. To describe the situation above, the consultant used the following sentence:

(13) čəl'kʷɬnet ʔiʔ čey sən ʔə kʷsə nə ʔeʔləŋ
Tuesday ACC work 1.sg OBL D my house
'I started working on my house on Tuesday.'

The perfective form of *čey* is used to express the beginning stage of the event. This suggests that the perfective must be able to access the internal structure of an event. For an activity predicate as in (13), the perfective views the initial sub-event of the entire event.

If this specific context was not given, however, then we also expect that the same sentence can be used to mean "I worked on my house on Tuesday," because *e'* in (13) can be the entire event *e*. The example in (14) apparently suggests that this is not the case.

(14) čey sən ʔə kʷs čəleqʷəɬ
work 1.sg OBL D yesterday
'I started working yesterday / *I worked yesterday.'

To obtain the reading "I worked yesterday," the past marker *ləʔ* or an auxiliary *ləʔ ~ kʷə* must be added.

(15) a. čey ləʔ sən ʔə kʷs čəleqʷəɬ
work PAST 1.sg OBL D yesterday
'I worked yesterday.'
b. ləʔə sən kʷəʔ čey ʔə kʷs čəleqʷəɬ
AUX 1.sg INF work OBL D yesterday
'I worked yesterday.'

The past reading of a perfective activity sentence without *ləʔ* or an auxiliary *ləʔə ~ kʷə* was elicited only once in my fieldwork.

(16) čiq ʔə kʷs čəleqʷəɬ
snow OBL D yesterday
'It snowed yesterday.'

I speculate that when the speaker wants to contrast the inceptive reading and the terminated reading, she uses the past marker for the latter. However, she does not need to use it when a contrast is not necessary. The other possibility is that the past marker or the auxiliary is not required when a context supplies the reference time. If the latter explanation is correct, it means that the reference time is required in any case to obtain the termination reading. Further research is required to clarify this issue, though. For the time being, I assume that the past particle or the auxiliary is required to obtain the terminated reading, which supplies the information that the event has terminated in the past.[3] The same strategy is required for an existential perfect reading with activities. I will come back to this issue in the next section.

3 The perfect marker *kʷɬ*

As briefly discussed in the beginning of this chapter, perfect readings are obtained when sentences contain the particle *kʷɬ* in Sənčáθən. In this section, I present various readings derived with the particle that I have collected through my fieldwork, and propose a formal account for the semantics of the particle, extending the semantics of the English perfect proposed by Pancheva (2003, 2004a).

[3] The past markers could be temporal deictic markers like the alleged past tense marker in St'át'imcets (Matthewson 2006). Further research is required for this issue.

Montler (1986) posits that *k*^{w}*ɬ* closely corresponds to English 'already', and glosses it as *realized*. He notes that it is the best understood and most productive among the pre-predicate particles in the dialect. However, he also notes that it is more often used in situations in which the translation 'already' is not appropriate, though he does not discuss this in detail. Thus the real function and meaning of *k*^{w}*ɬ* have been left undecided. Some examples from Montler (1986: 191) are given in (16):

(16) a. **k^{w}ɬ** técəl sən
PERF arrive 1.sg
'I arrived.'

b. **k^{w}ɬ** cˇ-qéq
PERF have-baby
'She gave birth.'

c. **k^{w}ɬ** x̣əy ʔal'
PERF die LIMIT
'He already died'

d. **k^{w}ɬ** mə́k'^{w}-ət sən
PERF pick.up-CTR 1.sg
'I picked it up.'

e. **k^{w}ɬ** x̣écˇ-əŋ sən
PERF dry-CMDL 1.sg
'I am dry.'

f. **k^{w}ɬ** hay ɬtə
PERF finish 1.pl
'We are all done.'

g. **k^{w}ɬ** ʔám'ət sən
PERF sit(ACT) 1.sg
'I am sitting now.'

h. **k̲ʷɬ** ʔi-ʔ-łən’ sən
PERF eat(ACT) 1.sg
‘I am eating now.’

Montler’s translations are either in the simple past (a-f) or in the present progressive (g and h) with or without ‘already’.

My fieldwork has established that ***kʷɬ*** yields an event completion reading as in (17), an on-going situation reading as shown in (18), and an inceptive reading as in (19)[4].

(17) Event completion reading

a. ləʔə sən kʷəʔ **k̲ʷɬ** let tsə nə snəxʷəɬ
AUX[5] 1.sg INF PERF get.fixed-CTR D my car
‘I have already fixed my car./ I have fixed my car before.’

b. **k̲ʷɬ** q’ʷəl-ət sən tsə sčeenəxʷ
PERF get.cooked-CTR 1.sg D salmon
‘I have cooked the salmon already. / I have cooked a salmon before.’

c. ləʔə sən kʷəʔ **k̲ʷɬ** təl’-nəxʷ tsə nə sčəsəqʷ
AUX 1.sg INF PERF get.found-NCTR D my hat
‘I have already found my hat.’

d. ləʔə sən kʷəʔ **k̲ʷɬ** kʷən-nəxʷ tə Jack
AUX 1.sg INF PERF see-NCTR D Jack
‘I have met Jack already./ I have met Jack before.’

[4] The translations are given by my consultant. As the translations in (17) indicate, the completion reading includes the experiential perfect reading.
[5] The auxiliaries are optional. Without the auxiliaries, the sentences mean roughly the same. Although they indicate some temporal and/or special information, their function is beyond the scope of this dissertation.

(18) On-going situation reading:

a. **k^{w}ɬ** łčíẃs sən
PERF tired (ACT) 1.sg
'I am tired already/now.'

b. ʔeɬtiʔ **k^{w}ɬ** łəḿx^{w}
AUX PERF rain(ACT)
'It is raining already/now.'

c. ʔeɬtiʔ **k^{w}ɬ** čé-ʔ-iʔ tiʔə Jack
AUX PERF work(ACT) D Jack
'Jack is working already/now.'

d. ləʔətə **k^{w}ɬ** šət-əŋ tsə nə qeq
AUX PERF walk(ACT)-CMDL D my baby
'My baby has been walking.'

(19) Inceptive reading: coming about of a situation.

a. **k^{w}ɬ** čéy tiʔə Jack
PERF work D Jack
'Jack has started working.'

b. **k^{w}ɬ** št-əŋ tsə nə qeq
PERF walk-CMDL D my baby
'My baby has started walking.'

c. **k^{w}ɬ** łčik^{w}əs tə Jack
PERF get.tired D Jack
'Jack has started feeling tired / Jack is getting tired.'

d. **k^{w}ɬ** ɬečəq tiʔə Jack
PERF get.mad D Jack
'Jack has started feeling mad / Jack is getting mad.'

The data presented here show not only that *k^{w}ɬ* does not just mean 'already', but also that it yields three apparently contradictory readings: the completion reading, which picks out the end

of a situation, the on-going situation reading, which expresses that the situation is in progress, and the inceptive reading, which focuses on the beginning of a situation. The difference between the on-going situation reading in (18) and the inception reading in (19) may be subtle for some readers, but my consultant distinguishes the two clearly: the former is used only when the situation expressed with the predicate has persisted for a while, whereas the latter is used as soon as the situation begins. This shows that the particle picks out three different stages of events: initial, middle, and final. To account for the various readings, I propose in the next section that the particle is a perfect marker similar to the English perfect.

3.1 *k^{w}ɬ* is a perfect marker

In this subsection, I provide evidence that the particle *k^{w}ɬ* is not an adverb meaning 'already', but a perfect marker. The general meaning of the perfect is the continuing present relevance of a past situation. It expresses a relation between two time-points: the time of the state resulting from a prior situation and the time of that prior situation (Comrie 1976).[6] There are two major uses of the present perfect in English: the Universal Perfect and the Existential Perfect. The universal perfect is also called the continuative perfect (Portner 2003), and the existential perfect is a cover term for Experiential Perfect, Perfect of Result, and Perfect of Recent Past (McCawley 1971, Comrie 1976, Binnick 1991, Iatridou et al. 2001).

[6] Though some researchers discuss the importance of pragmatic effects on the perfect construction (Portner 2003 among others), this chapter focuses only on the semantics of the perfect construction in Sənčáθən.

3.1.1 Universal Perfect

The universal perfect reading asserts that the predicate holds throughout a time interval stretching from a certain point in the past up to the present. The eventuality must be unbounded (i.e., there is no inherent endpoint). In English, this type of present perfect is available only with states or progressives (Iatridou et al. 2001).

(20) a. Mary has been sick since last month.

b. I have been working since 8 o'clock this morning.

The sentence in (20a), for example, asserts that there is a sickness eventuality that holds throughout the time interval extending from last month up to now. Likewise, the assertion of the sentence in (20b) is that the working eventuality holds throughout an interval extending from 8 o'clock this morning up to now.

In Sənčáθən, the Universal Perfect reading is induced whenever the particle *kʷɬ* co-occurs with either (a) a derived state (derived from an unaccusative verb by attaching the stative prefix *s*-), or (b) a non-stative verb (an inchoative state, an activity, or an accomplishment) in the imperfective. These different cases are illustrated in (21).[7]

[7] The universal reading is not available with non-derived homogeneous states in Sənča'θən. This predicate class cannot basically co-occur with *kʷɬ*. A more detailed discussion of this point will be provided below.

(21) a. ʔeɬəʔ sən **kʷɬ** s-x̣eɬ-əɬ ʔə tsə čəleqəɬ
AUX 1.sg PERF STAT-get hurt-DUR OBL D yesterday
'I have been sick since yesterday.'

b. **kʷɬ** ɬčíw's sən
PERF get tired(IMP) 1.sg
'I have been tired (for a while).'

c. **kʷɬ** čiʔəq ʔə tiʔe kʷəči1
PERF snow (IMP) OBL D morning
'It has been snowing since this morning.'

d. ləʔə sən kʷəʔ **kʷɬ** le-lə-t tsə latem
AUX 1.sg INF PERF IMP-get fixed-CTR D table
'I have been fixing the table.'

The main predicate in (21a) is a derived state or resultive (Montler 1986), which is derived from an unaccusative root *x̣əɬ* , which is an achievement. It contains the stativizer *s-* and the durative suffix *-əɬ*. The achievement root entails an inherent endpoint, but its resultive form, which is a stative, does not entail any endpoint. The main predicate in (21b) is an inchoative state predicate in the imperfective form, while the one in (21c) is an activity predicate in the imperfective. As discussed in chapter 2, Sənčáθən inchoative states and activities entail an initial point but not a final point. However, the imperfective views the event from inside so to speak, and thus the initial point is not included within the reference time. The predicate in (21d) is an accomplishment predicate in the imperfective, which is also unbounded.

The contrast in (22) further confirms that the combination of *kʷɬ* and the imperfective yields the Universal reading.

(22) a. **<u>kʷɬ</u>** či-ʔ-əq ʔə tiʔə kʷəčiɬ
PERF snow (IMP) OBL D morning
'It has been snowing since this morning.'

b. či-ʔ-əq ʔə tiʔə kʷəčiɬ
snow (IMP) OBL D morning
'It was snowing this morning.'

c. **<u>kʷɬ</u>** čiq
PERF snow
'It has begun to snow.'

The oblique marker *ʔə* is used to indicate various temporal and spatial locations in Sənčáθən, since this language does not have a set of prepositions like English. The adverbial phrase with the oblique marker in the example (22a) is translated as "since this morning" because it co-occurs with *kʷɬ*. In contrast, the formally identical adverbial phrase in (22b) where *kʷɬ* is absent, is translated "this morning". Only the inceptive reading is available for the sentence in (22c) whose predicate head is in the non-imperfective (i.e., perfective) form. This contrast supports the claim that *kʷɬ* with the imperfective form of a verb results in the universal reading.

3.1.2 Experiential Perfect

The Experiential Perfect asserts that the subject has had a certain experience. Consider the English examples in (23).

(23) a. I have read the Analects of Confucius seven times since 2000.
b. Jack has been seriously sick three times since 1995.

The assertion of the sentence in (23a) is that the speaker has had the experience of reading the Analects of Confucius seven times during the interval from the year 2000 until the time of the utterance. That of the sentence in (23b) is that there are three intervals in which Jack was seriously sick during the interval since 1995 until the time of speech.

In Sənčáθən, this kind of reading is possible with the particle *kʷɬ*.

(24) a. ləʔə sən kʷəʔ **kʷɬ** kʼʷən-nəxʷ kʷsəqʷənəs
AUX 1.sg INF PERF get.seen-NCTR D whale
'I have seen a whale.'
b. ləʔə sən kʷəʔ **kʷɬ** qʷəl-ət tsə sčeenəxʷ
AUX 1.sg INF PERF get.cooked-CTR D salmon
'I have cooked a salmon before.'

The example in (24a) asserts that the speaker has had an experience of seeing a whale between a certain time in the past and the time of the utterance.

Without the particle, the same sentences lose the perfect meaning as the examples in (25) illustrate.

(25) a. ləʔə sən kʷəʔ kʼʷən-nəxʷ tsə qʷənəs
AUX 1.sg INF get.seen-NCTR D whale
'I saw a whale.'
b. ləʔə sən kʷəʔ qʷəl-ət tsə sčeenəxʷ
AUX 1.sg INF get.cooked-CTR D salmon
'I cooked the salmon.'

The sentence in (25a), for example, is used as an answer to the question: *what happened on your way home the other day?* The sentence in (24a), which is the perfect counterpart of this sentence, is infelicitous as an answer to this question.

Furthermore, *kʷɬ* is consistently used when a speaker asks the hearer about an experience. This confirms that the particle induces the experiential reading.

(26) a. ləʔə sxʷ ʔə **<u>kʷɬ</u>** ʔist
AUX 2.sg Q PERF paddle
'Have you paddled (a canoe) before?'
b. ləʔə sxʷ ʔə **<u>kʷɬ</u>** qʷiiləš
AUX 2.sg Q PERF dance
'Have you danced before?'
c. ləʔə sən kʷəʔ **<u>kʷɬ</u>** qʷiiləš
AUX 1.sg INF PERF dance
'I have danced before.'

3.1.3 Perfect of Result

The Perfect of Result is available only with a telic predicate; it requires that the effect of the eventuality holds at the time of the utterance. The utterance in (27) can be a Perfect of Result only if the speaker's purse is still missing.

(27) I have lost my purse.

As the example in (28) shows, this kind of interpretation is also possible with the particle *kʷɬ*.

(28) a. ləʔə sən kʷəʔ **k̲ʷɬ̲** xʷil'-nəxʷ kʷsə nə sčəsəqʷ
AUX 1.sg INF PERF get.lost-NCTR D my hat
'I have lost my hat.'

b. **k̲ʷɬ̲** kʷən-nəxʷ sən kʷsə nə sčəsəqʷ
PERF get.found-NCTR 1.sg D my hat
'I have found my hat.'

The situation for the example in (28a) is that the speaker lost her hat and she has not found it yet. Likewise, the situation for the utterance in (28b) is that the speaker lost her hat once but she has the hat now. The infelicity of the example in (29), where a cancellation of the current relevance effect[8] (Portner 2003) results in infelicity, confirms that these sentences involve the Perfect of Result reading.

(29) #ləʔə sən kʷəʔ **k̲ʷɬ̲** xʷil'-nəxʷ kʷsə nə sčəsəqʷ
AUX 1.sg INF PERF get.lost-NCTR D my hat
ʔiʔ ʔeɬəʔ sən ḱʷən-nəxʷ
ACC AUX 1.sg get.found-NCTR
'I have lost my hat but I found it.'

Without *kʷɬ*, such cancellation does not result in a contradiction as shown in (30):

[8] I am assuming that the infelicity of (29) is due to a current relevance effect. However, this is the only example that I have collected so far.

(30) ləʔə sən kʷəʔ xʷil-nəxʷ kʷsə nə sčəsəqʷ ʔiʔ
AUX 1.sg INF get.lost-NCTR D my hat ACC
ʔeɬəʔ sən ƙʷən-nəxʷ
AUX 1.sg get.found-NCTR
'I lost my hat but I found it.'

Both examples in (28) are telic sentences[9]. As in English, the Perfect of Result reading is apparently not available with atelic sentences in Sənčáθən.

3.1.4 Perfect of Recent Past

The English perfect construction is also used to indicate the Perfect of Recent Past. This use of the perfect is to report an event which just happened; the eventuality must be telic (bounded) as in the example in (31) (Iatridou et al 2001).

(31) I have just graduated from university.

However, notice that an adverbial *just* is required to obtain this reading. That is, it is not the perfect alone that directly contributes to this reading, but it is the combination of the perfect and the adverbial that induces the reading. The other observation that I would like to make is that without the adverbial, the reading of the sentence is actually that of the perfect of result. In the case of (31) without *just*, it describes that the speaker is in a state of being a university graduate as a result of graduating from university.

[9] Recall that in Chapter 2, I argued that non-control transitives in Sənčáθən are achievements.

In Sənčáθən, the perfect of recent past is possible with the marker *kʷɬ* without any extra element corresponding to *just*. As expected, the perfect of result reading is also available as shown in (32).

(32) a. **kʷɬ** téčəl sən
PERF arrive 1.sg
'I have just arrived. / I'm here.
b. **kʷɬ** xʷəy tiʔə Jack
PERF wake.up D Jack
'Jack has just woken up. / He is awake.'
c. **kʷɬ** hay ɬtə
PERF finish 1.pl
'We have just finished. / We are done.'

In each of these cases, a result state obtains at the speech time. The predicate in each example in (32) is an achievement, which is telic. The first reading in each example is the preferred reading,[10] and the second reading is often given by the consultant as well. This suggests that the result of the eventuality holds at the utterance time, which is indeed characteristic of the perfect.

All of Montler's (1986) examples given in (16) above, repeated here, fall under one of the four perfect readings.

(16) a. **kʷɬ** téčəl sən
PERF arrive 1.sg
'I arrived.'

[10] It is also possible to express the first reading using another particle *čeɬ* 'immediate past' (Montler 1986). Unlike *kʷɬ*, however, it seems that *čeɬ* does not entail a resultant state.

b. **k^{w}ɬ** č-qéq
PERF have-baby
'She gave birth.'

c. **k^{w}ɬ** x̣əy ʔal'
PERF die LIMIT
'He already died'

d. **k^{w}ɬ** mə́k'^{w}-ət sən
PERF pick up-CTR 1SUBJ
'I picked it up.'

e. **k^{w}ɬ** x̣éč-əŋ sən
PERF dry-CMDL 1SUBJ
'I am dry.'

f. **k^{w}ɬ** hay ɬtə
PERF finish 1.pl.NOM
'We are all done.'

g. **k^{w}ɬ** ʔám'ət sən
PERF sit(IMP) 1SUBJ
'I am sitting now.'

h. **k^{w}ɬ** ʔí-ʔ-ɬən' sən
PERF eat(IMP) 1SUBJ
'I am eating now.'

Among the examples in (16), the sentences from (a) through (f) are cases of the Existential Perfect, which imply some current situation of the subject. (16a), for example, implies that the speaker is here as the result of his arriving event. This is due to the particle *k^{w}ɬ* because the resultative situation is not entailed without the particle.

The examples (g) and (h) are cases of the Universal Perfect. It is possible to obtain the same translations even without the particle *k^{w}ɬ*; this is actually the more common way to express

an on-going situation. If a temporal adverbial phrase like *ʔə tiʔə kʷəčíɬ* 'this morning' is added to the sentence, the adverbial is interpreted as durative *since* ~ with the particle *kʷɬ*, but this translation is not available without *kʷɬ*.[11]

In this section, I have shown that the major uses of the perfect (universal perfect, experiential perfect, perfect of result, and perfect of recent past) are all possible when the particle *kʷɬ* is used. This leads us to the conclusion that *kʷɬ* does not correspond to 'already' but it is a retrospective aspect marker which corresponds to the English perfect. In the following sub-section, I will propose a semantics for the particle *kʷɬ*.

3.2 The temporal semantics of *kʷɬ*

Having established that the particle *kʷɬ* is always involved in the different perfect readings, I provide the temporal semantics of *kʷɬ* in this section.

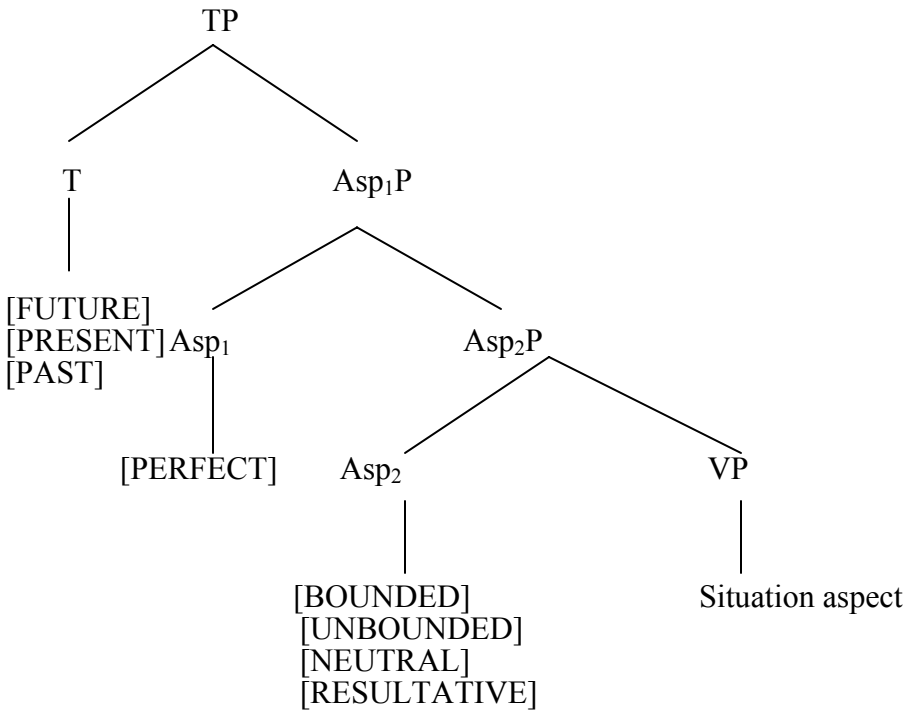
Pancheva (2003) argues that the distinction between the universal perfect, experiential perfect, and resultative perfect readings in English[12] is grammatically based, but that the English perfect itself has a uniform structure with a single meaning, which results in the three different uses. She assumes four viewpoint aspects (perfective, imperfective, neutral, and resultative) to account for the different readings. I extend her proposal to the Sənčáθən data, though I assume only the two familiar viewpoint aspects (perfective and imperfective) and show that all the different readings yielded by the particle can be accounted for by the interaction between the situation aspect of the VP, viewpoint aspect, and the semantics of *kʷɬ* as a perfect marker.

[11] See (22) in 3.1.1.
[12] Pancheva does not discuss the Perfect of Recent Past.

Various temporal adverbials can also contribute to the meaning of the perfect construction, but analysis of these is beyond the scope of this thesis.

Pancheva (2003) proposes that the perfect is higher aspect than the common viewpoint aspects. The structure that she proposes is as shown in Figure 3.1.

Figure 3.1 Syntactic structure of tense and aspect (Pancheva 2003: 284)



The features [BOUNDED] AND [UNBOUNDED] under the Asp_2 head correspond perfective aspect and imperfective aspect respectively. Pancheva adopts another viewpoint aspect *neutral* from Smith (1997) to account for certain cases of the experiential reading. She also adopts a

viewpoint aspect *resultative* proposed by Kratzer (1998) and von Stechow (1999) for the resultative perfect reading.[13]

The different perfect readings are derived depending on the combination of the perfect and a viewpoint aspect – perfective, imperfective, neutral, or resultative. The universal reading arises when the perfect combines with the imperfective, while the experiential reading arises when the perfect combines with perfectvie. The weaker meaning of the experiential perfect is also derived by the combination of the perfect and the neutral.[14] The resultative perfect reading is derived when the perfect selects the resultative aspect which, in turn, selects only a telic eventuality.

According to Pancheva, the semantic contribution of the perfect is to introduce an evaluation time interval *Perfect Time Span* (PTS) (the term introduced in Iatridou et al. (2001) for the concept of an Extended Now), and relate it to another interval, the reference time, which is specified by tense. The right boundary of PTS (i.e., its final subinterval) coincides with the final subinterval of the reference time. The left boundary of PTS is set by an adverbial phrase such as *since 2000* or *for five years*. When there is no such adverbial, the left boundary is left unspecified. According to Pancheva, the term "Perfect Time Span" has an advantage over "Extended Now" because it generalizes over intervals extending back in time from any reference time, not just "Now".

[13] As Pancheva (2003) notes, her use of the term *resultative* is different from that of Kratzer (1998) and von Stechow (1999, 2000). For both Kratzer and von Stechow, resultative is treated as the same category as the perfect. However, Pancheva treats it as a viewpoint aspect.
[14] See Pancheva (2003) for the difference between the strong version and the weak version of the expriential reading.

The denotation of the particle *kʷɬ* that I propose is given in (33), which is adopted from Pancheva (2003).

(33) [[*kʷɬ*]] = λp.λ*i*.∃*i'*[PTS(*i': i*) & p(*i'*)]
where *i* = reference time (= introduced by tense); *i'* = PTS (perfect time span)
PTS(*i': i*) iff *i* is a final subinterval of *i'*.

I adopt Pancheva's proposals that the different types of the perfect are derived compositionally and that the perfect introduces a PTS. However, while I follow the standard assumption that there are only two viewpoint aspects, perfective and imperfective, I do not adopt the additional aspects – neutral and resultative.

I will show in the immediately following section that the meaning of the particle *kʷɬ*, along with the semantics of situation aspect and viewpoint aspect, can account for the various readings that are observed.

3.2.1 Deriving the Universal Perfect reading

The Universal Perfect reading arises when the particle *kʷɬ* occurs with the imperfective form of any situation type except for achievement predicates. As discussed in 2.1., achievements are not compatible with the imperfective in normal cases in Sənčáθən (Montler 1986, Kiyota 2006b, Turner 2007). In what follows, I use an activity verb *štəŋ* which means 'to walk'. In (34), the imperfective is marked by stress shift, one of the allomorphs of the imperfective in Sənčáθən.

(34) **kʷɬ** šə́t-əŋ (ʔə tiʔə kʷəčíl)
PERF walk (IMP)-CMDL (OBL D morning)
'I have been walking (since this morning).'

The following is a compositional analysis of the Universal Perfect reading. The denotation of the activity verb *štəŋ* 'to walk' is as shown in (35).[15]

(35) $[[\check{s}t\partial\eta]] = \lambda e.\exists e_1 \exists e_2 [e =^s (e_1 \cup e_2)$ & BECOME-WALK(e_1) & DO-WALK(e_2)]

The imperfective morphology gives rise to the denotation in (36).

(36) $[[\check{s}\acute{\partial}t\partial\eta]] = \lambda Q.\lambda i.\exists e$ [$i \subseteq \tau(e)$ & Q(e)]($\lambda e. \exists e_1.\exists e_2 [e =^s (e_1 \cup e_2)$ &
BECOME-WALK(e_1) & DO-WALK(e_2)])
$= \lambda i.\exists e[\ i \subseteq \tau(e)$ & $\exists e_1.\exists e_2\ [e =^s (e_1 \cup e_2)$ & BECOME-WALK(e_1) &
DO-WALK(e_2)]]

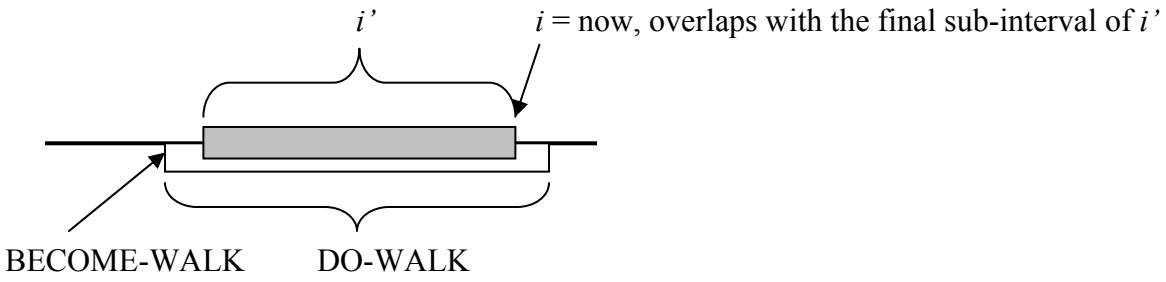
Finally, the addition of the perfect marker *kʷɬ* induces the universal perfect reading, as in (37).

(37) $[[k^w\text{ɬ}\ \check{s}\acute{\partial}t\partial\eta]] = \lambda p.\lambda i.\exists i'[$ PTS(i': i) & p(i')]($\lambda i.\exists e.$ [$i \subseteq \tau(e)$ & $\exists e_1.\exists e_2\ [e =^s (e_1 \cup e_2)$
& BECOME-WALK(e_1) & DO-WALK(e_2)]])
$= \lambda i.\exists i'$ [PTS(i': i) & $\exists e.[\ i' \subseteq \tau(e)$ & $\exists e_1.\exists e_2\ [e =^s (e_1 \cup e_2)$ &
BECOME-WALK(e_1) & DO-WALK(e_2)]]]

[15] I am abstracting away from the arguments (agent and theme) for the examples below.

Since the interval of the sub-event BECOME is instantaneous[16], it cannot include *i'* in it. Hence *i'* is included in the interval of the other sub-event DO. In the logical translation, the first conjunct ensures that the reference time interval *i* is a final subinterval of the perfect time span *i',* and the second conjunct denotes that the perfect time span *i'* is included in the run time of the event. Thus this correctly derives the universal reading. The diagram in Figure 3.2 illustrates it.

Figure 3.2 Universal Perfect reading of activities/inchoative states



3.2.2 Deriving the Existential Perfect

The existential perfect reading, which includes the experiential, perfect of result, and perfect of recent past readings, arises when the particle *kʷɬ* occurs with the perfective form of any situation type. In (38), I present an accomplishment sentence with the transitive verb *let* 'to fix something' as an example.

(38) ləʔə sən kʷəʔ **kʷɬ** le-t tsə nə snəxʷəɬ
AUX 1.sg INF PERF get.fixed-CTR D my car
'I have already fixed my car / I have fixed my car before.'

[16] Although see Chapter 2, Section 2.6.3.

Recall that the semantics of an accomplishment predicate entails a process eventuality DO, and the culmination requirement is not entailed but implicated. This is shown in (39).

(39) An accomplishment *let* 'to fix'

[[let]] = λe.[DO-FIX(e) & [∀w'[w' is an inertia world w.r.t w at the beginning of e → [∃e"[e" is a culmination of e in w' & e causes e"in w']]]]

The addition of the perfective meaning gives rise to the denotation shown in (40).

(40) $[[\text{let}_{\text{Perfective}}]]$ = λQ.λ*i*.∃e∃e'[e'⊑ e & τ(e')⊂ *i* & Q(e)] (λe.[DO-FIX(e) & [∀w'[w' is an inertia world w.r.t w at the beginning of e → [∃e"[e" is a culmination of e in w' & e causes e"in w']]]])

= λ*i*.∃e∃e'[e'⊑ e & τ(e')⊂ *i* & DO-FIX(e) & [∀w'[w' is an inertia world w.r.t w at the beginning of e → [∃e"[e" is a culmination of e in w' & e causes e" in w']]]])

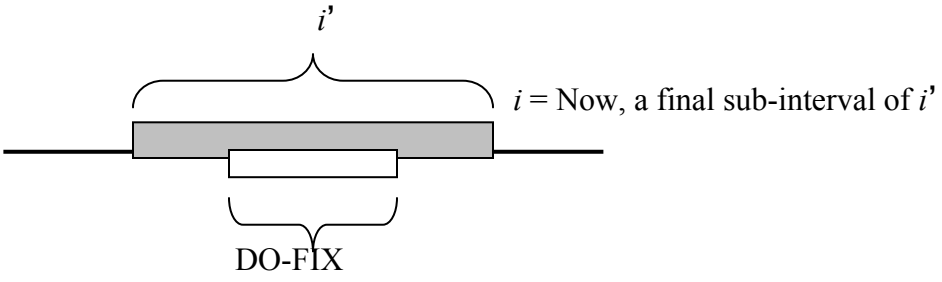
As shown in (40), the DO event is the only entailed sub-event of the entire accomplishment event since the culmination is just an implicature. This explains why the culmination requirement is cancelable with accomplishments. However, the presence of the implicature also accounts for the fact that accomplishments (control transitives) are systematically translated into the event-completion reading for the out-of-the-blue tenseless sentence test; the events culminate in normal circumstances.

Finally, combined further with the higher perfect aspect, the meaning of the existential perfect reading with this verb is as shown in (41).

(41) [[kʷɬ let]] = λp.λ*i*.∃*i'*[PTS(*i': i*) & p(*i'*)](λ*i*.∃e.∃e'.[e'⊑ e & τ(e')⊂ *i* &
DO-FIX(e) & [∀w'[w' is an inertia world w.r.t w at the beginning of e →
[∃e"[e" is a culmination of e in w' & e causes e"in w']]]])
= λ*i*.∃*i'*[PTS(*i': i*) & ∃e.∃e'.[e'⊑ e & τ(e')⊂ *i'* & DO-FIX(e) &
[∀w'[w' is an inertia world w.r.t w at the beginning of e →
[∃e"[e" is a culmination of e in w' & e causes e"in w']]]]]])

Since the *e'* is the DO-FIX event which is also the entire event *e* in this case, and it is properly included within the perfect time span *i'*, this gives rise to an Existential Perfect reading, which asserts that the event has terminated or completed at the reference time *i*. This is illustrated in the diagram in Figure 3.3.

Figure 3.3 Existential Perfect reading of accomplishments



As the diagram shows, the PTS does not assert that its left boundary (beginning) is the left boundary of the event time interval. The following example illustrates this point.

(42)	ləʔə	sən	kʷəʔ	**kʷɬ**	le-t	ʔə	tsə	čəsəʔ
	AUX	1.sg	INF	PERF	get.fixed-CTR	OBL	D	two

'I have fixed my car since two o'clock.'

This example sentence is used in a situation where the event of fixing the car occurred sometime between two o'clock and the utterance time at four o'clock in the same afternoon, say, from 2:30 to 3:00. In other words, the entire event time interval is properly included in the perfect time span. Note that the car in the example in (42) may not necessarily be completely fixed because of the culmination being only an implicature. The fixing-the-car event may have stopped without having reached its potential culmination point.

The Existential Perfect readings of achievements can be accounted for in the same way. Let us consider *téčəl* 'arrive' as an example. The logical translation of the verb itself is given in (43).

(43) [[téčəl]] = λe.BECOME-ARRIVE(e)

The perfective morphology results in the logical translation in (44).

(44) $[[\text{téčəl}_{\text{Perfective}}]] = \lambda Q.\lambda i.\exists e \exists e'[e' \sqsubseteq e \ \& \ \tau(e') \subset i \ \& \ Q(e)] \ (\lambda e.\text{BECOME-ARRIVE}(e))$
$= \lambda i.\exists e \exists e'[e' \sqsubseteq e \ \& \ \tau(e') \subset i \ \& \ \lambda e.\text{BECOME-ARRIVE}(e)]$

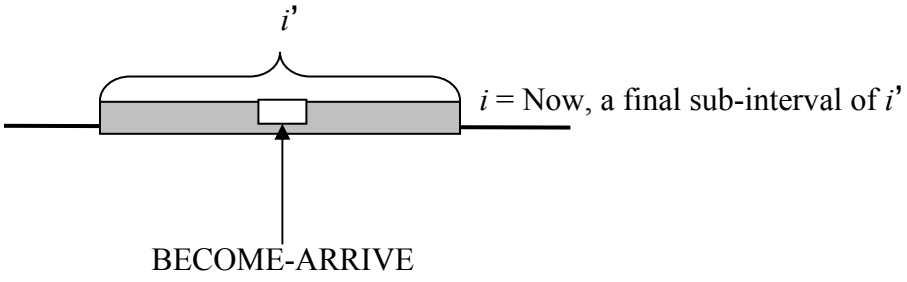
As the translation in (44) shows, the BECOME-ARRIVE event is the only sub-event which also is the entire event. Thus the entire BECOME event is included in the reference time *i*.

Finally, addition of the particle *kʷɬ* yields the translation in (45).

(45) [[kʷɬ téčəl]] = λp.λ*i*.∃*i'*[PTS(*i': i*) & p(*i'*)](λ*i*.∃e∃e'[e'⊑ e & τ(e')⊂ *i* & BECOME-ARRIVE(e)])
= λ*i*.∃*i'*∃e∃e'[PTS(*i': i*) & e'⊑ e & τ(e')⊂ *i'* & BECOME-ARRIVE(e)]

The logical translation in (45) ensures that the BECOME event is included in the perfect time span *i'* and followed by the reference time *i*, which is the final subpart of *i'*. This is illustrated in Figure 3.4.

Figure 3.4 Existential Perfect reading of achievements



As discussed in Chapter 2, the only eventuality entailed in an achievement event is a culmination which is represented with BECOME. As shown in Figure 3.4, the BECOME-ARRIVE event is properly included in the PTS, which forces the existential reading.

3.2.3 The Inceptive Reading

I argue that the inceptive reading of the *kʷɬ* construction is actually a type of the existential perfect, which is available only to activities and inchoative states. Thus, the reading can be accounted for by the composition of the VP, perfective, and perfect.

I present an inchoative state *ɬčík^{w}əs* 'to get tired' to illustrate a compositional analysis. When the verb *ɬčík^{w}əs* occurs with the particle *k^{w}ɬ*, the reading of the sentence is the inceptive reading as shown in (46). I introduce a new term to refer to this reading, the *Perfect of Inception*, which is actually a sub-type of the Existential Perfect reading, to distinguish from the inceptive reading with the plain perfective form.

(46) **k^{w}ɬ** ɬčík^{w}əs
REAL get.tired
'I am getting tired (I have begun to feel tired).'

The denotation in (47) is the event semantics of the stem *ɬčík^{w}əs*.

(47) [[ɬčík^{w}əs]] = $\lambda e.\exists e_1 \exists e_2 [e =^{s} (e_1 \cup e_2)$ & BECOME-TIRED(e_1) & TIRED(e_2)]

When the verb occurs in the perfective form, which is a zero morpheme, the semantics of the predicate is as demonstrated in (48).

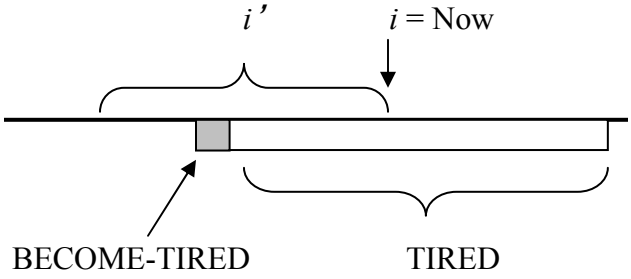
(48) [[ɬčík^{w}əs $_{\text{Perfective}}$]] = $\lambda Q.\lambda i.\exists e \exists e' [e' \sqsubseteq e$ & $\tau(e') \subset i$ & Q(e)]($\lambda e.\exists e_1 \exists e_2 [e =^{s} (e_1 \cup e_2)$
& BECOME-TIRED(e_1) & TIRED(e_2)]
= $\lambda i.\exists e \exists e'$ [$e' \sqsubseteq e$ & $\tau(e') \subset i$ & $\exists e_1 \exists e_2 .[e =^{s} (e_1 \cup e_2)$ & BECOME-TIRED(e_1) & TIRED(e_2)]]

Finally, the perfect morphology gives rise to the complex denotation shown in (49), which results in what I call the Perfect of Inception reading.

(49) [[kʷɬ ɬčík^{w}əs]] = λp.λ*i*.∃*i'*[PTS(*i': i*) & p(*i'*)] (λ*i*.∃e∃e'[e'⊑ e & τ(e')⊂ *i* &
∃e_1.∃e_2.[e=^{s}(e_1 ∪ e_2) & BECOME-TIRED(e_1) & TIRED(e_2)]])
= λ*i*.∃*i'*[PTS(*i': i*) & ∃e∃e'[e'⊑ e & τ(e') ⊂ *i'* & ∃e_1.∃e_2.[e=^{s}(e_1 ∪ e_2) &
BECOME-TIRED(e_1) & TIRED(e_2)]]]

The formula in (49) ensures that a sub-event *e'* of *e*, which is either the BECOME-TIRED(e_1), the TIRED(e_2), or the entire event is properly included in the perfect time span *i'*. Thus, if the sentence is uttered within the interval of the TIRED sub-event as shown below, then only the BECOME-TIRED sub-event is properly included in *i'*. Hence the *e'* in the denotation is correctly predicted to be the BECOME-TIRED event (i.e., e_1), which induces the Perfect of Inception reading.

Figure 3.5 Perfect of Inception reading of inchoative states

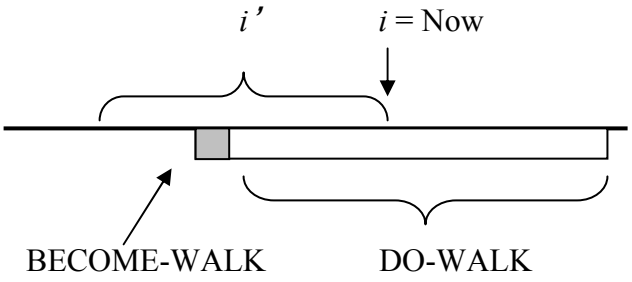


The Perfect of Inception reading of activities with *kʷɬ* can be accounted for in the same way. The logical translation of an activity verb in the perfect *kʷɬ štəŋ* 'He has started walking' is as shown in (50).

(50) [[kʷɬ štəŋ]] = λ*i*.∃*i'*[PTS(*i': i*) & ∃e∃e'[e'⊑ e & τ(e') ⊂ *i'* & ∃e_1.∃e_2.[e=^{s}(e_1 ∪ e_2) &
BECOME-WALK(e_1) & DO-WALK(e_2)]]]

Figure 3.6 illustrates that when the sentence is uttered within the interval of the DO-WALK event, only the BECOME-WALK sub-event is properly included in *i'*. This correctly yields the Perfect of Inception reading.

Figure 3.6 Perfect of Inception reading of activities



However, the same problem for the perfective activities discussed in 2.2 applies to the perfect activities and inchoative states. The denotation in (50) predicts that the perfective activity with the particle *kʷɬ* can also induce the other types of existential perfect reading when *e'* is either e_2 or the entire event *e*. This is not the case, however. To obtain the existential perfect reading of an activity, a post-predicate particle *ləʔ* or an auxiliary construction *ləʔə ~ kʷə* is required as shown in (51).

(51) kʷɬ čey ləʔ sən ʔə tsə s-x̣əl-x̣əɬ
PERF work PAST 1.sg OBL D sick(PL)
'I have worked for a hospital (lit. I have worked for sick people.).'

The sentence in (51) without the past marker *ləʔ* cannot be used to express the same reading regardless of the situation. Rather, the past marker is obligatory. As discussed in 2.2, I assume

that the marker is required because the activity predicate is inherently open: it does not entail a culmination or a termination at all. In other words, *ləʔ* is required to supply the meaning that the event terminated.[17]

I have shown that the proposed denotations correctly derive the Perfect of Inception reading for inchoative states. This analysis also applies to activities which are similar to inchoative states in their temporal structure, the only difference being that the second sub-event is a DO event.

4 Conclusion

In this chapter, I have proposed that the particle *kʷɬ* is a perfect marker, and argued that the meaning of the *kʷɬ* perfect construction is grammatically based. That is, it is a composition of a situation aspect, a viewpoint aspect, and the perfect aspect. Although I assumed the standard semantics of the imperfective, I proposed that the perfective can make reference to the internal structure of an event in order to account for the interesting readings, the inceptive reading of the perfective form and the Perfect of Inception. This makes it possible not only to view the run time of an event as a whole, but also to view the run time of one of the sub-events as the event time.

[17] I am not further exploring this issue for the purpose of this thesis, and leave it for my future research.

Chapter 4 Situation aspect in Japanese

1 Introduction

This chapter proposes a classification of situation aspect in Japanese. I first present a thorough examination of predicates using various standard and language-internal diagnostics. As discussed in Chapter 1, Kindaichi (1955, 1976) and his successors propose that Japanese verbs are classified into three core classes, *stative verbs (joutai dooshi)*, *durative verbs (keizoku dooshi)*, and *instantaneous verbs (shunkan dooshi)*.[1] The class of *instantaneous verbs* is also called *inchoative verbs* (Ogihara 1998a) or *change-of-state verbs* (*henka dooshi*) (Fujii 1976). This classification is solely based on the various readings yielded by the aspect marker *–tei-*. While the test with *–tei-* is unquestionably important for classifying Japanese predicates, this test alone cannot capture other important differences between different verb classes with respect to aspectual properties. In this chapter, therefore, I examine Japanese predicates making use of a set of diagnostics, both standard and language-internal, and propose a new classification of Japanese predicates. The remainder of the chapter will be dedicated to proposing a formal semantics for each class, extending Rothstein's version of a neo-Davidsonian theory of event representation.

2 Classification of Japanese predicates

I propose that Japanese predicates are classified into five classes as shown in (1).

[1] They also add a fourth category, which does not fall into the other three classes. I will discuss this in 2.5 below.

(1)	Homogeneous states	*iru (be/exist), aru (be/exist/have), dekiru (be able to)*
	Activities	*aruku (walk), hasiru (run), benkyosuru (study)*
	Accomplishments	*naosu (fix s.t.), tukuru (make s.t.), tateru (build s.t.)*
	Achievements	*tuku (arrive/reach), toochakusuru (arrive), kieru (disappear)*
	Inchoative states	*kumoru (get cloudy), hareru (get sunny), mieru (get visible)*

Homogeneous states form an independent class whose structure is maximally simple: only a single stative event which has no stages. Departing from Kindaichi (1955, 1976), the durative verbs are divided into two separate classes: *activities* and *accomplishments*. Japanese activities pattern with their Sənčáθən counterparts in terms of their event structure: they contain an initial instantaneous event BECOME and a process event DO. Japanese accomplishments are similar to their Sənčáθən counterparts in that they also have a process event DO with a culmination implicature. However, Japanese accomplishments also contain an initial BECOME event, unlike their Sənčáθən counterparts. In Japanese, activities and accomplishments still form a natural class: they pattern with each other for some tests including the *–tei-* test. Thus I group them together as *process verbs*, but not as *durative verbs* since another verb class, *inchoative states*, are also durative. I also divide change of state verbs into two classes: *achievements*, which are single instantaneous transition events, and *inchoative states*, which contain an initial transition event, which may or may not be instantaneous, followed by a resultant state, which is durative. Thus, Japanese change of state verbs also pattern with their Sənčáθən counterparts with respect to their subdivision and their event structures.

The event representations that I propose for these five verb classes are given in (2).

(2) Event representations for verb classes in Japanese

Homogeneous states:	$\lambda e.P(e)$
Activities:	$\lambda e.\exists e_1 \exists e_2[e =^S (e_1 \cup e_2) \wedge (\text{BECOME}(P))(e_1) \wedge (\text{DO}(P))(e_2)]$
Accomplishments:	$\lambda e.\exists e_1 \exists e_2[e =^S (e_1 \cup e_2) \wedge (\text{BECOME}(P))(e_1) \wedge (\text{DO}(P))(e_2)$ & [∀w'[w' is an inertia world w.r.t w at the beginning of e → [∃e'[e' is a culmination of e in w' & e causes e'in w']]]]
Achievements:	$\lambda e.(\text{BECOME}(P))(e)$
Inchoative States:	$\lambda e.\exists e_1 \exists e_2[e =^S (e_1 \cup e_2) \wedge (\text{BECOME}(P))(e_1) \wedge P(e_2)]$

This classification is based on the result of a series of aspectual tests, both cross-linguistic and language-specific, which will be discussed in the following subsections.

2.1 The stative/process/change-of-state distinction

The majority of previous research on *–tei-* has proposed that *–tei-* yields mainly three different readings: an on-going process reading, a resultant state reading, and a perfect reading (Kindaichi 1955, Fujii 1976, McClure 1996, Ogihara 1998a, Shirai 2000, Nishiyama 2006). It has been claimed that *–tei-* is not compatible with states, that the on-going process reading with *–tei-* is available only with durative (or process) verbs (i.e., activities and accomplishments), that the resultant state reading with *–tei-* is available only with instantaneous verbs (achievements), and that the perfect reading is possible with any verb class (Kindaichi 1955 a.o.). Though the *–tei-* test alone cannot distinguish all the proposed verb classes in (1), it can at least classify Japanese verbs into three: stative verbs, process verbs, and change of state verbs. Thus I reexamine the Japanese data with this test to make a basic distinction between the three classes. I will discuss only default or 'basic' readings with *–tei-* in this chapter. I will deal with the non-default possible

readings with the various classes, and present a detailed analysis of *–tei-* as an aspect marker, in Chapter 5.

Let us begin with homogeneous states. As shown in (3), homogeneous states are not compatible with *–tei-*: addition of the marker results in ungrammaticality[2].

(3) a. *Taroo-ga i-tei-ru
Taroo-NOM be here-TEI-PRES
'Taroo is here.'

b. *Kaigi-ga at-tei-ru
meeting-NOM exist-TEI-PRES
'The meeting is being held.'

c. *Ano-gakusei-ga yoku deki-tei-ru
that-student-NOM well be able to-TEI-PRES
'That student is smart.'

Activities and accomplishments pattern with each other for the *–tei-* test. As the examples in (4) show, the basic reading of *–tei-* with activities is an on-going process reading.

(4) a. Taroo-ga arui-tei-ru
Taroo-NOM walk-TEI-PRES
'Taroo is walking.'

b. Hanako-ga nai-tei-ru
Hanako-NOM cry-TEI-PRES
'Hanako is crying.'

[2] In some Western dialects such as the Kansai dialect and Fukuoka dialect, cognates of *–teiru* can co-occur with homogeneous states.

c. Josei-ga ubaguruma-o osi-tei-ru
woman-NOM stroller-ACC push-TEI-PRES
'A woman is pushing a stroller.'

d. Jiroo-ga hahaoya-o tetudat-tei-ru
Jiroo-NOM (his)mother-ACC help-TEI-PRES
'Jiroo is helping his mother.'

Likewise, *-tei-* induces an on-going process reading with accomplishments as shown in (4).

(5) a. Taroo-ga kuruma-o naosi-tei-ru
Taroo-NOM car-ACC repair-TEI-PRES
'Taroo is repairing a car.'

b. Hanako-ga seetaa-o an-dei-ru[3]
Hanako-NOM sweater-ACC knit-TEI-PRES
'Hanako is knitting a sweater.'

c. Jiroo-ga zibun-no ie-o tate-tei-ru
Jiro-NOM self-GEN house-ACC build-TEI-PRES
'Jiroo is building his own house.'

With achievements, the basic reading of *–tei-* sentences is a resultant state as shown in (6).

(6) a. Mado-ga ware-tei-ru
window-NOM break-TEI-PRES
'The window is broken apart.'

b. Musi-ga sin-dei-ru
bug-NOM die-TEI-PRES
'The bug is dead.'

[3] The initial /t/ in *teiru* surfaces as [d] when it is immediately preceded by a nasal.

c. Tegami-ga todoi-tei-ru
letter-NOM arrive-TEI-PRES
'The letter has arrived.'

Inchoative states pattern with achievements for the purposes of this test: the basic reading of inchoative states with *–tei-* is a resultant state reading as shown in (7).

(7) a. Mado-ga kumot-tei-ru
window-NOM get.fogged-TEI-PRES
'The window is fogged.'

b. Taroo-ga tukare-tei-ru
Taroo-NOM get.tired-TEI-PRES
'Taroo is tired.'

c. taoru-ga nure-tei-ru
towel-NOM get.wet-TEI-PRES
'The towel is wet.'

Table 4.1 summarizes the results of the *–tei-* test.

Table 4.1 Summary of the *–tei-* test

	On-going process	Resultant state	Kindaichi (1955)
Homogeneous states	*	*	States
Activities	√	*	Durative
Accomplishments	√	*	
Achievements	*	√	Instantaneous
Inchoative states	*	√	

The *–tei-* test divides Japanese verbs into three groups. Homogeneous states form one class alone. Activities and accomplishments form another group, both of which result in the on-going process reading, while achievements and inchoative states form the other group, which results in the resultant state reading with *–tei-*.

The following section shows that activities and accomplishments are two separate aspectual classes.

2.2 Two kinds of process verbs: activities and accomplishments

Kindaichi (1955) groups activities and accomplishments together as durative verbs due to their default reading (the on-going process reading) with *–tei-*, which was reexamined and confirmed in the previous section. Although activities and accomplishments form a natural class as process verbs (verbs containing a process sub-event), they behave differently with respect to one of the standard tests, the *in/for* adverbial test (Dowty 1979, Smith 1997), which is generally used to distinguish telic predicates from atelic ones. I apply this diagnostic to test Japanese activities and accomplishments; the data reveal that they are distinct classes in terms of aspectual properties. The Japanese *for*-adverbial phrase with the postposition *-kan* is compatible with both activities and accomplishments as shown in (8) and (9) respectively[4].

(8) a. Taroo-ga ni-ji-kan arui-ta
Taro-NOM 2-hour-KAN walk-PAST
'Taro walked for two hours.'

[4] This test is used in McClure (1996).

b. Hanako-ga san-ji-kan zibun-no-hahaoya-o tetudat-ta
Hanako-NOM 3-hour-KAN self-GEN-mother-ACC help-PAST
'Hanako helped her mother for three hours'

c. Jiroo-ga iti-ji-kan odot-ta
Jiroo-NOM 1-hour-KAN dance-PAST
'Jiroo danced for one hour.'

(9) a. Taroo-ga ni-ji-kan kuruma-o shuurisi-ta
Taroo-NOM 2-hour-KAN car-ACC fix-PAST
'Taroo fixed the car for two hours.'

b. Hanako-ga mik-ka-kan kono-seetaa-o an-da
Hanako-NOM 3-day-KAN this-sweater-ACC knit-PAST
'Hanako knitted this sweater for three days.'

c. Jiroo-ga is-shuu-kan ie-no-kabe-o nut-ta
Jiroo-NOM 1-week-KAN house-GEN-wall-ACC paint-PAST
'Jiroo painted the wall of (his) house for one week.'

However, activities and accomplishments behave differently with the Japanese *in*-adverbial phrase *-de*. With the *-de* adverbial, activities result in infelicity[5] as shown in (10), whereas accomplishment sentences are perfectly acceptable as shown in (11).

(10) a. #Taroo-ga ni-jikan-de arui-ta
Taroo-NOM 2-hour-DE walk-PAST
'Taroo walked in two hours.'

b. #Taro-ga ni-jikan-de zibun-nohahaoya-o tetudat-ta
Taro-NOM 2-hour-DE self-mother-ACC help-PAST
'Taro helped his mother in two hours.'

[5] The *in*-adverbial test is usually used for testing the telicity of predicates. If a sentence is compatible with an *in*-adverbial, the predicate is usually assumed to be telic. Though McClure (1996) reports that Japanese activities can have a telic interpretation in an appropriate situation, the examples in (10) are infelicitous in an out-of-the-blue context. English activities can also be made good with an *in*-phrase if there is a rich-enough context.

c. #Hanako-ga mik-ka-de benkyoosi-ta
Hanako-NOM 3-day-DE study-PAST
'Hanako studied in three days.'

(11) a. Taroo-ga ni-jikan-de ano-kuruma-o shuurisi-ta
Taroo-NOM 2-hour-DE that-car-ACC fix-PAST
'Taroo fixed that car in two hours.'

b. Hanako-ga mik-ka-de kono-seetaa-o an-da
Hanako-NOM 3-day-DE this-sweater knit-PAST
'Hanako knitted this sweater in three days.'

c. Taroo-ga iti-nen-de zibun-no-ie-o tate-ta
Taroo-NOM 1-year-DE self-GEN-house-ACC build-PAST
'Taro built his own house in a year.'

The results of the Japanese *for/in* (*kan/de*) adverbial tests are summarized in Table 4.2:

Table 4.2 Summary of the *kan/de* adverbial test

	-KAN	*-DE*
Activities	√	*
Accomplishments	√	√

As shown in the table above, Japanese activities are compatible with a *-kan* adverbial phrase, but not with a *-de* adverbial phrase. This suggests that Japanese activities contain a durative (process) component but not a final point. In contrast, both adverbial phrases are allowed with Japanese accomplishments, hence suggesting that accomplishments have both a durative component and some kind of final point.

The other standard test, the *almost* test, is also a good diagnostic for distinguishing activities from accomplishments in Japanese. There are at least two Japanese phrases that can be translated as *almost* in English: *moosukoside* and *hotondo*. The function of *moosukoside* is similar to its English counterpart in that it distinguishes activities from accomplishments. Consider (12) and (13).

(12) a. Taroo-ga moosukoside arui-ta
Taroo-NOM almost walk-PAST
'Taroo almost walked. (He did not walk.)'

b. Hanako-ga moosukoside jibun-no-hahaoya-o tetudat-ta
Hanako-NOM almost self-GEN-mother-ACC help-PAST
'Hanako almost helped her mother (She did not help her).'

c. Jiroo-ga moosukoside nai-ta
Jiroo-NOM almost cry-PAST
'Jiroo almost cried. (He did not cry).'

As shown in (12), *moosukoside* with an activity predicate yields only the event cancellation reading: i.e., the event denoted by the predicate did not actually start. In contrast, *moosukoside* with accomplishments allows ambiguity as shown in (13).

(13) a. Taroo-ga moosukoside kono-kuruma-o naosi-ta
Taroo-NOM almost this-car-ACC fix-PAST
'Taro almost fixed that car. '
1) √Taroo did not even start fixing the car.
2) √Taroo started fixing the car, but stopped just before completing it.

b. Hanako-ga moosukoside kono-seetaa-o an-da
Hanako-NOM almost this-sweater-ACC knit-PAST
'Hanako almost knitted this sweater.'
1) √Hanako did not even start knitting the sweater.
2) √Hanako started knitting the sweater, but stopped before completing it.

c. Jiroo-ga moosukoside jibun-no-ie-o tate-ta
Jiroo-NOM almost self-GEN-house-ACC build-PAST
'Jiroo almost built his own house.'
1) √Jiroo did not even start building the house.
2) √Jiroo started building the house, but stopped before completing it.

As shown in (13), *moosukoside* with accomplishments allows ambiguity between 1) an event cancellation reading and 2) an event non-completion reading, as does *almost* in English. This is also evidence that accomplishments and activities differ from each other.

The other adverb meaning 'almost', *hotondo*, can also be used as a diagnostic to distinguish activities from accomplishments, though its function appears to be different from that of *moosukoside*. First, *hotondo* is not compatible with activities. The examples in (14) show that activities with *hotondo* result in infelicity[6].

(14) a. #Taroo-ga hotondo hasit-ta
Taroo-NOM almost run-PAST
'Taroo almost ran.'

b. #Hanako-ga hotondo nai-ta
Hanako-NOM almost cry-PAST
'Hanako almost cried.'

[6] The sentences improve if a suffix *–soo* 'be likely to do~' is attached to the main verbs. Thus, *Hanako-ga hotondo naki-soo-datta* (Hanako-NOM almost cry-SOO-DEC-PAST 'Hanako almost cried.') is felicitous.

c. #Jiroo-ga hotondo hatarai-ta
Jiroo-NOM almost work-PAST
'Jiroo almost worked.'

In contrast, *hotondo* is compatible with accomplishments. Interestingly, it does not allow ambiguity with accomplishments, unlike *moosukoside*.[7] This adverb cannot induce an event cancellation reading like *moosukoside*: the only reading it yields is an event non-completion reading as shown in (15).

(15) a. Taroo-ga hotondo ano-kuruma-o naosi-ta
Taroo-NOM almost that-car-ACC fix-PAST
'Taroo almost fixed that car. '
1) *Taroo did not even start fixing the car.
2) √Taroo started fixing the car, but stopped just before completing it.

b. Hanako-ga hotondo kono-seetaa-o an-da
Hanako-NOM almost this-sweater-ACC knit-PAST
'Hanako almost knitted this sweater.'
1) *Hanako did not even start knitting the sweater.
2) √Hanako started knitting the sweater, but stopped before completing it.

c. Jiroo-ga hotondo jibun-no-ie-o tate-ta
Jiroo-NOM almost self-GEN-house-ACC build-PAST
'Jiroo almost built his own house.'
1) *Jiroo did not even start building the house.
2) √Jiroo started building the house, but stopped before completing it.

[7] This parallels the two kinds of 'almost' in Sənčáθən discussed in Chapter 2. This is an interesting issue because there appear to be many slightly different words for something like *almost*, cross-linguistically. These different effects of *almost*-like words on different aspectual classes indicate that more research is required into the exact semantics of these *almost*-like words.

Just like the *in/for* adverbial test, the Japanese 'almost' test also reveals that activities and accomplishments in Japanese behave differently. This is summarized in Table 4.3.

Table 4.3 Summary of the two *almost* tests (activities vs. accomplishments)

	moosukoside		*hotondo*	
	Cancellation	Non-completion	Cancellation	Non-completion
Activities	√	*	*	*
Accomplishments	√	√	*	√

The result again suggests that activities and accomplishments in Japanese must be separate aspectual classes. *Moosukoside* allows only the event cancellation reading with activities, which suggests that this verb class contains only an initial point. With accomplishments, on the other hand, *moosukoside* allows an ambiguity between the event cancellation reading and the event non-completion reading. One possible way to interpret these results would be that accomplishments contain both an initial point and a final point.[8] The result of the *hotondo* test further confirms that accomplishments have a final point but activities do not.

As the last diagnostic to distinguish activities from accomplishments, I propose another aspectual test. The Japanese adverb *tuini* means 'finally' in English, and its function appears similar to the English counterpart: *tuini* appears to focus on the last (the right-most) transition point of an event. Note that the last transition point here is not necessarily a final transition point or a culmination point. It is the right-most transition point available in an event. If an event has

[8] The final point or a culmination of Japanese accomplishments is not entailed, but it is an implicature as discussed in details in 3.3.

two transition points, initial and final, *tuini* focuses on the final one. If an event contains only one transition point, initial or final, that is the only point that the adverb focuses on.

Let us first consider activities, shown in (16).

(16) a. Taroo-ga tuini odot-ta
Taroo-NOM finally dance-PAST
'Taroo finally danced (started to dance).'

b. Hanako-ga tuini warat-ta
Hanako-NOM finally smile-PAST
'Hanako finally smiled (started to smile).'

c. Jiroo-ga tuini hatarai-ta
Jiroo-NOM finally work-PAST
'Jiroo finally worked (started to work).'

Each sentence in (16) implies that the event started after some effort, and the situation may or may not be on-going at the utterance time. In other words, *tuini* focuses on only the coming about of the event but not the termination of the event. The acceptability of the following sentences that express that the event is still on-going confirms this conclusion.

(17) a. Taroo-ga tuini odot-ta.
Taroo-NOM finally dance-PAST
'Taroo finally danced (started to dance).'
Ima-mo odori-tuduke-tei-ru.
now-still dance-continue-TEI-PRES
'He is still dancing.'

b. Hanako-ga tuini warat-ta
Hanako-NOM finally smile-PAST
'Hanako finally smiled (started to smile).'
Ima-mo warai-tuduke-tei-ru.
now-still smile-continue-TEI-PRES
'She is still smiling.'

c. Jiroo-ga tuini oyoi-da
Jiroo-NOM finally swim-PAST
'Jiroo finally swam (started to swim).'
Ima-mo oyogi-tuduke-tei-ru.
now-still swim-continue-TEI-PRES
'He is still swimming.'

The interpretation of accomplishments with *tuini* differs from that of activities. With accomplishments, *tuini* appears to focus only on a final point, inducing only an event completion reading. This is illustrated in (18).

(18) a. Taroo-ga tuini ano-kuruma-o naosi-ta
Taroo-NOM finally that-car-ACC fix-PAST
'Taroo finally fixed that car. '
1) *Taroo finally started fixing the car. – Inceptive reading
2) √Taroo finally completed fixing the car. – Completion reading

b. Hanako-ga tuini kono-seetaa-o an-da
Hanako-NOM finally this-sweater-ACC knit-PAST
'Hanako finally knitted this sweater.'
1) *Hanako finally started knitting the sweater. – Inceptive reading
2) √Hanako finally completed knitting the sweater. – Completion reading

c. Jiroo-ga tuini jibun-no-ie-o tate-ta
Jiroo-NOM finally self-GEN-house-ACC build-PAST
'Jiroo finally built his own house.'
1) *Jiro finally started building his house.
2) √Jiro finally completed building his house.

As every accomplishment example in (18) shows, *tuini* allows only the event completion reading but not the event inception reading. The unavailability of continuing sentences in (19) further support this conclusion:

(19) a. Taroo-ga tuini ano-kuruma-o naosi-ta
Taroo-NOM finally that-car-ACC fix-PAST
'Taroo finally fixed that car. '
Ima-mo naosi-tuduke-tei-ru
now-still fix-continue-TEI-PRES
'He is still fixing it (the same problem).'

b. Hanako-ga tuini kono-seetaa-o an-da
Hanako-NOM finally this-sweater-ACC knit-PAST
'Hanako finally knitted this sweater.'
Ima-mo ami-tuduke-tei-ru
now-still knit-continue-TEI-PRES
'She is still knitting it.'

c. Jiroo-ga tuini jibun-no-ie-o tate-ta
Jiroo-NOM finally self-GEN-house-ACC build-PAST
'Jiroo finally built his own house.'
Ima-mo tate-tuduke-tei-ru
now-still build-continue-TEI-PRES
'He is still building it.'

This result suggests that activities do not contain a final point but accomplishments do[9].

This subsection considered activities and accomplishments, making use of two standard tests, the *in/for* adverbial test and the *almost* test, as well as a new test, the *tuini* 'finally' test. The results suggest that activities and accomplishments pattern with each other in terms of durativity, but behave differently in terms of the final point of events.

2.3 Accomplishments and achievements

There is an interesting parallel between Sənčáθən and Japanese in terms of a correlation between transitivity and aspectuality. As in Sənčáθən, also in Japanese many transitives which are accomplishments share roots with unaccusatives which are achievements[10]. Furthermore, some of the accomplishment transitives are derived from unaccusative roots[11], just like in Sənčáθən. (20a) shows cases where transitives are derived from unaccusatives, whereas (20b) shows cases where transitives (with a transitiviser *–e*) and unaccusatives (with an intransitiviser *–ar*) share the same root[12].

[9] I will below argue that this final point (culmination) is not entailed but it is implicated.
[10] I assume that achievements are not necessarily near-instantaneous (Dowty 2002).
[11] In Sənčáθən, the unaccusative bare root is the achievement, and it becomes an accomplishment just by affixing the control transitivizer. In Japanese, in contrast, both unaccusatives (achievements) and transitives (accomplishments) can be derived from bare roots by affixing various intransitive or transitive suffixes. Details about the various intransitive/transitive suffixes are not within the scope of this thesis.
[12] There are other forms for transitives (or causatives) and intransitives in Japanese, but I will not discuss them in detail in this thesis. See Jacobsen (1985) and/or Harada (1999).

(20)	**Intransitives (unaccusatives)**[13]	**Transitives/causatives**
a.	*tuk* (stick to)	*tuk-e* (stick to-TR)
	tat (get built)	*tat-e* (build-TR)
	sizum (sink)	*sizum-e* (sink-TR)
	todok (arrive)	*todok-e* (arrive-TR)
b.	*ag-ar* (rise-INTR)	*ag-e* (rise-TR)
	at-ar (get hit-INTR)	*at-e* (get hit-TR)
	hajim-ar (start-INTR)	*hajim-e* (start-TR)
	atatam-ar (get warm-INTR)	*atatam-e* (get warm-TR)

Since tense marking is obligatory in Japanese, these forms must appear with tense markers (and an aspect marker if necessary)[14]. While these pairs share the same roots, they show distinct behaviours with respect to some aspectual tests. Just like with the Sənčáθən achievement-accomplishment distinction discussed in Chapter 2, these Japanese verbs in the intransitive forms are unaccusative verbs whose aspectual behaviour is that of achievements, while their transitive counterparts behave like non-culminating accomplishments (Bar-el et al. 2005).

The *almost* test, which was used in section 2.2 to distinguish activities from accomplishments, can also be used to distinguish accomplishments from achievements. The results will illustrate the correlation between transitivity and aspectual class. As discussed in section 2.2, Japanese has two main adverbs which correspond to English *almost*, *moosukoside* and *hotondo*. Since possible interpretations of the two verb classes are the same with *hotondo*, only the examples with *moosukoside* are considered in this section.

[13] Some of these examples are not achievements in English since they are not near-instantaneous. However, I argue that the semantics of Japanese achievements is different from that of English achievements. Detailed analysis of Japanese achievements will be given below.
[14] The present (non-past) marker has two variants *–u* and *–ru*, while the past marker is *–ta*.

With intransitives (achievements), this adverb yields only an event cancellation reading. Consider (21).

(21) a. nimotu-ga moosukoside todoi-ta
freight-NOM almost arrive-PAST
'The freight almost arrived.' – Event cancellation reading

b. inu-ga moosukoside sin-da
dog-NOM almost die-PAST
'The dog almost died.' – Event cancellation reading

c. hannin-ga moosukoside tukamat-ta
criminal-NOM almost be caught-PAST
'The criminal was almost caught.' – Event cancellation reading

Each example in (21) means that the event denoted by the verb did not happen at all, though its previous stages leading toward the event may have happened. For example, the dog in (21b) might have been sick, and the condition became so serious that the speaker thought that it would die. However, thanks to good care, perhaps, the condition improved and the dog is healthy now. The other possible situation is that the dog was going to eat a dog food containing a deadly poison, but it changed its mind and did not eat the food at all.

In the first case, there was a previous stage of the dog being seriously sick. So one might think that this is a case of the event non-completion reading. In the second case, on the other hand, it is obvious that the entire dying event did not happen at all since there was no previous stage of the dog being seriously sick, hence the event cancellation reading. Does this mean that *moosukoside* induces ambiguity between the event cancellation reading and the event non-

completion reading with achievements? I do not think so. I claim that *moosukoside* allows only the event cancellation reading in both cases since, as discussed in details in section 3, achievements denote only the culmination of an event. In other words, there may be a previous stage or stages leading up to the culmination, but such previous stages are not included in the event denoted by the verb.

This contrasts with accomplishment examples in (22).

(22) a. Taroo-ga moosukoside zibun-no-kuruma-o naosi-ta
Taroo-NOM almost self-GEN-car-ACC fix-PAST
'Taroo almost fixed his car.'
√ Taroo did not even start fixing the car. – Event cancellation
√ Taroo started but did not complete fixing his car. – Event non-completion

b. Taroo-ga moosukoside Fido-no-inugoya-o tukut-ta
Taroo-NOM almost Fido-GEN-doghouse-ACC fix-PAST
'Taroo almost made Fido's doghouse.'
√ Taroo did not even start making the doghouse. – Event cancellation
√ Taroo started but did not complete making the doghouse. – Event non-completion

c. Hanako-ga moosukoside ano-saamon-o tabe-ta
Hanako-NOM almost that-salmon-ACCeat-PAST
'Hanako almost ate that salmon.'
√ Hanako did not even start eating the salmon. – Event cancellation
√ Hanako started but did not complete eating the salmon. – Event non-completion

As shown in (22), Japanese accomplishments allow ambiguity between the two readings with *moosukoside*, the event cancellation reading and the event non-completion reading. The latter is not allowed with the achievements. The result is summarized in Table 4.4.

Table 4.4 Summary of the *almost* tests (achievements vs. accomplishments)

	Moosukoside	
	Cancellation	Non-completion
Achievements	√	*
Accomplishments	√	√

Let us also examine achievements and accomplishments with the *tuini* test, which appears to focus on the right-most transition point, which is an initial point for activities, while it is a final point for accomplishments as discussed in 2.2. Since we have already seen that *tuini* focuses only on the final point for accomplishments, we examine only achievements with this test in this subsection.

(23) a. kaze-ga tuini naot-ta
cold-NOM finally heal-PAST
'My cold finally healed.' – Event completion reading

b. inu-ga tuini sin-da
dog-NOM finally die-PAST
'The dog finally died.' – Event completion reading

c. garasu-ga tuini ware-ta
glass-NOM finally break-PAST
'The glass finally broke.' – Event completion reading

As expected, since achievements contain a final culmination point, the examples in (23) show that the focus of the adverb is the final culmination point, giving rise to only the event completion reading. This is the case for accomplishments as discussed in section 2.2. Thus achievements and accomplishments pattern with each other in this respect.

Table 4.5 Summary of the *tuini* test (achievements vs. accomplishments)

	tuini	
	Inception	Completion
Achievements	*	√
Accomplishments	*	√

Though accomplishments and achievements pattern with each other for the *tuini* test, they differ in terms of the last aspectual test, the culmination cancellation test (Bar-el et al 2005, Bar-el 2005). The culmination requirement cannot be cancelled with the achievements as shown in (24).

(24) a. # tegami-ga todoi-ta kedo mada todoi-tei-nai
letter-NOM arrive-PAST but yet arrive-TEI-NEG
'The letter arrived, but it has not arrived yet.' Contradiction!

b. # inu-ga sin-da kedo mada sin-dei-nai
dog-NOM die-PAST but yet die-TEI-NEG
'The dog died but it is not dead yet.' Contradiction!

c. #doa-ga simat-ta kedo mada simat-tei-nai
door-NOM close-PAST but yet close-TEI-NEG
'The door closed but it is not closed yet.' Contradiction!

In all cases in (24), the cancellation of the culmination results in infelicity. However, this is not the case with their transitive counterparts: the culmination requirement of the transitive predicates can be cancelled without resulting in a contradiction. This is illustrated in (25).

(25) a. √ Taroo-ga tegami-o todoke-ta kedo mada todoi-tei-nai
Taroo-NOM letter-ACC deliver-PAST but yet arrive-tei-NEG
'Taroo delivered the letter, but it has not arrived yet.' No contradiction!

b. √ Taroo-ga kodomo-o okosi-ta kedo mada okite-tei-nai
Taroo-NOM child-ACC wake up(TR)-PAST but yet wake up(INTR)-NEG
'Taroo woke his child up, but she is not awake yet.' No contradiction!

c. √ Hanako-ga doa-o sime-ta kedo mada simat-tei-nai
Hanako-NOM door-ACC close-PAST but yet close-TEI-NEG
'Hanako closed the door but it is not closed yet.' No contradiction!

There is a clear contrast between the examples in (24) and (25). This result suggests that the events described by achievements must culminate but those of accomplishments do not need to.

This subsection considered the distinction between achievements and accomplishments. The *moosukoside* test suggests that achievements have only a culmination point, while accomplishments have both initial and final points. The *tuini* test confirms that both achievements and accomplishments have a final culmination point. Lastly, the contrast between the two verb classes with respect to the culmination cancellation test shows that the culmination requirement is not cancelable for achievements, but cancelable for accomplishments, suggesting that there is a difference between the two classes in terms of culmination.

2.4 Achievements vs. inchoative states

As discussed in 2.1, achievements and inchoative states pattern with each other with respect to the *–tei-* test: the basic reading with *–tei-* is a resultant state reading for both verb classes. However, these two classes show different properties in terms of other diagnostics. In this

subsection, I propose some language-internal diagnostics to distinguish the two classes and argue that they are aspectually separate classes.

Japanese has a set of phasal aspect markers, which focus on different phases of an event. One that indicates the coming about of a state is *–tek-*.[15] This marker consists of *-te-* which is also part of *–tei-* and *k* which is a lexical verb meaning 'to come'. When this marker is attached to an inchoative state, it indicates that the inception of the state expressed by the predicate is in progress (Arita 2001). Consider (26).

(26) a. Taroo-ga tukare-tek-ita
Taroo-NOM get tired-TEK-PAST
'Taroo is getting tired.'

b. Sora-ga kumot-tek-ita
sky-NOM get cloudy-TEK-PAST
'The sky is getting cloudy.'

c. Mizu-ga koot-tek-ita
water-NOM get frozen-TEK-PAST
'The water is getting frozen.'

In contrast, the marker *–tek-* is not compatible with achievements as the ungrammaticality of the examples in (27) shows.

(27) a. *Taroo-ga toochakusi-tek-ita
Taroo-NOM arrive-TEK-PAST

[15] The *–tek* construction has two functions: one is to add directionality of the event, and the other is to add an aspectual meaning (Arita 2001). I focus on the aspectual use of *–tek* in this thesis.

b. *Inu-ga sin-dek-ita
dog-NOM die-TEK-PAST
c. *Eiga-ga hazimat-tek-ita
movie-NOM start-TEK-PAST

As the contrast between (26) and (27) shows, the phasal (inceptive) aspect marker *-tek-* is compatible only with inchoative states but not with achievements (or the other predicate classes),[16, 17] which suggests that inchoative states and achievements are separate aspectual classes.

The other language internal test which distinguishes achievements from inchoative states is compatibility with a durative adverbial. If a class of events has durativity, then it should be compatible with a durative adverbial. On the other hand, if the class does not have durativity, then it should not be compatible with a durative adverbial. The majority of Japanese inchoative states correspond to so-called "degree achievements" (Dowty 1979) in English. Degree achievements are also called *change of states* (Marchand 1969) and *gradual completion verbs* (Bertinetto and Squartini 1995). Dowty notes that degree achievements in English such as *widen*

[16] Toshiyuki Ogihara (p.c.) points out that the *–tek* form of *sinu* 'die' is acceptable if the subject is replaced with *bakuteria* 'a bacterium/bacteria'. However, this seems possible only when the subject refers to more than one bacterium (i.e., bacteria). Note that plurality does not need to be marked in Japanese. In fact, the sentence (32b) is acceptable if the subject refers to more than one dog which died one after another or if different dogs died in different occasions in the past. This is because *-tek* has a different effect with plurals, not giving the inchoative reading that it does with inchoative states, but rather giving a repetitive event (Arita 2001).

[17] Toshiyuki Ogihara (p.c.) also points out that another inchoative marker *-tutuaru* 'be in the stage of gradually becoming ~' does not distinguish inchoative states from achievements since it is compatible with the two classes as an aspectual marker, regardless of the plurality of the subject. In fact, this marker is compatible with all the predicate classes except for homogeneous states. Thus, its function as an inchoative marker is very different from that of *–tek*, which functions as an inchoative marker only with inchoative states. Therefore, I believe that *–tek*, but not *–tutuaru*, can be used as a diagnostic to distinguish inchoative states from all the other classes.

and *cool* can co-occur with durational adverbs. Just like the English degree achievements, inchoative states can take a durative adverb *sibaraku* 'for a while'[18]. This is shown in (28)[19].

(28) a. Sora-ga sibaraku hare-ta
sky-NOM for.a.while get.sunny-PAST
'It was sunny for a while.'
b. Mado-ga sibaraku kumot-ta
window-NOM for.a.while get.fogged-PAST
'The window was fogged for a while.'
c. Hanako-ga sibaraku otitui-ta
Hanako-NOM for.a.while calm.down-PAST
'Hanako calmed down for a while.'

In contrast, achievements are not compatible with the durative adverbial *sibaraku* as shown in (29).

(29) a. *Taroo-ga sibaraku tui-ta
Taroo-NOM for.a.while arrive-PAST
b. *Inu-ga sibaraku sin-da
dog-NOM for.a.while die-PAST / die-TEI-PAST
c. *Eiga-ga sibaraku hazimat-ta
movie-NOM for.a.while start-PAST

[18] Note that we can also express the same readings with *-tei* sentences, which sound more natural for some Japanese speakers, including Toshiyuki Ogihara (p.c). For instance, the *–tei-* sentence below means the same as (28a).

(i) Sora-ga sibaraku hare-tei-ta
sky-NOM for a while get sunny-TEI-PAST
'It was sunny for a while.'

[19] The durative adverbial can focus only on the resulting state but not the change of state.

The contrast between (28) and (29) suggests that inchoative states and achievements are separate classes. The inchoative states' compatibility with the durative adverbial is evidence that this class of verbs entails a component that has some durativity. Achievements, on the other hand, do not have duration because they are not compatible with the durative adverbial[20].

To sum up this sub-section, I conclude that inchoative states and achievements have distinct aspectual properties: inchoative states contain some stages and duration, but achievements do not. Thus, they must be separate verb classes.

2.5 The fourth category verbs

Let us consider Kindaichi's fourth category verbs (*dai-yonshu-no dooshi*) at this point. The discussion of this class is relevant here because Ogihara (1998a) claims that they are defective instantaneous verbs (i.e., achievements). McClure (1996), similarly, claims that they are achievements which look like statives since only their resultant state is defined.

It was originally Kindaichi who proposed that certain kinds of verbs must form an independent class, the fourth category verbs, pointing out that the verbs in this class cannot stand alone without *–tei-* when they occur as the matrix verb. This is shown in (30).

(30) a. * Taroo-wa eigo-no-seiseki-ga sugure-ru
Taroo-TOP English-GEN-grade-NOM excel-PRES
Intended: 'Taroo is outstanding in English.'

[20] There are some achievement events which can be durative in the real world. However, as with Sənčáθən achievements, I will argue in section 3 that the semantics of Japanese achievements entails only an instantaneous BECOME event which represents the culmination of an event.

b. * Hanako-wa hahaoya-ni niru
Hanako-TOP mother-LOC resemble
Intended: 'Hanako resembles her mother.'

c. * Asoko-ni biru-ga takaku sobieru
over.there-LOC building-NOM tall tower-PRES
Intended: 'A building stands tall over there.'

All the examples in (30) are unacceptable for the intended readings. However, these sentences become felicitous if they occur with *–tei-* as shown in (31).

(31) a. Taroo-wa eigo-no-seiseki-ga sugure-tei-ru
Taroo-TOP English-GEN-grade-NOM excel-TEI-PRES
'Taroo is outstanding in English.'

b. Hanako-wa hahaoya-ni ni-tei-ru
Hanako-TOP mother-DAT resemble-TEI-PRES
'Hanako resembles her mother.'

c. Asoko-ni biru-ga takaku sobie-tei-ru
over.there-LOC building-NOM tall tower-TEI-PRES
'A building stands tall over there.'

Ogihara (1998a) argues that these verbs are defective instantaneous verbs (hence achievements) by way of showing that they pattern with the regular achievements when they occur in the relative clause construction. According to Ogihara, the past form of the fourth category verbs as well as achievements in a relative clause can express a current situation. This is shown in (32).

(32) a. Taroo-wa [Hanako-ni ni-ta] hito-to hanasi-tei-ru
Taroo-TOP Hanako-DAT resemble-PAST person-with talk-TEI-PRES
'Taroo is talking with a person who resembles Hanako.' (Ogihara 1998: 102)

b. Taroo-wa [takaku sobieta] yama-o mi-tei-ru
Taroo-TOP high tower-PAST mountain-ACC see-TEI-PRES
'Taroo is looking at a mountain that stands tall.' (Ogihara 1998: 102)

c. Taroo-wa [soko-no nuke-ta] oke-o mot-tei-ru
Taroo-TOP bottom-GEN come.off-PAST pail-ACC have-TEI-PRES
'Taroo has a pail with no bottom.' (Ogihara 1998: 102)

d. Taroo-wa [hyoosi-no yabure-ta] hon-o mot-tei-ru
Taroo-TOP cover-GEN tear-PAST book-ACC have-TEI-PRES
'Taroo has a book whose cover is torn.' (Ogihara 1998: 103)

(32a) and (32b) are examples of 'defective achievements' in the relative clause, while (32c) and (32d) are those of 'regular achievements' according to Ogihara. In both cases, the achievements in the relative clause are in the past form but indicate a current situation.

When durative verbs (activities and accomplishments) are in the relative clause construction, in contrast, they must be in the *–tei-* form to express a current situation (Ogihara 1998). Consider (33).

(33) Watasi-wa [asokode nai-ta] hito-o sit-tei-ru
1.sg-NOM there cry-PAST person-ACC know-TEI-PRES
a. √'I know the person who cried there.'
b. *'I know the person who is crying there.'

As shown in (33), if the past form of a durative verb (activity) is used in the relative clause, the only available reading is a past reading. To indicate that the situation described by the durative verb in the relative clause is current, it must be in the *–tei-* form as shown in (34).

(34) Watasi-wa [asokode nai-tei-ru] hito-o sit-tei-ru
1.sg-NOM there cry-TEI-PRES person-ACC know-TEI-PRES
a. *‘I know the person who cried there.’
b. √‘I know the person who is crying there.’

I agree with Ogihara that the fourth category verbs do not form an independent class. However, I do not agree with him that they are (defective) members of the instantaneous verb (achievement) class. Instead, I claim that these verbs belong to the class of inchoative states. As discussed in 2.4, inchoative states allow the *–tek-* construction with an inchoative reading (gradual change reading) but achievements do not. This is also the case for the fourth category verbs. Consider (35).

(35) a. Dezitarukamera-no gasitu-ga sugure-tek-ita
digital camera-GEN picture.quality-NOM excel-TEK-PAST
‘The picture quality of digital cameras has been getting better.’
b. Taroo-wa titioya-ni ni-tek-ita
Taroo-TOP father-DAT resemble-TEK-PAST
‘Taroo has been becoming similar to his father.’
c. Yama-ga zenpoo-ni sobie-tek-ita
mountain-NOM front-DAT tower-TEK-PAST
‘The mountain has been getting to tower in front.’[21]

Furthermore, Ogihara’s ‘achievements’ in (32c) and (32d) are, in fact, inchoative states but not achievements since they allow the *–tek-* construction to indicate the inception of the change of

[21] It is usually not observable for a mountain to get bigger. This sentence can be used when you drive a car toward a mountain. From a distance, the mountain would look small. However, as you get closer to the mountain, it would become visually bigger little by little. This is one of the cases where we can use the sentence in (35c).

state as shown in (36).

(36) a. Oke-no-soko-ga nuke-tek-ita
Pail-GEN-bottom-NOM come.off-TEK-PAST
'The bottom of the pail is coming off.'

b. Hon-no-hyoosi-ga yabure-tek-ita
book-GEN-cover-NOM tear-TEK-PAST
'The cover of the book is getting torn.'

The fact that the fourth category verbs indicate a current situation which is a resultant state in the *–tei-* form, and that they allow the *-tek* construction for an inchoative reading, points to the conclusion that they are, in fact, (defective) inchoative states. They only differ from the regular inchoative states in that they cannot be in the simple past or present form in a matrix clause.

2.6 Section summary

In this section, I presented a thorough examination of Japanese verb classes.

In 2.1, a reexamination of the *–teiru* test, which is a classic diagnostic to classify Japanese verbs, suggested that homogeneous states such as *iru*, *aru*, and *dekiru* stand alone as one class. They are the only truly static events. Non-stative verbs, on the other hand, are further divided into two natural classes: process verbs including activities and accomplishments, and change of state verbs including achievements and inchoative states. The default interpretation of the process verbs with *–teiru* is an on-going process reading, while that of the change of state verbs is a resultant state reading.

In 2.2, the distinction between the two types of process verbs, activities and accomplishments, was examined using three diagnostics, the *kan/de* 'for/in' adverbial test, the *moosukoside/hotondo* 'almost' test, and the *tuini* 'finally' test. The *kan/de* test revealed that Japanese activities contain a durative (process) component but not a final point. In contrast, accomplishments have both a durative component and some kind of final transition point. The *moosukoside* test suggested that Japanese activities contain only an initial point but not a final point, because the adverb allows only the event cancellation reading for this class. The same test suggested that Japanese accomplishments, in contrast, contain both an initial point and a final point, since the adverb allows ambiguity between the event cancellation reading and the event non-completion reading for this class. Lastly, the *tuini* test further confirmed that activities contain only an initial point, because the adverb induces only the event inception reading for activities. For accomplishments, the adverb yields only the event completion reading, which also confirms that accomplishments have a final transition point in their meaning.

Section 2.3 examined the distinction between achievements and accomplishments. The *tuini* 'finally' test could not distinguish the two classes, but the *moosukoside* 'almost' test revealed that the adverb yields ambiguity with accomplishments (between the event cancellation reading and the event non-completion reading) but not with achievements (the event non-completion reading only). This result suggests that the former is a complex event, while the latter is a simplex event. The culmination cancellation test also confirmed that these two classes are aspectually different: the culmination requirement is cancellable with accomplishments, but not with achievements.

In 2.4, I discussed the distinction between achievements and inchoative states. These two verb classes were examined using two diagnostics, compatibility with the phasal aspect *–tek-* and the durative adverbial test. It was shown that the phasal aspect marker *–tek-* is compatible only with inchoative states but not with achievements, suggesting that inchoative states have internal stages, but achievements do not. Likewise, the durative adverbial is compatible only with inchoative states but not with achievements, thus suggesting that inchoative states entail a component that has some durativity. Achievements, on the other hand, do not have any duration because they are not compatible with the durative adverbial.

In the last subsection 2.5, I argued that Kindaichi's fourth category verbs (Ogihara's defective instantaneous verbs) are members of the inchoative state class. This conclusion is deduced from the fact that these verbs allow the *–tek-* construction for an inchoative reading.

All the test results point to the classification at the beginning of the section, which proposes that Japanese has five verb classes: *homogeneous states, activities, accomplishments, achievements,* and *inchoative states*. Having established the classification of Japanese verbs, the next section proposes a semantics for each aspectual class.

3 Formal representations of Japanese verbs

This section proposes a formal representation of each event type proposed in Section 2. In considering the internal structure of each event, the results of the various diagnostics in the previous section will be reviewed. In addition, the punctual adverbial test will be invoked to further confirm the results of the other tests.

3.1 Activities

The results of the aspectual tests discussed in section 2.2 suggest that in Japanese, both acivities and accomplishments have an initial transition point and a process part in their event representations. However, activities differ from accomplishments in that they do not entail or implicate a final end point.

The incompatibility with the frame adverbial *–de*, the possibility only of the event cancellation reading for the *moosukoside* test, and the possibility only of the completion reading for the *tuini* test point to the conclusion that in Japanese, activities entail an initial point but not a final point. This conclusion can be further confirmed with another aspectual test, the punctual adverbial test. Following Smith (1997), Bar-el (2005) suggests that the addition of a punctual clause/adverbial to a perfective predicate tests whether an event has an initial point in Sḵwx̱wú7mesh. With this test, punctual adverbials consistently induce inceptive readings, but not termination readings, with activity predicates in Japanese, as shown in (37).

(37) Taroo-ga hatiji-ni kawa-de oyoi -da
Taroo-NOM 8 o'clock-at river -LOC swim-PAST
Reading: At 8 o'clock,
i. √Taroo began to swim in the river.
ii. *Taroo was swimming in the river.
iii. *Taroo stopped swimming in the river.

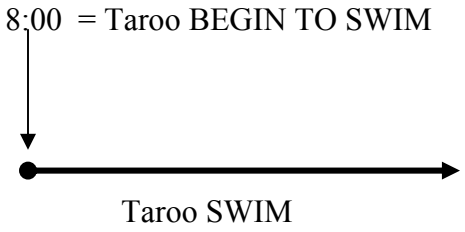
The only available reading is that the event of Taroo's swimming begins simultaneously with the time indicated by the punctual adverbial. This suggests that the only transition point of the

activity event available for the adverbial phrase *hatiji-ni* to focus on is the initial point.

The process part of activities is evident in the result of the test with the durative adverbial phrase with the postposition *–kan*, as discussed in 2.2.

Figure 4.1 illustrates the temporal structure of the sentence in (37).

Figure 4.1 The inception reading of an activity with a punctual adverbial



As shown in Figure 4.1, Japanese activities have an initial transition point in their event representation and the punctual adverbial picks out this initial point as a sub-event of the entire event (Bar-el 2005). The proposed event representation of activities is as shown in (38), which is the same event structure as proposed for Sənčáθən activities in Chapter 2.

(38) Activities: λe.∃e1.∃e2[e=s(e1 ∪ e2) & (BECOME(P))(e1) & (DO(P))(e2)]

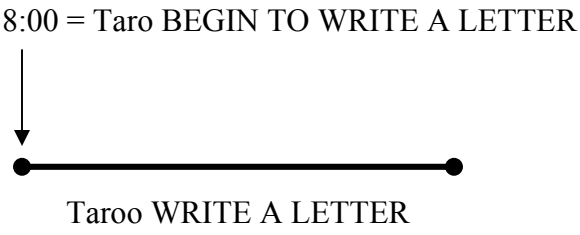
3.2 Accomplishments

I propose that Japanese accomplishments entail an initial transition point and carry an implicature of culmination. With a punctual adverbial/clause, an accomplishment can take either an inceptive reading (i) or a completion reading (iii), as shown in (39).

(39) Taroo-ga sakuya hatiji-ni tegami-o kai-ta
Taroo-NOM last night 8 o'clock-at letter-ACC write-PAST
Reading: At eight o'clock last night,
i. √Taroo began to write a letter.
ii. *Taroo was writing a letter.
iii. √Taroo finished writing a letter.

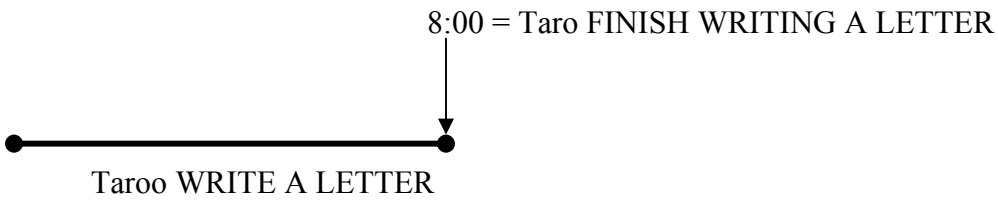
The sentence in (39) is ambiguous between an event inception reading (i) and an event completion reading (iii). Figure 4.2 shows that in the inceptive reading (i), the beginning of Taro's writing-a-letter event coincides with 8:00.

Figure 4.2 The inception reading of an accomplishment with a punctual adverbial



In the completion reading (iii), in contrast, the final point of Taro's writing-a-letter event occurred at 8:00. This is illustrated in Figure 4.3.

Figure 4.3 The completion reading of an accomplishment with a punctual adverbial



The result suggests that Japanese accomplishments contain both an initial point and a final point, in contrast with activities. However, this culmination is only an implicature, because it can be cancelled (cf.Tsujimura 2003, Kiyota 2006b) as shown in 2.3. The examples are repeated here as (40).

(40) a. √kuruma-o naosi-ta kedo naor-anakat-ta
car-ACC fix-PAST but get.fix-NEG-PAST
'(I) fixed the car, but it is still out of order.' No contradiction!

b √ tako-o age-ta kedo agar-anakat-ta
kite-ACC raise-PAST but rise-NEG-PAST
'(I) raised the kite but it did not rise.' No contradiction!

c. √doa-o sime-ta kedo simar-anakat-ta
door-ACC close-PAST but close-NEG-PAST
'(I) closed the door but it did not close.' No contradiction!

As the examples show, the culmination effect of the event described by the verb can be cancelled without resulting in a contradiction, just like their Sənčáθən counterparts (as discussed in Chapter 2).

Based on the results of the various aspectual tests, the proposed event representation of Japanese accomplishments is as shown in (41).

(41) Japanese accomplishments:
$\lambda e.\exists e_1.\exists e_2[e =^{s} (e_1 \cup e_2)$ & (BECOME(P))(e_1) & (DO(P))(e_2) & [$\forall$w'[w' is an inertia world w.r.t w at the beginning of e → [$\exists$e'[e' is a culmination of e in w' & e causes e' in w']]]] (Bar-el 2005, Bar-el, Davis and Matthewson 2005, Kiyota 2006b)

The denotation says that in all the inertia worlds, the event culminates. The hearer assumes that the actual world is an inertia world, so there is an implicature that the event culminated in the actual world.

3.3 Achievements, inchoative states, and homogeneous states

In 2.4, I proposed that there are two kinds of change of state verbs in Japanese: achievements and inchoative states. The two verb classes were examined with respect to two diagnostics, compatibility with the phasal aspect *–tek-* and the durative adverbial test. The phasal aspect marker *–tek-* is compatible only with inchoative states but not with achievements, which suggests that inchoative states have internal stages, but achievements do not.

Furthermore, durative adverbials are compatible with inchoative states as shown in (42).

(42) Sora-ga **san-ji-kan** kumot-ta
sky-NOM three-hour-KAN get.cloudy-PAST
'The sky was cloudy for three hours.'

This suggests that inchoative states entail a stative component that has some durativity. The three hours in (42) refers to the resulting state of being cloudy, but not the transition of becoming cloudy. In other words, inchoative states contain not only an initial transition event, but also a durative resulting state.

Achievements, on the other hand, do not have any duration linguistically: they are not compatible with a durative adverbial as shown in (43).

(43) * Tegami-ga **san-ji-kan** ie-ni todoi -ta
letter-NOM three-hour-KAN home-LOC arrive -PAST
'? A letter arrived for three hours.'

The achievement sentence in (43) is unacceptable with the durative adverbial phrase *san-ji-kan*. I argue that this is because achievements do not entail a resultant state for the durative adverbial to apply to.

The incompatibility of an achievement with the phasal aspect marker *–tek-* also suggests that an achievement predicate does not have stages linguistically, though the change of state of an achievement predicate may take some time in the real world. Dowty (2002) claims that the BECOME does not restrict the change to happening at an instant in English. However, as with the event representation of Sənčáθən achievements proposed in Chapter 2, the semantics that I put forward for Japanese models it only as an instantaneous BECOME event which represents only the culmination of an achievement event.[22]

I propose that Japanese achievements contain only a transition event BECOME, just like their Sənčáθən counterparts. This is shown in (44).

(44) λe.(BECOME(P))(e)

[22] This can account for the (in)compatibility of achivements or inchoative states with the durative adverbial. However, it does not account for availability of *–tek* with inchoative states sicne *–tek* requires some duration. One possible way to solve this problem would be to propose two kinds of BECOME, one with duration and the other with no duration. However, this does not affect my proposal that inchoative states form a separate class from achievements, so I leave this issue for my future study.

In contrast, an inchoative state is a complex event which entails an initial transition eventuality BECOME and a simple predicate P, which is a resultant durative state, as shown in (45).

(45) $\lambda e.\exists e_1.\exists e_2[e=^s(e_1 \cup e_2)$ & (BECOME(P))(e_1) & P(e_2)]

Lastly, homogeneous states are proposed to be simplex events containing a plain predicate P, as shown (46).

(46) Homogeneous state:λe.P(e) (Dowty 1979, Rothstein 2004)

This conclusion is due to the fact that homogeneous states do not allow any aspectual morphology including *–tei-* and *–tek-* which have been discussed in this chapter.

(47)	a.	Taroo-wa	eigo-ga	deki-ru
		Taroo-TOP	English-NOM	be.good.at
		Intended: Taroo is good at English.		
	b. *	Taroo-wa	eigo-ga	deki-tei-ru
		Taroo-TOP	English-NOM	be.good.at-TEI-PRES
	c. *	Taroo-wa	eigo-ga	deki-tek-ita
		Taroo-TOP	English-NOM	be.good.at-TEK-PAST

As shown in (47), the homogeneous state *deki* neither allow *–tei-* nor *–tek-*. This is also the case for the other homogeneous states such as *iru* and *aru*.[23] Homogeneous states are incompatible

[23] As Nishiyama (2006) points out, there are some verbs such as *mieru* which behave as homogeneous states in some cases, but as eventive verbs in other cases. I leave an analysis of this kind of verbs for future study.

with these aspectual markers because as homogeneous states, they do not have inherent transition points or stages.

Furthermore, homogeneous states show different behaviour from all the other event types with the *moosukoside* 'almost' test. Consider (48).

(48) a. # Taroo-ga moosukoside koko-ni i-ta (Homogeneous state)
Taroo-NOM almost here-LOCbe-PAST
'Taro was almost here.'

b. Sora-ga moosukoside kumot-ta (Inchoative state)
sky-NOM almost get.cloudy-PAST
'The sky almost got cloudy.'

c. Taroo-ga moosukoside arui-ta (Activity)
Taroo-NOM almost walk-PAST
'Taroo almost walked.'

d. Taroo-ga moosukoside tegami-o kai-ta (Accomplishment)
Taroo-NOM almost letter-ACC write-PAST
'Taroo almost wrote a letter.'

e. Tegami-ga moosukoside todoi-ta (Achievements)
letter-NOM almost arrive-PAST
'The letter almost arrived.'

As shown in (48a), *moosukoside* with an inchoative state *i*(*ru*) 'be at' is infelicitous. As discussed in 2.4, *moosukoside* requires an initial or final transition point. The fact that *moosukoside* is not compatible with homogeneous states, as shown in (48a), is evidence that homogeneous states do not contain a transition point.

4 Conclusion

In this chapter, I proposed a new classification of Japanese verbs/predicates, and a formal representation for each verb/predicate class proposed. By way of applying both standard and language-internal aspectual tests, the internal structure of each event has been proposed.

Activities have a complex structure containing a BECOME event which denotes the initial transition event and a DO event which denotes a durative process event. Accomplishments are similar to activities in that they contain a BECOME event as well as a DO event. However, these two classes differ in that accomplishments also induce a culmination implicature due to their semantics which states that the event culminates in all inertia worlds. Achievements are simplex BECOME events, while inchoative states are complex events containing an initial BECOME event and a bare predicate P which indicates a resultant state of the BECOME event. Homogeneous states are proposed to be a plain predicate P.

The proposed event structure of each verb type is crucial for the next chapter since they interact with the semantics of the aspectual marker *–tei-*.

Chapter 5 The Japanese aspectual marker *-tei-*

1 Introduction

This chapter proposes a unified account of the various readings yielded by the Japanese aspectual marker *–tei-*. In contrast to much previous study on this aspectual marker, which assumes that the marker is ambiguous (Ogihara 1998a, Kusumoto 2004, a.o.), I argue that *–tei-* is not ambiguous (cf. McClure 1996, Nishiyama 2006): it is a perfect marker which denotes an anteriority relation between a situation time (a.k.a. event time) and a topic time (a.k.a. reference time). Unlike with the English perfect, the situation time for *–tei-* can be a sub-event contained in an event or the entire event denoted by the predicate. I also extend Portner's (2003) pragmatic/modal analysis of the English perfect to *–tei-*. Portner argues that in addition to having a temporal/aspectual function, the perfect presupposes a discourse topic or question, and the perfect form is used to answer that question. This successfully accounts for the current relevance reading of the English perfect, and also of Japanese *–tei-*.

Let us first consider the various readings yielded by *–tei-*. *-Tei-* induces an on-going process (progressive) reading with both kinds of process verbs, activities as shown in (1) and accomplishments as shown in (2).

(1) a. Taroo-ga soto-o arui-tei-ru.
Taroo-NOM outside-ACC walk-TEI-PRES
'Taroo is walking outside (now).'

b. Jiroo-ga odot-tei-ru
Jiroo-NOM dance-TEI-PRES
'Jiroo is dancing (now).'

c. Hanako-ga hahaoya-o tetudat-tei-ru
Hanako-NOM mother-ACC help-TEI-PRES
'Hanako is helping her mother (now).'

(2) a. Taroo-ga kuruma-o naosi-tei-ru.
Taroo-NOM car-ACC fix-TEI-PRES
'Taro is fixing a/the car (now).'

b. Jiroo-ga ie-o tate-tei-ru
Jiroo-NOM house-ACC build-TEI-PRES
'Jiroo is building a/the house (now).'

c. Hanako-ga seetaa-o an-dei-ru
Hanako-NOM sweater-ACC knit-TEI-PRES
'Hanako is knitting a/the sweater (now).'

In contrast, *-tei-* yields a resultant state (resultative) reading with the two kinds of change of state verbs, achievements as shown in (3) and inchoative states as shown in (4).

(3) a. Ano-tegami-ga todoi-tei-ru
that-letter-NOM arrive-TEI-PRES
'That letter has arrived (and is here now).'

b. Hanako-ga saifu-o nakusi-tei-ru
Hanako-TOP purse-ACC lose-TEI-PRES
'Hanako has lost her purse (and she does not have it now).'

c. Taroo-ga ano-hon-o mituke-tei-ru
Taroo-TOP that-book-ACC find-TEI-PRES
'Taroo has found that book (and he knows where it is).'

(4) a. Taroo-wa tukare-tei-ru.
Taroo-TOP get.tired-TEI-PRES
'Taro is tired.'

b. Joutai-ga otitui-tei-ru
condition-NOM settle.down-TEI-PRES
'The condition is stable.'

c. Mado-ga kumot-tei-ru
window-NOM get.foggy-TEI-PRES
'The window is foggy.'

It is a very well-known, interesting fact that *–tei-* can also induce an experiential perfect reading with any eventive verb type as illustrated in (5).

(5) a. Taroo-wa izen kono-kooen-o arui-tei-ru. (Activity)
Taroo-TOP before this-park-ACC walk-TEI-PRES
'Taro has walked in this park before.'

b. Taroo-wa nandomo kuruma-o naosi-tei-ru. (Accomplishment)
Taroo-TOP many times car-ACC fix-TEI-PRES
'Taro has fixed cars many times.'

c. Taroo-wa itido saifu-o nakusi-tei-ru. (Achievement)
Taroo-TOP once wallet-o lose-TEI-PRES
'Taroo has lost his wallet once.'

d. kono-kuruma-wa itido koware-tei-ru. (Achievement)
this-car-TOP once break.down-TEI-PRES
'This car has broken down once.'

The progressive is generally regarded as a type of imperfective which expresses incompleteness, while resultative and experiential perfect readings are associated with perfective aspect, which

encodes the completion of an event. A puzzle, therefore, is why *–tei-* can yield this varied range of readings.

In order to account for this fact, much previous research has assumed that *–tei-* is ambiguous between imperfective and perfect meanings (Kudo 1995, Ogihara 1998a, Shirai 2000). In contrast, Nishiyama (2006) has recently proposed a unified account assuming that the marker *-tei-* is monosemous. She argues that the '*te*' part of *–tei-* is an imperfective operator whose output is vague. Both of these approaches are problematic however, though in different ways, as discussed in this chapter.

My proposal follows Nishiyama in that *–tei-* is not ambiguous. However, I do not assume that *-te-* is an imperfective operator. I argue that *–tei-* as a whole is a perfect marker, which denotes a temporal relation between a situation time (T-SIT, a.k.a. event time) and a topic time (TT, a.k.a. reference time). In order to account for the difference from the English perfect, i.e, the fact that *-tei-* can not only induce a perfect reading with any event type but also a progressive reading with durative verbs (activities and accomplishments), I adopt Klein et al.'s (2000) idea that a situation time can be the run time of one of the sub-events of a whole event[1]. This makes it possible to explain why *–tei-* can yield the two apparently conflicting readings, the on-going situation reading and existential perfect reading. The different readings are due to interaction between the semantics of *-tei-*, the semantics of the event type of the verb, the function of a temporal adverbial, and the presupposition of *–tei-*.

[1] Klein et al. (2000) call components of an event 'phases'. See their paper for details.

2 Previous proposals and their problems

2.1 The ambiguity approach

Much previous study on *-tei-* has assumed that the marker is ambiguous: there are at least two distinct meanings for *-tei-*: one which yields current situation readings (progressive and resultative) and the other which yields an experiential perfect reading (Fujii 1976, Kudo 1995, Ogihara 1998a, Shirai 2000). Kusumoto (2004) even proposes that there are four distinct meanings of *–tei-*: progressive, resultative, perfect, and habitual.

Some studies which adopt an ambiguity approach are successful in covering the major interpretations that *-tei-* can yield. Ogihara (1998a), for example, captures the various readings by proposing a new analysis of instantaneous verbs, assuming the *te* part of *tei* has a binary feature of [+/- perfect], and extending Landman's (1992) proposal of the English progressive to *–tei-*. Ogihara groups the progressive reading of durative verbs (activities and accomplishments) and the resultant state reading of instantaneous verbs (achievements) together as a current situation reading, as opposed to an experiential reading of any verb class. He claims that the ambiguity is due to the binary feature of [+/- perfect] that the *te* part of *–tei-* has. One of the on-going situation readings (a progressive reading of durative verbs or a resultant state reading of instantaneous verbs) arises if *–te-* has [-perfect], while an experiential perfect reading of any event type arises if *–te-* has [+perfect]. When *–te-* with [-perfect] occurs with the aspectual auxiliary *–iru*, whose meaning is an extension of Landman's analysis of the English progressive,

accounts for the progressive reading of durative verbs straightforwardly[2].

To account for the resultant state reading of instantaneous verbs, Ogihara proposes a new semantics of instantaneous verbs. He claims that the resultant state portion of an event is entailed in the lexical meaning of Japanese instantaneous verbs. He also extends Landman's proposal in such a way that one can not only search into the future but also to the past to find a desired eventuality. This allows him to account for the resultant state reading of instantaneous verbs as well.

Although Ogihara does not deal with the habitual reading, which is another major reading that *–tei-* can induce, his account for the core interpretations of the *–tei-* construction is successful. In this sense, Kusumoto (2004) may be even more successful because she captures all the possible readings. She assumes that there are four distinct meanings of *–tei-*, progressive, resultative, perfect, and habitual.

However, the ambiguity approach is not preferable in two ways: 1) some of the evidence for the ambiguity of *–tei-* is not convincing, and 2) it would be preferable, if possible, to provide a unified analysis rather than one based on ambiguity, as long as the facts can be captured.

In the following, I will first present supposedly problematic counter-evidence that Nishiyama (2006) points out against the ambiguity approach, and show that Nishiyama's characterization of the problem is inaccurate. I will show that the problem with the evidence lies in a different place.

[2] Lisa Matthewson (p.c.) points out that Ogihara's analysis would predict that *-te-iru* with an experiential reading should always mean 'has been V-ing' (i.e. a progressive experiential perfect). This may be another problem for his analysis.

2.1.1 Empirical problems for previous analyses

The ambiguity approach relies on a co-occurrence restriction between *–tei-* and some adverbs. First, this approach often invokes a co-occurrence restriction with the present-time adverb *genzai* (now). This is shown in (6).

(6) **Genzai** ano-hito-wa takusan-no shosetu-o kai-tei-ru
now that-person-TOP many-GEN novel-ACC write-TEI-PRES
√ 'He is writing many novels now.'
* 'He has written many novels now.' (Fujii 1976: 106, Nishiyama 2006: 188)

The example in (6) shows that the present-time adverbial can co-occur only with the current situation reading of *-tei-* but not with the experiential reading (Fujii 1976). Fijii argues that this co-occurrence restriction is because the experiential perfect reading of the *-tei-* sentence focuses on a past event, but not on a current state (Fujii 1976: 106). However, Nishiyama (2006) argues against Fujii by presenting counterexamples, which show that the experiential perfect reading of a *–tei-* sentence can co-occur with the adverb *genzai* in an appropriate context. She presents a situation where the speaker of (6) is speaking of someone's achievements, and continues with (7).

(7) Tatoeba, Kiseki, Ki-no-kuni, ….
for.example miracle Ki-GEN-country, ….
'For example, Kiseki, Ki-no-kuni (the titles of books), ….' (Nishiyama 2006: 189)

Nishiyama argues that in this context, the experiential perfect reading of the sentence in (6) is not infelicitous. She also presents another counterexample; she shows that the experiential perfect reading of *-tei-* is found in some cases with the present time adverb as shown in (8).

(8) **Genzai** kare-wa sankai taitoru-o boueisi-tei-ru
now he-TOP three-times title-ACC defend-TEI-PRES
'He has defended his title three times now.' (Nishiyama 2006: 189)

However, according to my informants, both the experiential perfect reading of the sentence in (6) in the situation in (7) and that of the sentence in (8) still sound slightly odd. The adverb should occur with two postpositions *made* and *ni* for the sentences to be perfectly felicitous with the experiential perfect reading.

(9) a. Genzai-**made-ni** ano-hito-wa takusan-no shosetu-o kai-tei-ru
now-until-DAT that-person-TOP many-GEN novel-ACC write-TEI-PRES
'He has written many novels so far.'

b. Genzai-**made-ni** kare-wa sankai taitoru-o boueisi-tei-ru
now-until-DAT he-TOP three-times title-ACC defend-TEI-PRES
'He has defended his title three times so far.'

This fact thus suggests that these examples cannot be really counterexamples against the ambiguity hypothesis.

Nishiyama also claims that it would be odd if present-time adverbs distinguished resultative perfects from experiential perfects in Japanese, invoking Michaelis's (1998) argument

that the present-time adverb *now* is compatible with all present perfects in English. However, it is rather odd to say that the Japanese perfect must pattern completely with the English counterpart in this respect, unless the perfect and the adverb in both languages have exactly the same semantics. However, Nishiyama herself proposes a different denotation for the Japanese perfect marker *–tei-* from any of those which are usually proposed for the English perfect.

Furthermore, Japanese has at least two commonly used lexical items corresponding to the English 'now', *genzai* and *ima*,[3] each of which seems to show slightly different behaviors. If *genzai* in (6) and (8) is replaced with *ima*, then the contrast becomes clearer since the acceptability of the perfect interpretation deteriorates:

(10) Ima ano-hito-wa takusan-no shosetu-o kai-tei-ru
now that-person-TOP many-GEN novel-ACC write-TEI-PRES
√ 'He is writing many novels now.' / * 'He has written many novels now.'

In this case, the specific situation given in (7) does not help improve the acceptability of the sentence. Again, the sentence would be completely felicitous if the adverb is replaced with *ima-made-ni* 'so far'. Thus this suggests that the meaning of *genzai* itself is not necessarily identical to the English 'now' either. Therefore, Nishiyama's argument is not conclusive enough to claim that in Japanese, the existential perfect can co-occur with a present-time adverbial as can the English perfect.

My intention is not to support the ambiguity approach, but rather to show that Nishiyama's

[3] *Genzai* is a Sino-Japanese word (i.e., originally from Chinese), whereas *ima* is a Yamato-Japanese word (i.e., a native Japanese word).

counter-argument is not accurate. In contrast to Nishiyama, I argue that there is a co-occurrence restriction between a present-time adverbial and the perfect interpretation of *–tei-,* though the restriction is not because there are two distinct meanings of *–tei-*. Instead, I argue that the semantics of *–tei-* is one and the same, but the present-time adverbial specifies that the location of the reference time is within the interval of the second sub-event. This forces the on-going or resulative interpretations and excludes the experiential perfect one. The details of this analysis will be discussed in 3.3.

The ambiguity approach also relies on a co-occurrence restriction on location adverbs: a location adverbial phrase with the postposition *-de* can co-occur only with the experiential *-tei-* as shown in (11a), but not with the resultant state *-tei-* as shown in (11b) (Kudo 1995).

(11) a. Kanojo-wa suisu-no kyokai-de kekkonsi-tei-ru
she-TOP Switzerland-GEN church-LOC marry-TEI-PRES
'She has got married at a church in Switzerland.'

b. *Genzai Kanojo-wa suisu-no kyokai-de kekkonsi-tei-ru
now she-TOP Switzerland-GEN church-LOC marry-TEI-PRES
'She is married at (and lives in)[4] a church in Switzerland now.'

(Nishiyama 2006: 191)

In (11b), the present-time adverb *genzai* is used to show that the sentence is intended to have the current resultant state reading. Note that the sentence without the location adverb is completely felicitous as shown in (12).

[4] This implication is common for Japanese speakers. This may be because the verb *kekkons* not only means 'get married' but also 'spend a married life.'

(12) Genzai Kanojo-wa kekkonsi-tei-ru
now she-TOP marry-TEI-PRES
'She is married now.'

Nishiyama, however, shows that a location adverbial phrase *can* co-occur with the resultant state reading of *-tei-* in some cases, as shown in (13).

(13) Genzai kanojo-wa suisu-de kekkonsi-tei-ru
now she-TOP Switzerland-LOC marry-TEI-PRES
'She has got married in Switzerland (she is still married there) now.'
(Nishiyama 2006: 191)

According to Nishiyama, (11b) is infelicitous because the location adverbial *suisu-no kyokai-de* ('at a church in Switzerland') can only describe the location for a wedding ceremony, but not the location of her being in the state of being married. In contrast, (13) is felicitous since the location adverbial phrase *suisu-de* (in Switzerland) can describe the location of her being in the state of being married. However, Nishiyama's explanation does not suffice. Technically, the adverbial phrase could describe the place of being in the state of being married (if she did live in the church). Thus it may not be the adverb's fault, but rather that the reading that the sentence gives is pragmatically odd.

Now contrast (13) with (14).

(14) 1999-nen-ni kanojo-wa suisu-de kekkonsi-tei-ru
1999-year-DAT she-TOP Switzerland-GEN marry-TEI-PRES
√'She has got married in Switzerland in 1999 (but does not live there).' – Experiential
*'She has got married in Switzerland in 1999 and lives there now.' – Resultative

As shown in (14), with a past-time adverbial, only the experiential reading is possible. This suggests that it is not *–tei-* that provides the different readings, but is the past-time adverb that specifies the reading.

Thus far, I have shown that Nishiyama's counterexamples against the ambiguity approach are not strong enough as counter-evidence that *-tei-* is ambiguous. However, this does not mean that I accept the ambiguity hypothesis. I still agree with Nishiyama that *–tei-* is monosemous. I claim that the problem with the ambiguity approach lies in the argument that the co-occurrence restriction of the present-time adverb or the location adverb is due to *–tei*'s ambiguity. I argue that it is not because *–tei-* is ambiguous, but that it is the adverb that induces the two different readings, the resultative reading and the experiential reading, and the semantics of *–tei-* is one and the same all the time. The various surface readings are due to the interaction between the semantics of *–tei-* and the semantics of an adverbial phrase.

A similar fact can be observed in the non-*tei* simple past forms. For example, an activity predicate can denote the beginning of the activity or the durative process of the activity, depending on the adverb it co-occurs with.

(15) a. Taroo-wa kinoo **hati-ji-ni** ne-ta
Taroo-TOP yesterday eight-o'clock-DAT sleep-PAST
'Taroo went to sleep at eight o'clock yesterday.'
b. Taroo-wa kinoo **hati-jikan** ne-ta
Taroo-TOP yesterday eight-hours sleep-PAST
'Taroo slept for eight hours yesterday'

As discussed in chapter 4, a punctual adverbial phrase can pick out the inception of an activity in Japanese (as in Sənčáθən as discussed in chapter 2), which is the case in (15a). (15b) shows that a durative adverbial focuses on the entire process event rather than part of the event. This is not because the main predicate in (15) is ambiguous between an inception and a process, but the different adverbials pick out different parts of the same event. This is what happens to the two apparently distinct readings of the *–tei-* forms as well. The aspectual property of *–tei-* is one and the same, but different adverbials pick out different temporal locations.

The co-occurrence restrictions with adverbials are not the only problem for the ambiguity approach, though. Ogihara's (1998a) proposal, for example, has some additional problems. One of them is his hypothesis that the *-te-* part of *–tei-*bears a binary perfect feature, [+ perfect] or [- perfect]. This is based on the following data.

(16) a. Gohan-o tabe-te, hon-o ka-u
meal-ACC eat-TE book-ACC buy-PRES
'(I) will have dinner and (then) will buy a book.' (Ogihara 1998a: 108)
b. Taroo-wa heya-ni i-te, terebi-o mi-tei-ru
Taroo-TOP room-DAT be-TE TV-ACC watch-TEI-PRES
'Taroo is in the room and is watching TV.' (Ogihara 1998a: 108)

In (16a), the event of eating precedes the event of buying a book. In (16b), in contrast, the two events, being in the room and watching TV, occur simultaneously. Since the temporal relation can either be sequential as in (16a) or simultaneous as in (16b), Ogihara posits that *-te-* bears a [+ perfect] feature for cases like (16a), while a [-perfect] feature for cases like (16b). He derives an experiential reading of the *–tei-* sentence with the former, and an on-going situation reading (progressive and resultant state) with the latter.

However, I argue that (16b) cannot be used as evidence that the *-te-* part of *–tei-* may bear a [- perfect] feature. The two predicates in (16a), *gohan-o tabe* and *hon-o kau* are accomplishments, both of which are temporally bounded. Thus, it follows that the event described first in the first conjunction occurred before the second one. In (16b), in contrast, the first predicate *heya-ni i* is a stative situation (a homogeneous state), which does not entail temporal boundaries. The second predicate *terebi-o miteiru* is eventive (an activity), but it is in the *teiru* form, which does not describe a bounded event either (but an on-going process of watching TV). Consequently, there is no temporal precedence between the two situations in (16b). In other words, the difference between (16a) and (16b) is not due to *-te-*, but due to the aspectual properties of each event.

In sum, much evidence used in favor of the ambiguity approach actually cannot support this position. I agree with Nishiyama in that *-tei-* is not ambiguous. However, I show in the next sub-section that Nishiyama's proposal is also subject to some problems.

2.2 Nishiyama's monosemous approach

Nishiyama analyzes *–tei-* into two separate morphemes: *-te-* and *-i-* (*-ru* is analyzed as the non-past marker), and proposes that *-te-* is an imperfective marker and *-i-* a stativiser. Her grounds for proposing that the morpheme *-te-* is an imperfective marker are that an eventuality denoted by a sentence radical (event description) which is followed by *-te-* and other aspectual verbs can be interpreted as either complete or incomplete, as Nishiyama's examples in (17) show.

(17) a. Reizooko-no gyuunyuu-ga non-**de**-a-ru
Refrigerator-GEN milk-NOM drink-**TE**-exist-PRES
'The milk in the refrigerator has been drunk. (Nishiyama 2006: 196)

b. Kare-ga kinoo-no-shukudai-o yat-**te**-kure-ta
he-NOM yesterday-GEN-homework-ACCS do-**TE**-give-PAST
'He did the homework for me yesterday.'
kedo zenbu-wa yat-te-inai
but all-TOP do-TE-NEG
'but he did not do all.' (Nishiyama 2006: 197)

The sentence in (17a) can be used in two situations: either when the milk is completely gone, or when some of the milk is left. Likewise, the sentence in (17b) exemplifies that the eventuality followed by *-te-* does not need to be complete. Nishiyama uses this as evidence that the morpheme *-te-* is an imperfective marker whose output is vague.

However, I argue that the vagueness of these sentences is not due to *-te-*, but is because the main predicates in the examples in (17) do not entail a culmination. As Tsujimura (2003) and Kiyota (2006b) argue (see also Chapter 4 of this dissertation), Japanese accomplishments do not

entail culmination of the event, but they carry an implicature of culmination instead. Thus, even in the perfective form (with the past marker *-ta*), the culmination effect can be cancelled. This is shown in (18).

(18) a. Reizouko-no gyuunyuu-o non-**da**-kedo sukoshi nokosi-ta[5].
fridge-GEN milk-ACC drink-PAST-but a little leave-PAST
'I drank the milk in the fridge, but (I) left some (for later).'

b. Kare-wa kinoo-no-shukudai-o yat-**ta**-kedo zenbu-wa yat-te-inai.
he-TOP yesterday-GEN-homework-ACC do-PAST-but all-TOP do-TE-NEG
'He did yesterday's homework but he did not do it all.'

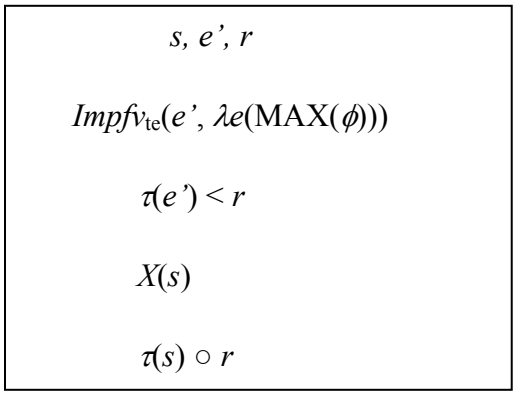
The fact that the culmination effect of accomplishments is cancelable as shown in (18) is evidence that the vague interpretations of the sentences in (17) are not due to the morpheme *-te-*. Thus, contra Nishiyama, I conclude that *-te-* is not contributing the semantics of imperfectivity.

Nishiyama's proposal also has a conceptual problem. Assuming Discourse Representation Theory (Kamp 1981), Nishiyama proposes that *-te-* involves two operators: an operator which quantizes its input eventuality (MAX operator) and an imperfective operator that dequantizes the eventuality again, only in the case of atelic eventualities. The semantics (discourse representation structure) of *-tei-* that Nishiyama proposes is shown in Figure 5.1.

[5] For some Japanese speakers, the cancellation of the culmination requirement is not allowed if the object has a numeral classifier such as *ippon* 'one bottle of.' Thus the following sentence results in a contradiction for these speakers:

*Reizouko-no gyuunyuu-o *ip-pon* non-da-kedo, sukoshi nokosi-ta
fridge-GEN milk-ACC one-bottle drink-PAST-but a.little leave-PAST
'I drank one bottle of milk in the fridge, but I left some for later.'

Figure 5.1 DRS for *–tei-* (Nishiyama 2006)



There are at least two problems with this proposal. First, Nishiyama's analysis has the same morpheme including two operators whose functions are conflicting (quantizing and dequantizing), hence the analysis is counter-intuitive. Second, it is not clear why the imperfective operator dequantizes only atelic eventualities.

Nishiyama's argument to support that *–te-* contains the MAX operator is also problematic. First, she argues that an atelic eventuality must be bounded by MAX to obtain an episodic interpretation, as shown by a 'stative' example *mie* 'be visible' in (19).

(19) a. Sono jiinzu-wa oheso-ga mie-**te-i**-ru.
that jeans-TOP navel-NOM visible-TEI-NONPAST
√'(Your) navel is visible with that pair of jeans.' (A speaker is looking at an addressee's navel.)
*'The navel is visible with that pair of jeans.' (A speaker is describing a pair of jeans at a store.)

b. Sono jiinzu-wa oheso-ga mie-ru.
that jeans-TOP navel-NOM visible-NONPAST
'The navel is visible with that pair of jeans.' (A speaker is describing the pair of jeans at the store.) (Nishiyama 2006: 198)

Nishiyama presents this contrast intending to show that the described 'stative' eventuality is understood as episodic when it occurs with *–tei-*. The sentence in (19a) must be uttered only when the speaker actually sees the addressee's navel with a pair of jeans (episodic). The sentence in (19b), on the other hand, can be uttered without the navel actually visible. It just expresses a property of a pair of jeans (generic).

There is a crucial question arising with this: if the event used in (19) is really a 'stative', then it contradicts with the general understanding that statives in Japanese are not compatible with *–tei-*. If some 'stative' verbs can co-occur with *–tei-*, then why are other stative verbs such as *–i-* 'exist' or *–ar-* 'exist' not compatible with *–tei-* in standard Japanese?[6] Nishiyama is not explicit about this issue and just mentions that co-occurrence of these stative verbs and *–tei-* is very limited. However, I believe that this is an important issue since stative events have been believed to be the only class which does not allow the *–tei-* construction.

I claim that the verb in (19a) is not a stative. Instead, I propose that it is an inchoative state which contains an initial transition as opposed to a simple state (homogeneous state) which does not entail any transition point. This claim is actually supported by Nishiyama's very example in (19a) which shows that this class of verbs allows the *–tei-* construction. It is also supported by the fact that this class of verbs is also compatible with *–tek-*, which is a characteristic property of inchoative states, as discussed in Chapter 4. Consider (20).

[6] As discussed in Chapter 4, these stative verbs are compatible with the version of *-tei-* in some Western dialects.

(20) a. Fuji-san -ga mie-tek-ita
Mt. Fuji-NOM visible-TEK-PAST
'Mt. Fuji has been becoming visible.'

b. Ano-uta-ga kikoe-tek-ita
that-song-NOM audible-TEK-PAST
That music has been becoming audible.'

c. Keeki-ga deki-tek-ita
cake-TOP become.completed-TEK-PAST
'The cake has been getting ready.'

As discussed in Chapter 4, the -*tek*- form is not available with the other typical stative verbs as shown in (21). In fact, a stative sentence with -*tek*- is completely bad.

(21) a. * Taroo-ga i-tek-ita
Taroo-NOM exist-TEK-PAST

b. * Eiga-ga at-tek-ita
movie-NOM exist-TEK-PAST

c. * Taroo-wa suugaku-ga deki-tek-ita
Taroo-TOP math-NOM be.good.at-TEK-PAST

Furthermore, the verbs in (20) also pattern with typical inchoative states for the *moosukoside* (almost) test discussed in Chapter 4, but the stative verbs in (21) do not. With this test, the verbs in (20) result in an event cancellation reading like the typical inchoative states. This is shown in (22).

(22) a. Fuji-san-ga mooosukoside mie-ta
Mt. Fuji-NOM almost visible-PAST
'Mt. Fuji was almost visible (lit. Mt.Fuji almost became visible.).'

b. Ano-uta-ga moosukoside kikoe-ta
that-song-NOM almost audible-PAST
'That song was almost audible (lit. That song almost became audible.).'

c. Keeki-ga moosukoside deki-ta
cake-TOP almost become.completed-PAST
'The cake was almost completed (lit. The cake almost became completed.).'

Being unbounded, the typical stative verbs (homogeneous verbs) are not compatible with the adverb *moosukoside*, as shown in (23).

(23) a. * Taroo-ga moosukoside i-ta
Taroo-NOM almost exist-PAST

b. * Eiga-ga moosukoside at-ta[7]
movie-NOM almost exist-PAST

c. * Taroo-wa Suugaku-ga moosukoside deki-ta
Taroo-TOP math-NOM almost be.good.at-PAST

Thus, contrary to Nishiyama's argument that a verb like (19a) is 'stative' and MAX is required to quantize the stative eventuality to induce an episodic interpretation, I argue that (19a) is not a case of the homogeneous state *mie* which is quantized by the MAX operator, but is a case of the inchoative state *mie*, which does not disallow the *–tei-* or *–tek-* form. In fact, an episodic interpretation is also possible for (19b) even without *–tei-* (hence without the putative MAX).

[7] In some Western dialects such as the Fukuoka dialect, this construction is acceptable with an event cancellation reading. This is probably because the verb *ar* in these dialects is an inchoative state.

According to my proposal, which will be discussed in detail in the following section, an episodic interpretation of an inchoative state arises when the topic time is located within the run time of the second sub-event (a resultant state). A generic interpretation is available with any event type in a plain present form.

In what follows, I propose an alternative account that unifies the various readings of *-tei-* without assuming ambiguity or that *-te-* is a vague aspectual marker. My analysis makes it possible to simplify the semantics of *–tei-* proposed by Nishiyama, since it does not need to include two conflicting operators in one morpheme. Instead, *–tei-* can make reference to an entailed subcomponent (sub-event) of an event denoted by the verb.

3 The proposal

3.1 Background assumptions

I extend a temporal relation analysis of tense and aspect proposed for English by Klein (1994) and Klein et al. (2002), and propose that *–tei-* is not semantically ambiguous: it is a perfect marker. Specifically, I argue that *–tei-* as a perfect marker denotes an anteriority relation between the time of situation T-SIT (a.k.a. event time) and the topic time TT (a.k.a. reference time) (Klein 1994). I also adopt Klein's idea that a language can select the time of one of the complex event components as T-SIT. This allows the marker *-tei-* to make reference to the internal structure (sub-events) of predicates. The different readings of *-tei-* sentences arise from the interaction between the semantic and pragmatic components of *-tei-*, the semantics of the different event types, and potentially the function of an adverbial.

The classification of event types and the representation of each event type in Japanese proposed in Chapter 4 are crucial because *-tei-* makes reference to the internal structure of the event predicate to which it is attached. The semantics (event representation) of the proposed classes are repeated in (24).

(24) Event representations for verb classes in Japanese

Homogeneous states:	$\lambda e.P(e)$
Activities:	$\lambda e.\exists e_1 \exists e_2[e =^S (e_1 \cup e_2) \wedge (\text{BECOME}(P))(e_1) \wedge (\text{DO}(P))(e_2)]$
Accomplishments:	$\lambda e.\exists e_1 \exists e_2[e =^S (e_1 \cup e_2) \wedge (\text{BECOME}(P))(e_1) \wedge (\text{DO}(P))(e_2)$ & [$\forall$w'[w' is an inertia world w.r.t w at the beginning of e $\rightarrow$ [$\exists$e'[e' is a culmination of e in w' & e causes e'in w']]]]
Achievements:	$\lambda e.(\text{BECOME}(P))(e)$
Inchoative States:	$\lambda e.\exists e_1 \exists e_2[e =^S (e_1 \cup e_2) \wedge (\text{BECOME}(P))(e_1) \wedge P(e_2)]$

When an event contains more than one sub-event, like activities, accomplishments, and inchoative states, *-tei-* can make reference to each component. In contrast, *-tei-* can not make reference to the internal structure when an event contains only a single eventuality like achievements.

It is also important to note that *-tei-* is not compatible with the class of homogeneous states because this class has no boundary or transition. This is because homogeneous states are individual states: they express permanent properties of an individual and consist of undifferentiated temporal period (Huang et al. 2000, Chang 2003).

3.2 Semantics of *-tei-*

In analyzing *–tei-*, I extend Portner's (2003) proposal for the English perfect according to which the perfect consists of two components: a semantic component and a pragmatic component. However, the semantic component of my proposal differs from that of Portner's, as will become clear below.

For the semantic component of *–tei-*, I extend a claim in the previous literature that *-te-* can convey a temporal sequence relation (Kuno 1973, Hasegawa 1996, Ogihara 1998a, a.o.). I propose that the marker *-tei-* (the two morphemes *-te-* and *-i-* together[8]) denotes an anteriority relation between two time intervals: a situation time (T-SIT) which can be the interval of a sub-event or the entire event entailed in the predicate preceding *-te-,* and a topic time (TT).

(25) [[*-tei-*]] = $\lambda P.\lambda e.\lambda t.\exists e'[\ e' \sqsubseteq e\ \&\ \tau(e') < t\ \&\ P(e)]$

In (25), '$\sqsubseteq$' represents a special part-of relation: *e'* $\sqsubseteq$ *e* means that *e'* is sub-component of *e*. '$<$' is a temporal relation: $\tau(e') < t$ means 'the run time of *e'* precedes *t*.' The logical translation in (25) says that a sentence containing *P-tei* is true of an event *e* and a time *t* iff *e* is a P-event and there is an eventuality *e'* such that *e'* is an eventuality (sub-event) included in *e*, and the run time of *e'* precedes *t*.

[8] *-tei-* can potentially be analyzed as two separate morphemes *–te-* and *–i-*. As exemplifiedin (i), *-tei-* can be separated by particles such as *sae* 'even', *mo* 'also', etc.

(i) Taroo-wa itido oti-te-sae-i-ru ga ….
Taroo-TOP once fail-TE-even-I-PRES but …
'Taroo has even failed but ….'

There are a few possibilities for temporal relations that the meaning in (25) can derive. The semantics predicts that *t* always follows *e'*. However, there are two ways this can arise: *t* can be inside or outside of the runtime of the event *e*. *t* is included in the runtime of *e* when it follows the runtime of the initial sub-event, but is within the runtime of the second sub-event. This induces a progressive interpretation of activities and accomplishments, and a resultant state reading of inchoative states. On the other hand, *t* is outside of the entire *e* when it follows the second sub-event of *e*. This is the temporal relation for a perfect reading for any event type. In other words, the apparently distinct readings, progressive, resultative, and experiential perfect, induced by *-tei-* are all sub-cases of the perfect.

The following is the pragmatic component of *-tei-*. This is largely adopted from Portner (2003), with the addition of the statement restricting the default topic, the reason for which will become clear below.

(26) A sentence S of the form TEI(ϕ) presupposes:
$\exists q[ANS(q) \& \mathbf{P}(p, q)]$
where ANS is true of any proposition which is a complete or partial answer to the discourse topic at the time S is uttered, and the default topic or question is 'What is happening now?' [9]

In (26), 'p' is the proposition expressed by ϕ. The property ANS is true of any proposition which answers the question which the speaker of S tries to answer. The operator **P** is similar to an epistemic *must*, which relates 'p', the proposition expressed by the *–tei-* sentence, to 'q', a partial

[9] This default question is suggested by Lisa Matthewson (p.c.)

or complete answer to the question (Portner 2003, Chung 2006). The actual values of ANS and **P** will be discussed in detail below.

3.3 The various interpretations of the -*tei*- sentences

3.3.1 Progressive and resultative readings

In this subsection, I propose that the default interpretation of activities and accomplishments with -*tei*- is the progressive, while the default interpretation of inchoative states with -*tei*- is the resultant state. I will show that these default interpretations result from the interaction between the semantics of the event type and the perfect meaning of -*tei*-.

The default interpretation for activity predicates with -*tei*- is that the event denoted by the predicate has started sometime in the past, and still holds at the reference time as an in-progress event, as represented by the example in (27).

(27) a. Jiroo-ga arui-tei-ru
Jiroo-NOM walk-TEI-PRES
'Jiroo is walking (now).'

b. Hanako-ga hahaoya-o tetudat-tei-ru
Hanako-NOM mother-ACC help-TEI-PRES
'Hanako is helping her mother (now).'

The bare predicate (or *sentence radical* in Nishiyama's terms) without -*tei*- in (27a) is an activity predicate, whose denotation is as shown in (28).

(28) [[Jiroo-ga aruk]]

$= \lambda e.\exists e_1.\exists e_2[e =^s (e_1 \cup e_2)$ & BECOME-WALK(e_1) & DO-WALK(e_2) & Ag(j, e)]

Observing compositionality, the logical translation of the *–tei-* sentence in (27a) is as shown in (29)[10].

(29) [[Jiroo-ga arui-tei]]

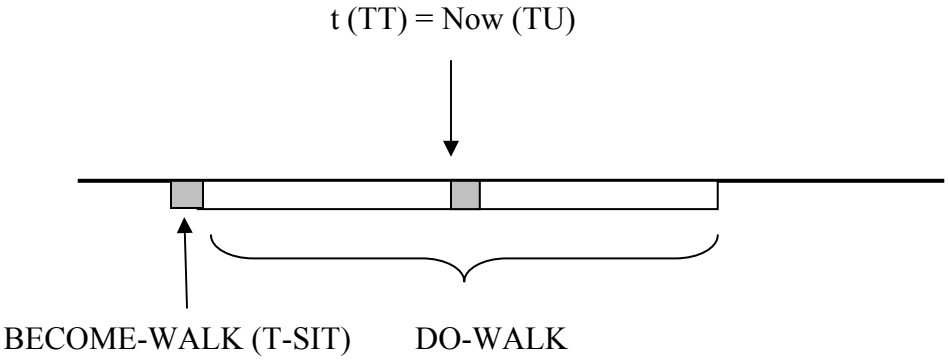
$=$ $\lambda P.\lambda e.\lambda t.\exists e'[\ e' \sqsubseteq e$ & $\tau(e') < t$ & $P(e)]$ ($\lambda e.\exists e_1.\exists e_2[e =^s (e_1 \cup e_2)$ & BECOME-WALK(e_1) & DO-WALK(e_2) & Ag(j, e)])

$=$ $\lambda e.\lambda t.\exists e'[\ e' \sqsubseteq e$ & $\tau(e') < t$ & $\exists e_1.\exists e_2[e =^s (e_1 \cup e_2)$ & BECOME-WALK(e_1) & DO-WALK(e_2) & Ag(j, e)]]

(29) is true of an event *e* and a topic time *t* iff there is an *e'* such that *e'* is a subevent of *e* whose runtime precedes *t*, *e* is an event of WALK, and Jiroo is the agent of *e*. In this particular case (the on-going case), *e'* corresponds to the initial sub-event e_1. The pragmatic component of *-tei-* ensures that the second sub-event DO(WALK) holds at the reference time (= speech time) because the default question of the presupposition is 'What's happening now?' This temporal relation is schematized in Figure 5.2.

[10] For simplicity, I leave tense out of the calculations.

Figure 5.2 The temporal structure of the progressive reading (activities)



An accomplishment with -*tei*- also denotes that some sub-event denoted by the predicate precedes TT, and the pragmatic component of –*tei*- prefers that the event still holds due to the default question 'What is happening now?'. This yields the on-going interpretation, as shown in (30).

(30) a. Jiroo-ga kuruma-o naosi-tei-ru
Jiroo-NOM car-ACC fix-TEI-PRES
'Jiroo is fixing a/the car (now).'
b. Hanako-ga seetaa-o an-dei-ru
Hanako-NOM sweater-ACC knit-TEI-PRES
'Hanako is knitting a/the sweater.'

The meaning of the whole sentence in (30a) without tense is shown in (31).

(31) [[Jiroo-ga kuruma-o naos-tei]]

= $\lambda P.\lambda e.\lambda t.\exists e'[\ e' \sqsubseteq e\ \&\ \tau(e') < t\ \&\ P(e)](\exists e_1.\exists e_2[e =^{s} (e_1 \cup e_2)\ \&$ BECOME-FIX(e_1) & DO-FIX(e_2) & Ag(j, e) & Th(c, e) & [$\forall$w'[w' is an inertia world w.r.t w at the beginning of e → [$\exists$e'[e' is a culmination of e in w' & e causes e'in w']]]]])

= $\lambda e.\lambda t.\exists e'[\ e' \sqsubseteq e\ \&\ \tau(e') < t\ \&\ \exists e_1.\exists e_2[e =^{s} (e_1 \cup e_2)\ \&$ BECOME-FIX(e_1) & DO-FIX(e_2) & Ag(j, e) & Th(c, e) & [$\forall$w'[w' is an inertia world w.r.t w at the beginning of e → [$\exists$e'[e' is a culmination of e in w' & e causes e'in w']]]]]]

Just like the case of an activity in (28), the *e'* is the initial subevent (BECOME) of the accomplishment in this discourse context, which is the preferred reading due to the pragmatic component of *–tei-*. The pragmatics prefers the run time of the initial sub-event (BECOME) to that of the second sub-event (DO) as T-SIT because the default question "What is happening now?" forces TT to be included within the second sub-event.

With the accomplishment, just as with the activity, the run time of the initial transition event (BECOME), T-SIT, precedes the topic time TT. TT is also included in the run-time of the second sub-event DO, and coincides with the utterance time TU in the present tense. This is not forced by the semantic component of *–tei-*, but is due to the pragmatic component.[11]

In the resultant state reading, which is available only with inchoative states, the initial change into a state occurred sometime in the past, and the state resulting from the change obtains at TT/TU as the examples in (32) show.

[11] Accomplishments in the past perfect can be accounted for in the same way, since both past progressive and past perfect readings are possible for an identical *–tei-* sentence in the past, just like the present perfect.

(32) a. Mado-ga kumot-tei-ru
window -NOM get.foggy-TEI-PRES
'The window is foggy (lit. The window has got foggy.).
b. Jiroo-wa tukare-tei-ru
Jiroo-NOM get.tired-TEI-PRES
'Jiroo is tired (lit. Taroo has got tired.).
c. Hanako-ga okot-tei-ru
Hanako-NOM get.mad-TEI-PRES
'Hanako is mad (lit. Hanako has got mad.).

For this reading, the initial transition denoted by the predicate has been completed, and its resultant state sub-event, which is a simple predicate P, still holds. The derivation of the example in (32b) is given in (33).

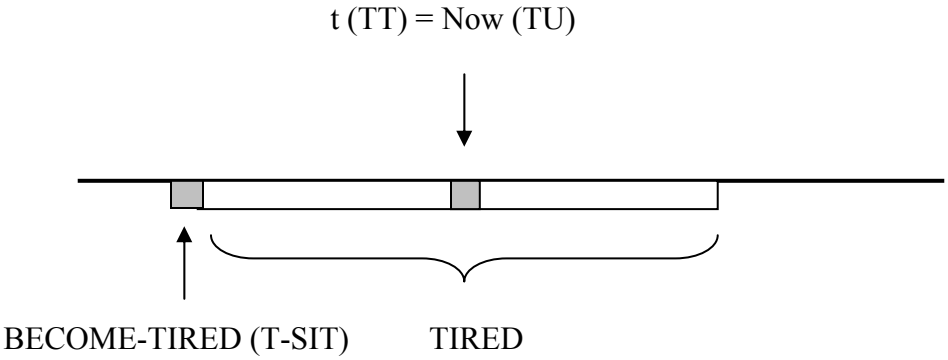
(33) [[Jiroo-ga tukare-tei]]

$= \lambda P.\lambda e.\lambda t.\exists e'[\ e' \sqsubseteq e \ \&\ \tau(e') < t \ \&\ P(e)](\ \exists e_1.\exists e_2[e =^{s} (e_1 \cup e_2) \ \&$ BECOME-TIRED(e_1) & TIRED(e_2) & Th(j, e)])

$= \lambda e.\lambda t.\exists e'\exists e\ [e' \sqsubseteq e \ \&\ \tau(e') < t \ \&\ \exists e_1.\exists e_2[e =^{s} (e_1 \cup e_2) \ \&$ BECOME-TIRED(e_1) & TIRED(e_2) & Th(j, e)]]

In all the cases, activities, accomplishments, and inchoative states, TT follows T-SIT, which is the run time of a BECOME sub-event. Due to the pragmatic component of *–tei-*, it is preferred that the TT coincides with the following sub-event, which is a process event DO for activities and accomplishments, while it is a simple predicate P for inchoative states. In other words, the event is still on-going by default, and therefore, TT coincides with the second part of *e.* This is illustrated in Figure 5.3.

Figure 5.3 The temporal structure of the resultant state reading (inchoative states)



Thus, the two apparently different readings of the *-tei-* construction, progressive and resultant state readings, are identical in terms of temporal relation. The seemingly distinct readings are simply due to the difference in the sub-event (DO or P).

I further argue that both the progressive reading and the resultant state reading of *-tei-* are, strictly speaking, the universal perfect reading because durative adverbials can co-occur with this reading[12] as shown in (34).

(34) a. Taroo-wa kesa-kara kuruma-o naosi-tei-ru
Taroo-TOP this morning-since car-ACC fix-TEI-PRES
'Taro has been fixing a/the car since this morning.'
b. Ano-mado-wa asa-kara kumot-tei-ru
that-car-TOP morning-since get.foggy-TEI-PRES
'That window has been foggy since this morning.'

Thus, I assume that a *-tei-* sentence with no durative adverbial like (30) is a universal perfect

[12] Similarly, Nishiyama (2006) argues that the progressive reading of the *-tei-* sentences is the universal perfect reading. However, she does not claim that the resultant state reading is a universal perfect.

sentence with no beginning point overtly specified (Iatridou et al. 2001). Thus (30a), for example, means that *Taro has been fixing the car since sometime in the past.* Note that this applies only to activities, accomplishments, and inchoative states, all of which contain a durative portion in their event representations (the DO for activities and accomplishments, while the resultant state P for inchoative states).

3.3.2 Experiential Reading

For the experiential interpretation, which is a sub-case of the existential perfect (Iatridou et al. 2001), nothing extra needs to be said: this interpretation falls out if the topic time TT, which coincides with the utterance time TU in the present perfect, happens to follow not only the run-time of the initial sub-event of *e*, but that of the entire event *e* (or that of the second sub-event). Adverbials such as *maeni* 'before' and *kyonen* 'last year' override the default question of the pragmatic component and help facilitate the experiential interpretation: TT, which is *now*, can now follow the run-time of e (i.e., $\tau(e) < \text{now}$). This yields the experiential interpretation as shown in (35).

(35) a. Jiroo-wa maeni kono-koen-o arui-tei-ru
Jiroo-TOP before this-park-ACC walk-TEI-PRES
'Jiroo has walked in this park before.'

b. Ano-kuruma-wa maeni koware-tei-ru
that-car-TOP before break down-TEI-PRES
'That car has broken down before.'

The logical translation of the sentence in (35a) is as shown in (36).

(36) [[Jiroo-wa maeni kono-kooen-o arui-tei]]

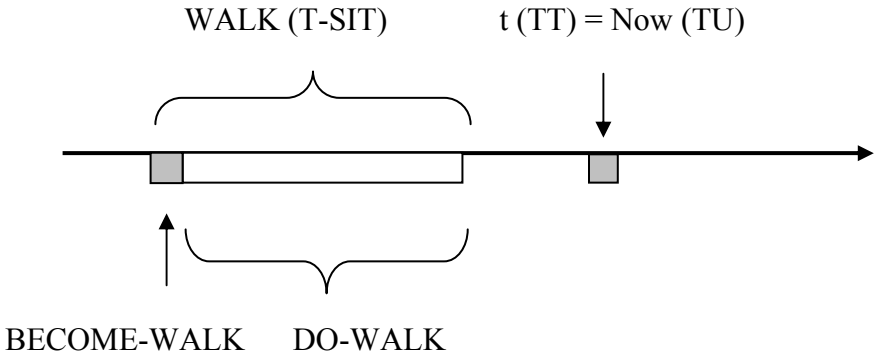
= $\lambda P.\lambda e.\lambda t.\exists e'[\ e' \sqsubseteq e\ \&\ \tau(e') < t\ \&\ P(e)](\ \exists e_1.\exists e_2[e=^{s}(e_1 \cup e_2)\ \&$ BECOME-WALK(e_1) & DO-WALK(e_2) & Ag(j, e) & At(p,e) & $\tau(e) <$ now])

= $\lambda e.\lambda t.\exists e'[\ e' \sqsubseteq e\ \&\ \tau(e') < t\ \&\ \exists e_1.\exists e_2[e=^{s}(e_1 \cup e_2)$ & BECOME-WALK(e_1) & DO-WALK(e_2) & Ag(j, e) & At(p,e) & $\tau(e) <$ now]]

The translation in (35a) is true of an event *e* and a topic time *t* iff *t* follows the run-time of an event (WALK), the agent of the event is Jiroo, the location (At) of the event is the park, and the run time of the entire event precedes now ($\tau(e) <$ now).

Schematically, as shown in Figure 5.4, the experiential perfect reading arises with activities, accomplishments, and inchoative states when TT(=TU) is located sometime after an entire event.

Figure 5.4 The temporal structure of the experiential perfect reading



Likewise, an experiential perfect reading also arises with achievements as shown in (37).

(37) a. Jiroo-ga maeni saifu-o nakusi-tei-ru
Jiroo-NOM before purse-ACC lose-TEI-PRES
'Jiroo has lost his purse before.'
b. Jiroo-ga izen takaramono-o hakkensi-tei-ru
Jiro-NOM before treasure-ACC discover-TEI-PRES
'Jiroo has discovered a treasure before.'

For this reading, TT(=TU) is located sometime after BECOME, which is the only eventuality that achievements contain. This is shown in (38).

(38) [[Jiroo-wa maeni saifu-o nakusi-tei]] =
= λP.λe.λt.∃e'[e' ⊑ e & τ(e') < t & P(e)](∃e [BECOME-LOSE(e) & Ag(j, e) & Th(p, e) & τ(e) < now])
= λP.λe.λt.∃e'[e' ⊑ e & τ(e') < t & ∃e [BECOME-LOSE(e) & Ag(j, e) & Th(p, e) & τ(e) < now]]

In terms of the anteriority relation between T-SIT and TT, the current situation reading (progressive or resultant state reading) and the experiential reading are identical, the only difference being the temporal adjacency between T-SIT and TT. The current situation reading (or universal perfect reading) arises when TT immediately follows T-SIT, where T-SIT is the run time of the initial sub-event, while the experiential perfect reading arises when pragmatics or an adverb separates TT from T-SIT, where T-SIT is an entire event. In other words, the semantic contribution of *-tei-* is identical, but the distinct readings are facilitated by pragmatics or a temporal adverbial.

3.3.3 Quasi-resultant state reading of achievements

Achievements in the *-tei-* form also yield a resultant state-like reading, which is very similar to the resultant state reading of inchoative states. This reading patterns with that of inchoative states in that it expresses a state at TT resulting from a transition eventuality which has occurred previously. However, there is a crucial difference between the two. The resultant state reading of inchoative states refers to a resultant state entailed in the predicate as discussed in 3.4.1. However, this is not the case with achievements. The addition of a durative adverbial phrase *~kara zutto* 'ever since' to an achievement results in infelicity as shown in (39).

(39) a. # Tegami-wa kinoo-kara zutto todoi-tei-ru.
letter-TOP yesterday-ever since arrive-TEI-PRES
'The letter arrived yesterday and it has been here since then.'

b. # Hanako-wa kesa-kara zutto saifu-o nakusi-tei-ru
Hanako-TOP this.morning-ever.since purse-ACC lose-TEI-PRES
'Hanako lost her purse this morning and it has been missing since then.'

The infelicity of the examples in (39) follows from the event representation of achievements: they do not entail any durative portion, i.e., a resultant state. This is why they are not compatible with the durative adverbial phrase, and hence the universal reading is not available even in the *-tei-* form.

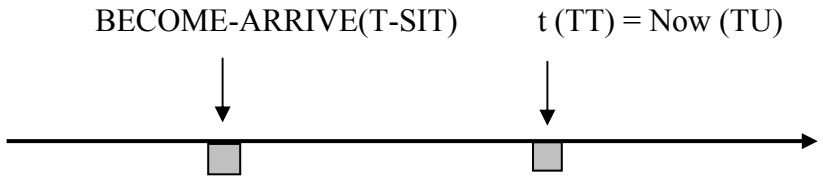
The data in (39) contrast with the data in (40), which show that inchoative states with *-tei-* and the durative adverbial phrase are felicitous.

(40) a. Taroo-wa kinoo-kara zutto tukare-tei-ru.
Taroo-TOP yesterday-ever.since get.tired-TEI-PRES
'Taro has been tired ever since yesterday.'
b. Vancouver-wa kesa-kara zutto kumot-tei-ru
Vancouver-TOP this.morning-ever.since get.cloudy-TEI-PRES
'It has been cloudy in Vancouver ever since this morning.'

The inchoative states with *-tei-* in (40) are compatible with the durative adverbial because they entail a durative component in their event representation.

Figure 5.5 illustrates the temporal relation between TT and T-SIT in the case of achievements in the *-tei-* form.

Figure 5.5 The temporal structure of achievements in the *–tei-* form



In terms of the temporal relation between the time intervals, TT is located sometime after T-SIT, the run time of the BECOME event, which is the only eventuality that achievements contain. In other words, the temporal (anteriority) relation between the two time intervals is identical to that of the experiential perfect reading: TT follows T-SIT and TT is outside the entire event *e*. Thus, I conclude that the resultant state reading of achievements is actually the perfect of result, which is a sub-case of the existential perfect (Iatridou et al. 2001).

This temporal/aspectual account alone is not sufficient for the meaning of the resultative perfect reading of achievements, however. Intuitively, there should be some (resultant) state expressed by the achievement predicate in the *–tei-* form at the reference time. As mentioned already, the state in question here is the perfect of result, which is caused by the event denoted by the predicate. This kind of (not lexically entailed) resultant state must be supplied by the pragmatic component of *–tei-* as the perfect aspect marker (Portner 2003, Chung 2006), which is repeated below.

(26) A sentence S of the form TEI(ϕ) presupposes:
$\exists q[ANS(q) \ \& \ \mathbf{P}(p, q)]$
where ANS is true of any proposition which is a complete or partial answer to the discourse topic at the time S is uttered (Portner 2003), and the default topic or question is 'What is happening now?'

The specific values of *q* and *p* in (26) depend on the discourse. Consider an example in (41).

(41) Taroo-wa uti-ni ki-tei-ru
Taroo-TOP house-DAT arrive/come-TEI-PRES
'Taroo has come to my place (and he is here now).'

The most reasonable background question for the utterance in (41) would be 'Where is Taroo?' Before the *–tei-* sentence in (41) is uttered as the answer to this question, the common ground, which is the set of propositions which conversation participants agree to treat as true (Portner 2003), contains the following propositions:

(42) {If someone comes to my place and nothing else happens after, he/she is here}

When the sentence in (41) is uttered, the proposition *Taroo came to my place* is added to this common ground. In other words, the variable 'p'in (26) is filled with this proposition. The epistemic modal P, which is presupposed by the -*tei*- sentence, then relates it to the proposition *Taroo is here*, which is the value of 'q', as the answer to the background question.

Note that the non-*tei* simple past sentence *Taroo-wa uti-ni ki-ta* could be used as an answer as well. In this case, however, the sentence does not imply that Taroo is still here. He could still be here or have gone somewhere else. Moreover, it is more felicitous to use the non-*tei* sentence if the person in question is not here anymore. The –*tei*- form, in contrast, implicates that the result of Taroo's coming to the speaker's place holds at the utterance time because of the presupposition of –*tei*-.

In the same way, the perfect of result reading may arise with the other verb types. Let us consider an accomplishment.

(43) Taroo-ga *Rongo*-o yon-dei-ru
Taro-NOM *Analect.of.Confucius*-ACC read-TEI-PRES
'Taroo has read *Analects of Confucius*.'

The accomplishment sentence in (42) indicates that there is some current state which was caused by the fact that Taroo read *Analects of Confucius*. The following conversation illustrates a kind of context in which (43) might be used:

(44) A: I would like to know what ancient Chinese philosophy is like. Who should I ask?
B: *Taroo has read the Analects of Confucius*. So you should ask him.[13]

In this context, the sentence *Taroo-ga Rongo-o yondeiru* can be used as an answer to A's question, to express that Taroo is the right person to ask because he can explain what ancient Chinese philosophy is like. As Portner (2003) argues for the English perfect, I propose that such a (perfect) resultant state entailment is epistemic in nature. When the sentence is uttered the common ground contains the following:

(45) {Confucius is the most well-known ancient Chinese philosopher; if someone reads a book about Confucius, they understand what ancient Chinese philosophy is like}

If the proposition in (43) above is added to the common ground, it entails that Taroo can explain what ancient Chinese philosophy is like. This satisfies *-tei-*'s presupposition because the entailment of (45) answers the question which B tries to answer. Portner claims that in general, "resultative perfects" occur when the past event referred to provides evidence for the existence of some current state because of a causal relation.

The other reading which is not a lexically entailed state or a state due to a causal relation is the current relevance reading (Portner 2003). Consider the following example:

(46) Tokyo-wa kako-ni nando-mo kyodai-jishin-ga okot-tei-ru
Tokyo-TOP past-DAT many.times huge-earthquake happen-TEI-PRES
'In Tokyo, huge earthquakes have happened many times before.'

[13] This example is adopted from one of Portner's (2003) examples.

This sentence would be uttered in a situation like (47).

(47) A: Is Tokyo in danger of being struck by a huge earthquake?
B: Huge earthquakes have happened many times in Tokyo before.

In this case, the state in question or the current relevance is that Tokyo is in danger of being hit by a huge earthquake. When (47) is uttered, the common ground contains the following proposition:

(48) {The condition of the plate tectonics around Tokyo now is not very different from what it has been in the past; if the conditions are the same, the past is a good guide to the future}

With this conversational background, the utterance in (48) implies that Tokyo is presently in danger of huge earthquake, and the proposition answers A's question, and hence satisfies *tei*'s presupposition.

Note that a simple past tense like in (49) can be used to convey the same information.

(49) Tokyo-wa kako-ni nando-mo kyodai-jishin-ga okot-ta
Tokyo-TOP past-DAT many.times huge-earthquake happen-PAST
'In Tokyo, huge earthquakes happened many times before.'

Like the *–tei-* form in (46), this can yield a common ground as does (48), entailing an answer to A's question. However, as Portner argues, the simple past tense proposition is not functionally

equivalent to the use of the perfect. The perfect's presupposition functions to highlight the fact that B's utterance serves to imply an answer to A's question. It even presupposes that it provides an answer.

3.3.4 Habitual reading with *–tei-*

In this subsection, I extend the pragmatic analysis of the resultative perfect and current relevance readings discussed in the previous section to the habitual use of *–tei-*. I will show that the habitual reading of the *–tei-* form can be accounted for with the presupposition of *–tei-*.

If my analysis of *–tei-* as a perfect marker is correct, then it is a particularly interesting fact that it is also used for the habitual reading, since habits (as well as generics, general truths, and proverbs) are generally expressed in the simple present form in English (Brinton 1987: 198). However, as Brinton (1987: 199) also notes in the same paper, Leech (1971) classifies the universal perfect (continuative perfect) into two, "state-up-to-the-present" and "habit-up-to-the present" for English. This is also evidence that even in English the perfect can express a type of habitual reading. This suggests that the truth conditions of the habitual reading in the (universal) perfect are the same as the regular use of the universal perfect. Different readings arise due to the pragmatic component of the perfect. I argue that the use of the perfect (i.e., *–tei-*) to express habits is particularly common in Japanese.

The habitual reading appears to be readily available with activities, accomplishments and achievements.[14] The translation of each example in (50) is the intended habitual reading of the

[14] The habitual reading is also possible with inchoative states, although a very specific context is necessary. Data will be given below.

sentence.[15]

(50) a. Taroo-wa daigaku-de suugaku-o osie-tei-ru
Taroo-TOP university-DAT math-ACC teach-TEI-PRES
'Taroo teaches mathematics at university.'

b. Jiroo-wa ie-o tate-tei-ru
Jiro-TOP house-ACC build-TEI-PRES
'Jiroo builds houses.'

c. shinbun-wa asa roku-ji-ni todoi-tei-ru
newspaper-TOP morning six-o'clock-DAT arrive-TEI-PRES
'The newspaper arrives at 6 o'clock in the morning.'

d. Jugyoo-wa gogo go-ji-ni owat-tei-ru
class-TOP afternoon five-o'clock-DA finish-TEI-PRES
'The class ends at 5 PM.'

As exemplified in (50), all the eventive verb classes in the *-tei* form can have a habitual reading even without a quantificational adverbial, though a specific discourse topic is necessary for the reading to arise. For example, a relevant discourse topic or a question for the utterance in (50a) is something like in (51).

(51) A: Anata-no-sigoto-wa nan-desu-ka?
you-GEN-job-TOP what-PRES(PLT)-Q
'What is Taroo's occupation?'

B: Watasi-wa daigaku-de suugaku-o osie-tei-masu.
1.sg-TOP university-LOC mathematics-ACC teach-TEI-PRES(PLT)
'I teach mathematics at university.'

[15] Each sentence in (50) can also be used for an on-going situation or an experiential perfect reading.

A possible question for (50b), similarly, is *What's Jiroo's occupation?* and (50b) answers that question. An appropriate context for (50c), on the other hand, would be like (52):

(52) A: Shinbun-wa maiasa nanji-ni todoi-tei-masu-ka?
newspaper-TOP every.morning what.time-DAT arrive-TEI-PRES(PLT)-Q
'What time does the newspaper arrive every morning?'
B: (shinbun-wa) asa roku-ji-ni todoi-tei-masu
(newspaper) morning six-o'clock-DAT arrive-TEI-PRES(PLT)
'It arrives at six every morning.'

Note that if the sentences are uttered out-of-the-blue, i.e., if there is no such discourse topic, then the sentences are vague between an on-going situation reading, a perfect reading, or a habitual reading. Thus, the sentence in (50b), for example, if uttered out-of-the-blue, can mean *He is building a house now* or *He has built a house before.*

The kind of context for an inchoative state sentence to be habitual is given in (53).

(53) B works very hard day and night from Monday to Saturday. A is wondering how B spends his time on Sunday.

A: Kimi-wa nichiyoobi-wa doo-sugosi-tei-masu-ka?
you-TOP Sunday-TOP how-spend-TEI-PRES(PLT)-Q
'How do you spend your time on Sunday?'
B: Watashi-wa tukare-**tei**-masu node, tada ne-tei-masu
I-TOP get tired-TEI-PRES(PLT) because just sleep-TEI-PRES(PLT)
'I am so tired that I just sleep all day Sunday.'

In terms of the semantics of the habitual reading, I argue that it is identical to the other perfect readings truth-conditionally. The only peculiarity of a habitual event is that it is a repetition, iteration, or continuation of a single event. A similar phenomenon has been observed in Brazilian Portuguese, in which the present perfect construction as shown in (54) obligatorily denotes an iterative (habitual) event (Giorgi and Pianesi 1997, Molsing 2006).

(54) A Maria tem cantado "Parabéns".
The Maria has sung "Congratulations" (many times). (Molsing: 1)

To account for this fact, Giorgi and Pianesi (1997) claim that it is due to a covert habitual operator. However, I do not adopt their analysis for the Japanese facts. The pragmatic approach discussed above can successfully account for the habitual reading.

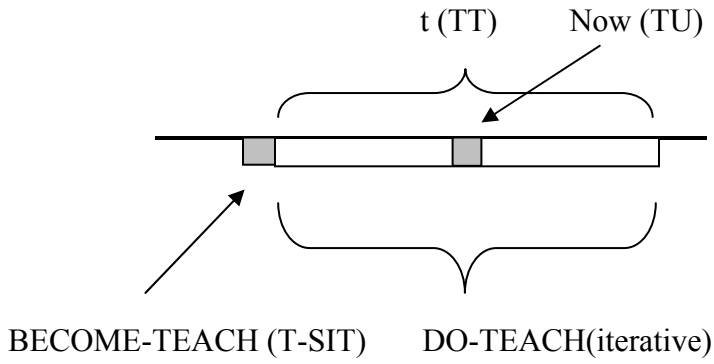
I argue that semantically, the habitual reading of the *–tei-* construction is a sub-case of the *–tei-* perfect. Specifically, the habitual reading is semantically identical to the on-going situation reading (i.e., universal perfect), the only difference being that the event described is an iterated event on different occasions (Brinton 1987: 205).

Even with the following example, which is a typical case of the universal perfect reading, the actual event described does not hold throughout the interval indicated by the durative adverbial phrase. The actual event is an iterative event during that interval.

(55) Taroo-wa 2000-nen-kara daigaku-de suugaku-o osie-tei-ru
Taroo-TOP 2000-year-since university-DAT math-ACC teach-TEI-PRES
'Taroo has been teaching mathematics at university since 2000.'

The sentence in (55) differs from (50a) only in that (55) specifies the beginning of the iterative event, while (50a) does not say anything about the beginning. As discussed in 3.4.1, the on-going process reading of process verbs (activities and accomplishments) and inchoative states turns into the universal perfect reading with the help of an adverbial which specifies the initial boundary of the repetitive/continuing situation. I suggest that this is the case for the apparent habitual reading of process events in Japanese since a habitual event must start at some point in the past, and continues up until the utterance time, implying that the same eventuality further continues into the future. Thus the temporal relation can be schematized as shown in Figure 5.6, which is identical to the on-going situation reading of *–tei-*.

Figure 5.6 The temporal structure of the habitual reading



3.4 Section summary

In this section, I proposed a semantic component and a pragmatic component of *–tei-*. The semantics of *–tei-* makes reference to a sub-event of an event, and this allows the apparently conflicting interpretations: the on-going situation reading (the progressive reading of activities and accomplishments and the resultant state reading of inchoative states) and the perfect readings

of any event type.

The pragmatic component of *–tei-* along with adverbials also contributes to the different readings. The default question 'what is happening now?' would facilitate the default on-going situation reading, and the various perfect readings are also accounted for by *–tei-*'s presupposition. More specifically, *-tei-*'s presupposition functions to highlight the fact that one's utterance serves to imply an answer to the discourse question.

In the following section, my analysis is compared with Nishiyama's (2006) similar but crucially different proposal, and it is shown that my proposal solves the problems Nishiyama's has.[16]

4 Comparison with Nishiyama's pragmatic analysis

Nishiyama (2006) claims that the *–tei-* construction introduces a perfect state (poststate: Klein 1994), and it is the *–i-* part of *–tei-* that performs this function.

(56) The function of *–i-* (Nishiyama 2006: 205)
-i- takes the output of *–te-*, i.e. *e'*, and maps it onto a state *s* which overlaps with *r* (the reference time) and whose category is underspecified and given as a free variable *X*. The value of *X* has to be filled in by addressees *via* pragmatic inferences.

[16] Toshiyuki Ogihara (p.c.) points out that my analysis of *–tei-* is quite similar to McClure's (1996). It is certainly similar in that McClure proposes that *–tei-* is monsemous and the three major readings progressive, resultant state, and perfect ('perfective' in McClure's terms) are drived due to interaction between the semantics of *–tei-* and the meaning of different verb types. However, there are critical differences: in McClure's analysis, 1) there is no pragmatic component, 2) achievements and inchoative states are not distinguished, 3) achivements and accomplishments are treated as one class as achievements, 4) it is not explicitly specified that the subpart ('segment' in his terms) of an event is one of the components of the entire event, and finally, 5) the distinction between the progressive reading, the resultative reading, and perfect is nicely accounted for, but the different kinds of perfect readings are not dealt with.

Nishiyama further argues, presenting the examples in (57), that the semantics of the Japanese perfect must express that the state can either start before the occurrence of *e'* or sometime after *e'* ends, as long as *s* overlaps with *r*.

(57) a. Ken-wa hidoi kaze-o hii-te-i-ru
Ken-TOP bad cold-ACC catch-TE-I-NONPAST
'Ken has caught a bad cold.' (He is absent today.)
b. Kono-hei-wa sankai taore-te-i-ru
this-fence-TOP 3-times fall-TE-I-NONPAST
'This fence has fallen three times.' (It is not strong.) (Nishiyama 2006: 206)

According to Nishiyama, the perfect state is the output of *–te-* in both cases. I do not think this is correct, however. In (57a), the state that *Ken is absent today* is not the direct output (or result) of the proposition preceding *–te-*. There is a direct causal relation from *having a cold* to *being sick* but not from *having a cold* directly to *being absent*. The case in (57b) is even more problematic for Nishiyama. In this case, she assumes that *the fence being not strong* is the output of *the fence having fallen three times before*. However, the usual interpretation is not that the weakness is the output of the falling, but rather that the falling is because of the weakness. In other words, the state that a *–tei-* sentence describes is not necessarily an output of the proposition preceding *–tei-*.

Extending Portner's analysis, we do not need to stipulate this vagueness (*s* precedes or follows *e'*) in the semantics of *–tei-*. The state in (57a) may be the output of *e'* because it is a case of a causal (resultative) relation between *e'* and *s*. At the time (57a) is uttered, the following common ground is established:

(58) {If one catches a cold, he/she is sick; if one is sick, he/she is at home; if one is at home, he/she is absent from school}

The kind of question for the answer in parentheses is 'Where is Ken? (uttered in a classroom)' If (57a) is uttered, i.e., added to (58), then the common ground entails that *Ken is absent*. Thus, (57a) can be used as an answer to the question implying that Ken is absent, and this satisfies the presupposition of *–tei-*.

(57b), as well, can be nicely explained as a case of 'current relevance'. The state in this case is also an implication due to the common ground. The most likely question for the sentence is 'Is the fence strong?' or 'How strong is the fence?' The common ground for (57b) is shown in (59).

(59) {if a fence is strong, it does not fall down easily}

When (57b) is uttered, the proposition *kono-hei-wa san-kai taore-ta* (this fence fell down three times) is added to the common ground.

(60) {If a fence is strong, it does not fall down easily; this fence fell down three times}

Thus, (57b) can be used as an answer to the question implying that *the fence is not strong*. And again, this satisfies the presupposition of the *–tei-* perfect.

5 Conclusion

In this chapter, I proposed that *–tei-* is monosemous (c.f. Nishiyama 2006) rather than ambiguous (Fujii 1976, Ogihara 1998a a.o.). It is proposed that *–tei-* is a perfect marker, which contains a semantic component and a pragmatic component. For the semantic component of *–tei*, it is proposed that the marker needs to make reference to the internal structure of an event, which accounts for the temporal/aspectual meaning of the two main readings, the on-going situation reading (the progressive reading of process verbs or the resultant state reading of change-of-state verbs), and the experiential reading.

Furthermore, the sub-cases of the experiential reading, resultative (perfect) and current relevance, are accounted for by extending Portner's modal/pragmatic analysis of the English perfect. I have argued that the habitual use of *-tei-* can also be regarded as a sub-case of the (universal) perfect, and it is yielded by the same type of pragmatics as the resultative and current relevance readings.

My proposal solves various problems of previous analyses of *-tei-* including the ambiguity approach represented by Ogihara (1998a) and the monosemous approach of Nishiyama (2006).

Chapter 6 Summary and implications

This chapter summarizes my proposal in this thesis, and discusses its implications. In section 1, I will review and summarize each chapter. Section 2 discusses implications for cross-linguistic variation in situation and viewpoint aspect. In section 3, I will compare my findings and proposals with previous studies on lexical and grammatical aspect in Sənčáθən and other Salish languages. Section 4 concludes the thesis.

1 Summary of my proposal

Chapters 2-5 in this thesis have investigated situation and viewpoint aspect in two unrelated languages, Sənčáθən and Japanese. In particular, I focused on striking similarities between the two languages with respect to various readings the perfect constructions induce.

1.1 Situation aspect

In Chapter 2, a classification of verbs in Sənčaθən was proposed which is the first attempt at a formal semantic analysis of situation aspect in Straits Salish[1]. The proposed classification is repeated below:

[1] Kiyota (2004a) first investigated lexical aspect in Sənčáθən. Turner (2007) also discusses lexical aspect in this language, but it is not a formal analysis.

(1) Classification of verbs/predicates in Sənčáθən

a. Homogeneous states
b. Inchoative states
c. Activities
d. Achievements
e. (Non-culminating) accomplishments

This classification has been proposed based on the results of various standard and language-internal diagnostics which distinguish the verbs aspectually as shown in (2).

(2) Diagnostics for aspectuality of verbs in Sənčáθən

a. Interpretation of out-of-the-blue sentences (atelic vs. (quasi-)telic)
b. Interpretation with *kʷɬ* (atelic vs. (quasi-)telic)
c. (Un)availability of the stative prefix *s-* (achievements vs. the other classes)
d. Interpretation with punctual clauses (homogeneous states vs. inchoative states)
e. Imperative test (activities vs. inchoative states)
f. Culmination cancellation test (accomplishments vs. achievements)
g. Interpretation with *čəlel* and *xʷeləq* 'almost' (accomplishments vs. achievements)

Based on the results of these diagnostics, I further proposed a semantics for each verb/predicate class, which is shown in (3).

(3) Semantics of each verb/predicate class in Sənčáθən

a. Homogeneous states: $\lambda e.P(e)$

b. Inchoative States: $\lambda e.\exists e_1 \exists e_2[e =^{S} (e_1 \cup e_2) \wedge (\text{BECOME}(P))(e_1) \wedge P(e_2)]$

c. Activities: $\lambda e.\exists e_1 \exists e_2[e =^{S} (e_1 \cup e_2) \wedge (\text{BEGIN}(P))(e_1) \wedge (\text{DO}(P))(e_2)]$

d. Achievements: $\lambda e.(\text{BECOME}(P))(e)$

e. (Non-culminating) accomplishments:

$\lambda e.[(\text{DO}(P))(e) \& [\forall w'[w' \text{ is an inertia world w.r.t w at the beginning of e} \rightarrow [\exists e'[e' \text{ is a culmination of e in w' \& e causes e'in w'}]]]]$

Likewise, I examined Japanese verbal predicates in Chapter 4 and proposed a new verb classification for the language. The proposed classification is shown in (4).

(4) Classification of verbs/predicates in Japanese

a. Homogeneous states
b. Inchoative states
c. Activities
d. Achievements
e. (Non-culminating) accomplishments

The classification in Japanese is also based on various standard and language-internal diagnostics as listed in (5).

(5) Diagnostics used to classify Japanese verbs/predicates

a. Interpretation with *-teiru* (statives vs. non-statives)
b. Availability with *~kan*(for)/*~de*(in) adverbial (activities vs. accomplishments)
c. Interpretation with *moosukoside*/*hotondo* 'almost'
(activities vs. accomplishments, achievements vs. accomplishments)

d. Interpretation with *tuini* 'finally' (activities vs. accomplishments)
e. Culmination cancellation (achievements vs. accomplishments)
f. Availability with *–tek-* 'become' (achievements vs. inchoative states)

The results of these tests have led me to propose the meaning of each aspectual class as shown in (6).

(6) Semantics of each verb/predicate class in Japanese

a. Homogeneous states: $\lambda e.P(e)$

b. Inchoative States: $\lambda e.\exists e_1 \exists e_2[e =^S (e_1 \cup e_2) \wedge (\text{BECOME}(P))(e_1) \wedge P(e_2)]$

c. Activities: $\lambda e.\exists e_1 \exists e_2[e =^S (e_1 \cup e_2) \wedge (\text{BECOME}(P))(e_1) \wedge (\text{DO}(P))(e_2)]$

d. Achievements: $\lambda e.(\text{BECOME}(P))(e)$

e. (Non-culminating) accomplishments:

$\lambda e.\exists e_1.\exists e_2\,[e =^S (e_1 \cup e_2) \wedge (\text{BECOME}(P))(e_1)$ & $(\text{DO}(P))(e_2)$ & [∀w'[w' is an inertia world w.r.t w at the beginning of e → [∃e'[e' is a culmination of e in w' & e causes e'in w']]]]

Comparing (3) with (6), it is striking that both languages have the same five aspectual classes, which are different from that of English, the only difference between Sənčáθən and Japanese being the event structure of accomplishments. Sənčáθən accomplishments contain only one event, that is a DO event, while Japanese accomplishments are complex events containing two sub-events, a BECOME and a DO event.

Both languages differ from English in terms of the classification of verbs, since it is commonly assumed that English has only four verb/predicate classes as shown in (7).

(7) Semantics of verb/predicate classes in English (Rothstein 2004)

a. Homogeneous states: $\lambda e.P(e)$

b. Activities: $\lambda e.(DO(P))(e)$

c. Achievements: $\lambda e.(BECOME(P))(e)$

d. Accomplishments: $\lambda e. \exists e_1. \exists e_2 [e =^{S} (e_1 \cup e_2) \wedge (DO(P))(e_1) \& (BECOME(P))(e_2)]$

The most prominent difference between English and the two languages examined in this thesis is that the former has only four classes: (homogeneous) states, activities, achievements, and accomplishments, whereas the two languages examined in this thesis have five classes: (homogeneous) states, activities, achievements, accomplishments, and a new class of inchoative states.

In terms of the semantics of each event type, it is generally assumed that activities do not contain an initial BECOME sub-event in English, except for by Smith (1997), who includes an initial point in her event schema of English activities,[2] but in Sənčáθən and Japanese, they do. However, as pointed out by Laurel Brinton (p.c.), English activities pattern with their Sənčáθən and Japanese counterparts for the punctual adverbial test. A similar fact that native English speakers prefer the inceptive reading when activities co-occur with a punctual adverbial is reported in Smith (1997), Rothstein (2004), and Bar-el (2005). Consider (8).

(8) a. Mary swam when the bell rang.
= Mary started swimming when the bell rang. (Smith 1997: 64)

b. John ran at 9 p.m.
= John began to run at 9 p.m. (Rothstein 2004: 25)

[2] See (65) in Chapter 2, section 2.6.2.

c. Mary sang when John arrived.
Speaker's comments: "started reading is most natural – you don't even have to say started, it is assumed." (Bar-el 2005: 306)

This may be evidence that English activities do contain an initial point, as do Sənčáθən and Japanese counterparts. I intend to explore this issue further as my future study.

As Laurel Brinton (p.c.) and Lisa Matthewson (p.c.) point out, English activities also pattern with their Japanese counterparts for the *finally* test, which I introduced to test transition points for Japanese in Chapter 4, section 2.2. In Japanese, *tuini* 'finally' picks out the last transition point of an event. In the case of activities, *tuini* focuses on the initial transition point, which is the only transition point that activities contain, Consider (9).

(9) a. Jack finally danced. He is still dancing.
b. Mary finally smiled. She is still smiling.

These facts suggest that in English, as in Sənčáθən and Japanese, activities contain an initial transition. Thus, as Bar-el (2005) proposes, I claim that English activities contain a BECOME event as their initial sub-event, as shown in (10).

(10) English activities: $\lambda e. \exists e_1 \exists e_2[e =^{S} (e_1 \cup e_2) \wedge (\text{BECOME}(P))(e_1) \wedge (\text{DO}(P))(e_2)]$

The other intriguing difference between English and the two languages examined in this thesis concerns accomplishments: English accomplishments contain a culmination entailment,

but Sənčáθən and Japanese do not. The culmination requirement for Sənčáθən and Japanese is an implicature[3].

As for similarities, the three languages pattern with each other in the representations of (homogeneous) states and achievements, having a simplex bare predicate and a simplex BECOME event respectively.

There remains a conceptual issue, though. It has been assumed that an achievement event or a BECOME event is near-instantaneous (Dowty 1979, Bar-el 2005). In Chapter 2 for Sənčáθən and in Chapter 4 for Japanese, I claimed that the BECOME in an achievement event is near-instantaneous as it represents culmination of the event. However, as discussed in Chapter 4, *-tek-*, which is an inceptive marker, is compatible only with inchoative states in Japanese. This suggests that the initial BECOME event contained in inchoative states is not necessarily instantaneous because the interpretation with *–tek-* involves a gradual change of state; i.e., there can be some duration in the BECOME event.[4] The non-instantaneousness of BECOME can be appealed to, in order to account for the gradual change of state interpretation with *–tek-*. However, this raises a converse problem, since in chapter 4, I assumed that BECOME is near-instantaneous.

One possible option to solve this problem is to propose another operator which covers durative change of state events. This could be supported by Dowty, who points out that the requirement that BECOME is instantaneous is plausible for 'mental' changes of state (or

[3] This seems to be a wide-spread property (Henry Davis p.c., Travis 2000, Matthewson 2004, Tatevosov and Ivanov 2006)
[4] A similar problem about instantaneousness was pointed out by Bar-el et al. (2005) for Sḵwx̱wú7mesh and St'át'imcets achievements.

achievements) such as *notice, recognize, and realize* but not plausible for others such as *the door opened slowly* (2002: 264). However, Henry Davis (p.c.) points out that the former set of 'instantaneous' verbs can still be durative as shown in (11).[5]

(11) a. I slowly realized that linguistics was not all I had imagined it to be.
b. I began to notice a change in his attitude.
c. I gradually recognized the landscape as the fog cleared.

Davis also suggested that there could be two separate dimensions of analysis: one to do with end-points/boundaries, and the other to do with duration. This dichotomy was recognized in Smith (1997) in her aspectual classification, and by Verkuyl (1989) who treats English achievements as just short accomplishments. Some of the tests discussed in this thesis such as imperfective marking are sensitive to duration, while others (e.g., those testing for telicity) are not. However, investigation of this possible solution goes beyond the scope of this dissertation.

There is another question with respect to the status of BECOME. As discussed in Chapter 4, Japanese activities and accomplishments are not compatible with *–tek-* as an inceptive marker. This means that the initial BECOME contained in these two event classes is not identical to that

[5] These achievement sentences could be analyzed as repetitive achievement events so that the co-occurrence of the durative adverbials could be accounted for. Japanese achievements can co-occur with *–tek* when the events are repetitive as well.

(i) Hanako-wa Taroo-no taido-no henka-ni sukosizutu kizui-tek-ita
Hanako-TOP Taroo-GEN attitude-GEN change-DAT gradually notice-PAST
'Hanako gradually noticed a change in his attitude.'

This sentence can be used in a situation as follows: Taroo used to be a person with a good attitude all the time. For some reason, however, he started showing a bad attitude. If Hanako sees his bad attitude only once or twice, she may not notice that his attitude has changed. If Taroo continues to show the bad attitude toward her, then she will be surer that Taroo's attitude has changed. Then this sentence can be used to describe the situation.

of inchoative states. Moreover, the initial BECOME event should be different from the final BECOME event since the initial transition and the final transition (i.e., culmination) are, intuitively, not the same. Although these questions are important issues for event semantics in general, I will leave them for further research.

1.2 Grammatical aspect

In Chapter 3, I examined grammatical aspect (perfective and imperfective) and the *k^{w}ɬ* construction in Sənčáθən and proposed that *k^{w}ɬ* is a perfect marker which is similar to the English perfect. I first proposed the following denotations for perfective and imperfective in Sənčáθən.

(12) a. [[Imperfective]] = λQ.λ*i*.∃e.[*i* ⊆ τ(e) & Q(e)]
b. [[Perfective]] = λQ.λ*i*.∃e.∃e'[e'⊑ e & τ(e')⊂ *i* & Q(e)]

The semantics of the imperfective in (12a) is the one that is usually assumed for a number of languages: the reference time is included in the event time. Though the standard theory of perfective assumes that an entire event is included in the reference time, the denotation of perfective in Sənčáθən only forces one of the sub-events to be included within the reference time, leaving the possibility that some part of an event is outside the reference time. This yields an interesting difference from English. The proposed semantics of the perfective accounts for the fact that in Sənčáθən, activities and inchoative states in the perfective form can be interpreted as

either a current situation or a past event. It also accounts for the availability of the inception reading in the perfect form for the two classes.

As discussed in Chapter 3, the particle *kʷɬ* yields various existential perfect readings: the perfect of recent past, the perfect of result, and the experiential perfect. In addition, it was claimed that the inceptive reading with *kʷɬ* is actually a sub-type of the existential perfect, which I called the perfect of inception. *kʷɬ* also induces, when it appears with the actual (imperfective), the universal perfect reading. An example of each perfect reading is given in (13).

(13) a. ləʔə sən kʷəʔ **k̲ʷɬ̲** kʼʷən-nəxʷ kʷsə qʷənəs (Experiential perfect)
AUX 1.sg INF PERF get.seen-NCTR D whale
'I have seen a whale.'

b. **k̲ʷɬ̲** kʷən-nəxʷ sən kʷsə nə sčəsəqʷ (Perfect of result)
PERF get.found-NCTR 1.sg D my hat
'I have found my hat.'

c. **k̲ʷɬ̲** téčəl sən (Perfect of recent past)
PERF arrive 1.sg
'I have just arrived. / I'm here.

d. **k̲ʷɬ̲** łčíkʷəs sən (Perfect of inception)
PERF get.tired 1.sg
'I am getting tired (I have begun to feel tired).'

e. **k̲ʷɬ̲** čí-ʔ-eq ʔə tiʔə kʷəčíl (Universal perfect)
PERF snow (IMP) OBL D morning
'It has been snowing since this morning.'

I proposed the following logical translation for the particle.

(14) [[ㄱㅝㄴ]] = λp.λ*i*.∃*i'*.[PTS(*i'*: *i*) & p(*i'*)]
where *i* = reference time (= introduced by tense); *i'* = PTS (perfect time span)
PTS(*i'*: *i*) iff *i* is a final subinterval of *i'*.

With the semantics of lexical aspect proposed in Chapter 2, plus the semantics for perfective, imperfective, and perfect proposed in Chapter 4, the various readings with the ㄱㅝㄴ construction were accounted for.

The perfect construction or the *-tei-* construction in Japanese was considered in Chapter 5. The aspect marker *-tei-* has been widely believed to be at least two-ways ambiguous between progressive (15a, 15b)/resultative (15c, 15d) and experiential perfect (15e) (Ogihara 1998a). However, I claimed in Chapter 5 that *-tei-* is not ambiguous, and the apparently disparate readings are derived from only one meaning (i.e. perfect).

(15) a. Taroo-ga arui-tei-ru (activity)
Taroo-NOM walk-TEI-PRES
'Taroo is walking.'

b. Hanako-ga seetaa-o an-dei-ru (accomplishment)
Hanko-NOM sweater-ACC knit-TEI-PRES
'Hanako is knitting a sweater.'

c. Musi-ga sin-dei-ru (achievement)
bug-NOM die-TEI-PRES
'The bug is dead.'

d. Sora-ga kumot-tei-ru (inchoative state)
sky-NOMget cloudy-TEI-PRES
'It is cloudy (lit. The sky is cloudy).'

e. Taroo-wa daigaku-o sotugyoosi-tei-ru (accomplishment)
Taroo-TOP university-ACC graduate-TEI-PRES
'Taroo has graduated from university.'

As shown in (15a) and (15b), a progressive reading is available only with process verbs/predicates (activities or accomplishments), while a resultative reading is available only with change-of-state verbs/predicates (achievements and inchoative states) as shown in (15c) and (15d). The example (15e) is an experiential perfect reading of an accomplishment, but this reading is available with any verb/predicate class.

I argued in Chapter 5 that these various readings can be derived by proposing that *-tei-* is a perfect marker, whose denotation is repeated here in (16).

(16) $[[\textit{-tei-}]] = \lambda P.\lambda e.\lambda t.\exists e'.[\ e' \sqsubseteq e \ \&\ \tau(e') < t \ \&\ P(e)]$

This denotation of the Japanese perfect differs from the standard one in that it can make reference to the internal structure of a predicate. Specifically, the past eventuality can be a sub-event of a larger event or the whole event itself. This proposal accounts for the various temporal positions of the event time depending on the reading. The denotation of Japanese perfect in (16) also differs from that of Sənčáθən in (14), which will be discussed in more detail in Section 2.

I also proposed in Chapter 5 that there are pragmatic effects (presuppositions) with the perfect in Japanese, following Portner's (2003) proposal for English. With the semantics of lexical aspect proposed in Chapter 4, the semantics of the perfect or *-tei-*, and its pragmatic

component, all the various readings were accounted for in that chapter. Though I did not consider the pragmatics of the perfect in Sənčáθən, the examples in (28a) and in (29) discussed in Chapter 3, repeated here as (17) and (18), may be evidence that pragmatics plays an important role for the various readings of the perfect in Sənčáθən as well.

(17) ləʔə sən kʷəʔ **<u>kʷɬ</u>** xʷil-nəxʷ kʷsə nə sčəsəqʷ
AUX 1.sg INF PERF get.lost-NCTR D my hat
'I have lost my hat (it is still lost). / I have lost my hat before.'

(17) can be used in at least two different situations: one is when the hat is still lost (Perfect of Result), and the other is when the hat may or may not be lost at the utterance time (Experiential Perfect). Acceptability of (18) depends on the situation.

(18) ləʔə sən kʷəʔ **<u>kʷɬ</u>** xʷil-nəxʷ kʷsə nə sčəsəqʷ
AUX 1.sg INF PERF get.lost-NCTR D my hat
ʔiʔ ʔeɬəʔ sən ǩʷən-nəxʷ
ACC AUX 1.sg get.found-NCTR
'I have lost my hat but I found it.'

The utterance in (16) is infelicitous if it is used when the hat is still lost (Perfect of Result). However, the same sentence is felicitous if it is used to express the speaker's experience of losing her hat. This reading difference can be accounted for with a pragmatic component just like Japanese.

2 Cross-linguistic variation in lexical and grammatical aspect

My proposal has striking consequences for the general understanding of lexical and grammatical aspect. First, it challenges the standard classification of verbs/predicates, which assumes four aspectual classes, states, activities, accomplishments, and achievements (Vendler 1967 a.o.). Others propose a five-class system by adding a class of semelfactives (Smith 1997). As opposed to the standard classification, I proposed five classes in Sənčáθən and Japanese: homogeneous states, inchoative states, activities, accomplishments, and achievements[6]. Further study is necessary to see whether this five-classification system is cross-linguistically common. As far as I know, Mandarin Chinese is one of the candidates for this type (Huang et al. 2000) and so is Blackfoot (Chin 2006).

This result raises an important question: which syntactic level situation aspect is a property of. Much previous research on situation aspect has claimed that the classification should not be at the lexical level (V), but it should be at the phrase (VP) or the predicate level (vP) (Dowty 1972, Smith 1997, a.o.). I argue that the classification is basically at the lexical level, but each class can be altered to another class at the morphological and/or syntactic level. In Sənčáθən, for example, accomplishments are derived from unaccusatives which are achievements at the lexical level, as discussed in Chapter 2. This is also the case for some Japanese accomplishments as discussed in Chapter 4.

Second, my proposal predicts that the meaning of perfect can vary depending on the language. This is also closely related to how the language derives the perfect reading

[6] In Sənčáθən, semelfactives in Smith's terms behave like activities, but I set this issue aside for the present purpose.

syntactically. In the case of Sənčáθən, the perfect readings with *kʷɬ* are derived compositionally from the lexical aspect, lower grammatical aspect (perfective or imperfective), and higher grammatical aspect (perfect). Thus, in this language, different exsistential perfect readings are derived by the combination of a situation aspect and the perfective, while the universal perfect reading is derived by the combination of a situation aspect (of any type except homogeneous states or achievements) and the imperfective. In Japanese, in contrast, the perfect readings are derived compositionally only from the lexical aspect and perfect aspect, since my analysis implies that Japanese does not have standard viewpoint aspects (perfective and imperfective), like that of Sənčáθən, English, and many other languages. I claimed this because one of the interpretations of the *-tei-* construction , which is analyzed as perfect, can express a situation expressed by the standard imperfective in the other languages.

The assumption that *-tei-* can directly make reference to the internal structure of an event (as the denotation in (16) shows) makes it possible to derive such an interpretation. On the other hand, I have shown that the Sənčáθən perfect marker *kʷɬ* cannot directly make reference to the internal structure of an event. In this language, it is the perfective aspect that makes reference to the internal structure of an event. This is why the denotation of the perfect in Sənčáθən differs considerably from that of Japanese. The semantics of the perfect in Sənčáθən is a function from an interval to another interval as shown in (14), while that of Japanese is a fuction from an event to an interval as shown in (16). We have to see, as in future study, if the Japanese type of aspect system is common cross-linguistically[7].

[7] There is at least one candidate: Icelandic (Kristin Johannsdottir p.c.) shows very similar phenomena in that the same form is used for progressive (or imperfective) and perfect interpretations.

Why do we find such variation? Though this requires further study, I speculate for the moment that it is due to semantic parameterization (Pustejovsky 1995). In other words, the cross-linguistic variation in grammatical behaviour I examined in this thesis can be characterized as arising from a combination of distinct parameter settings in terms of lexical semantics as well as in terms of the semantics of grammatical aspect. The variation is the result of underlying semantic properties of the languages as well as syntactic parameterization. Specifically, the semantic distinction between the Japanese type aspect system and the Sənčáθən / English system, for example, is reflected in the syntax by a missing functional projection in Japanese. This syntactic parameter (i.e., the presence or absence of a particular functional head) is derived by a semantic parameter of possessing or lacking a form which encodes imperfective.

3 Studies of lexical and grammatical aspects in other Salish languages

In this section, my proposals are compared with some of the previous studies on lexical and grammatical aspects in Sənčáθən as well as other Salish languages.

3.1 Previous studies of aspect in Sənčáθən

There are at least two studies of aspect in Sənčáθən, neither of which, however, is set within a formal semantic framework. The first one is Montler (1986) which is actually a general descriptive study of phonology and morphology in the language. He claims that the actual, or imperfective, in Sənčáθən 'signals that the action, state, or other reference of the predicate is actually occurring at an indicated time.' He also notes that 'the actual is often translated into

English in the form of 'be … -ing' progressive aspect and the English progressive is nearly always rendered in the actual in Sənčáθən (1986: 111).'

Turner (2007), on the other hand, claims that the actual adds a [durative] feature to a predicate in line with Wilhelm (2003), who claims that durativity is a property grammaticised by the viewpoint aspect system of a language. However, Turner also admits that her claim is preliminary and further fieldwork is necessary. I argued that durativity is a property of lexical aspect in Chapter 2, and that the actual or imperfective aspect in Sənčáθən is an imperfective of the standard type. That is, the imperfective aspect views the event time from within.

3.2 Previous studies of aspect in other Salish languages

Among cross-Salishan study on aspect, Kinkade (1996) provides a reconstruction of aspectual markers in Salish, focusing on imperfective, stative, unrealized, inchoative, repetitive, affective, state, and mutative. In her dissertation, Nancy Mattina (1996) examines aspect in Okanagan, one of the Interior Salish languages, focusing on the role of aspect and category in the morphological processes. She also attempts to develop an inventory of Okanagan predicate classes. Other descriptive work on Salish aspect includes Davis (1978) and Watanabe (2003) on Sliammon.

In terms of formal study on lexical aspect, Davis and Demirdache (2000) analyze St'át'imcets lexical aspect within the framework of Pustejovsky (1995). Davis and Demirdache claim that all St'át'imcets roots are underlyingly unaccusatives, which have underlying causative lexical semantics. They propose that the suffixation of (in)transitivizers serves to foreground the relevant sub-events in the causative structure. Bar-el et al. (2005) argue that in both

Sḵwx̱wú7mesh and St'át'imcets, accomplishments do not have a culmination entailment, but a culmination implicature.

More recently, Bar-el (2005) studied lexical and grammatical aspects in Sḵwx̱wú7mesh. In terms of lexical aspect, she proposes that Sḵwx̱wú7mesh has four verb classes: activities, accomplishments, achievements, and inchoative states. Various diagnostics are invoked in this study including culmination cancellation, event continuation, the scope of *k̓ilh* 'almost', the scope of negation, interpretation with punctual clauses/adverbials, and interpretation with the auxiliary *mi* 'come'. Aside from the fact that Bar-el does not consider homogeneous states, all the four aspectual classes in Sḵwx̱wú7mesh pattern with their counterparts in Sənčáθən in terms of event structure as shown in (14).

(19) Event representation in Sḵwx̱wú7mesh (Bar-el 2005: 9)

Activities:	$\lambda e. \exists e_1 \exists e_2[e =^S (e_1 \cup e_2) \wedge (\text{BEGIN}(P))(e_1) \wedge (\text{DO}(P))(e_2)]$
Achievements:	$\lambda e.(\text{BECOME}(P))(e)$
Accomplishments:	$\lambda e[(\text{DO}(P))(e) \& [\forall w'[w' \text{ is an inertia world w.r.t w at the beginning of e} \rightarrow [\exists e'[e' \text{ is a culmination of e in w' \& e causes e' in w'}]]]]$
Inchoative States:	$\lambda e. \exists e_1 \exists e_2[e =^S (e_1 \cup e_2) \wedge (\text{BECOME}(P))(e_1) \wedge (\text{BE}(P))(e_2)]$

Bar-el (2005) also considers (im)perfectivity in Sḵwx̱wú7mesh. She adapts Kratzer's (1998) analysis of the perfective, and argues that Sḵwx̱wú7mesh perfective is of the standard type. This is a different result from this thesis, as shown in (15).

(15) Sḵwx̱wú7mesh perfective: λP.λ*i*.∃e.[τ(e)⊂ *i* & P(e)] (Bar-el 2005: 223)
Sənčáθən perfective λP.λ*i*.∃e.∃e'[e'⊑ e & τ(e')⊂ *i* & Q(e)]

As shown in (15), the event time of an entire event is completely included in the reference time for Sḵwx̱wú7mesh perfective events. This contrasts with the denotation of the Sənčáθən perfective,[8] in which the time of one of the sub-events or the entire event can be included within the reference time.

As for imperfectivity, both Bar-el (2005) for Sḵwx̱wú7mesh and this thesis for Sənčáθən propose a standard representation for the imperfective as shown in (16).

(16) Imperfective (both Sḵwx̱wú7mesh and Sənčáθən): λP.λ*i*.∃e.[*i* ⊆ τ(e) & P(e)]
(Kratzer 1998, Bar-el 2005)

Thus, this predicts that all the available interpretations of imperfective forms in Sḵwx̱wú7mesh and Sənčáθən must be the same. However, Sḵwx̱wú7mesh, according to Bar-el (2005), has two imperfective morphemes: *wa* and a CV reduplicant. *Wa* can induce habitual, in progress, and stative readings, but the CV reduplicant can yield only in progress and stative readings, from which Bar-el concludes that these two forms are separate morphemes rather than allomorphs. As discussed in Chapter 3, imperfective in Sənčáθən is variously marked (a Cə reduplicant, the glottal stop infix, or stress shift/metathesis), each of which can induce habitual, in progress, and

[8] Martina Wiltschko (p.c.) suggests a competing hypothesis according to which perfective in Sənčáθən, which is unmarked, is truly unmarked (i.e., general aspect), which is certainly a possible analysis. However, there is no evidence favouring this hypothesis at this point so I will leave this issue for my future research.

stative readings. Therefore, these forms are allomorphs of the actual or imperfective (Montler 1986).

4 Conclusion

This chapter summarized the previous chapters, and reviewed and compared my analysis with previous studies of aspect in language in general and other Salish languages. My analysis of aspect in these two unrelated languages, Sənčáθən and Japanese, sheds new light on the study of aspect in general. The standard classification of lexical aspect, and of grammatical aspects including perfective/imperfective and perfect, is based mostly on Indo-European languages and cannot be applicable to the two languages studied in this thesis, or to other Salish languages and some non-Indo-European languages. Finally, I suggested that the variation documented in this dissertation may be due to a semantic parameter which also drives syntactic parametric variation.

Bibliography

Aganostopolou, E., Iatridou, S., and Izvorski, R. 1998. On the Morpho-Syntax of the Perfect and How it Relates to its Meaning.*Proceedings of the North Eastern Linguistics Society 28*. Amherst, MA.GLSA.

Arita, Setsuko. 2001. On the Japanese *V-te-k* Construction [Nihongo no Idookoobun V-Tekuru ni Kanshiteno Oboegaki]. *Osaka Shoin Women's University Collected Essays*, Vol.38: 1-10

Bar-el, Leora. 2003a. Imperfectivity in Sḵwx̱wú7mesh. Jan Anderson, Paula Menendez- Benito, and Adam Werle (eds.), *The Proceedings of SULA 2*, Vancouver, BC: 1-18. GLSA, University of Massachusetts, Amherst.

Bar-el, Leora. 2003b. On Sḵwx̱wúm7esh *mi* 'come' and its Various readings. *Paper presented at 38th International Conference on Salish and Neighboring Languages*. Lillooet, British Columbia.

Bar-el, Leora. 2005. *Aspectual Distinction in Sḵwx̱wú7mesh*. Ph.D. Dissertation. University of British Columbia.

Bar-el, Leora, Henry Davis and Lisa Matthewson. 2005. On Non-Culminating Accomplishments. *Proceedings of the North Eastern Linguistics Society 35*. Amherst, MA.GLSA.

Bertinetto, Pier Marco and Mario Squartini. 1995. Attempt at defining the class of 'gradual completion' verbs. Pier Marco Bertinetto, Valentina Bianchi, James Higginbotham, and Mario Squartini (eds.), *Temporal Reference, Aspect, and Actionality, vol. I, Semantic and Syntactic Perspectives*. Torino: Rosenberg and Sellier, 11-27.

Binnick, Robert I. 1991. Time and the Verb: a Guide to Tense and Aspect. New York: Oxford University Press.

Bohnemeyer, J. and M. Swift. 2004. Event Realization and Default Aspect. *Linguistics and Philosophy 27*: 263–296.

Brand, Peter, John Elliott, and Ken Foster. 2002. Language Revitalization Using Multimedia. In Barbara Burnaby and Jon Reyhner (eds.), *Indigenous Languages Across the Community.* Northern Arizona University: 245-247.

Brinton, Laurel. 1985. Verb Particles in English: Aspect or Aktionsart? *Studia Linguistica 39*: 157-168.

Brinton, Laurel. 1987. The Aspectual Nature of States and Habits. *Folia Linguistica 21*: 195-214.

Burton, Strang, and Henry Davis. 1996. Stative Aspect and Possession in Salish. In *Papers for International Conference on Salish and Neighbouring Languages 31*:13-22. Vancouver, B.C.

Carlson, Barry. 1996. Situation Aspect and a Spokane Control Morpheme. International Journal of American Linguistics 62.59-69.

Carlson, Gregory N. 1977. *Reference to kinds in English*. Ph.D. Dissertation. University of Massachusetts.

Chang, Jung-hsing. 2003. State Eventualities and Aspect marker *le* in Chinese. *Taiwan Journal of Linguistic* Vol. 1.1, 97-110.

Chin, Seok Koon. 2006. *Unifying the meanings of "begin" and "end" for -akaa- in Blackfoot.* ms.

Chung, Kyung-Sook. 2005. *Space in Tense: The Interaction of Tense, Aspect, Evidentiality and Speech Act in Korean*. Ph.D. dissertation, Simon Fraser University.

Chung, Kyung-Sook. 2006. Toward an integrated theory of the perfect and the indirect evidential. *Proceedings of NELS 36*, GLSA.

Comrie, Bernard. 1976. *Aspect*. Cambridge University Press.

Cseresnyesi, Laszlo. 1996. Perfectivity in Japanese. *Folia Linguistica 30*: 47-58.

Currie, Elizabeth. 1997. *Topic Time: The Syntax and Semantics of SqwXwu7mish Temporal Adverbs*. MA Thesis, University of British Columbia.

Czaykowska-Higgins, Ewa and M. Dale Kinkade. 1998. Salish languages and linguistics. In *Salish Languages and Linguistics: Theoretical and Descriptive Perspectives*, Ewa Czaykowska-Higgins and M. Dale Kinkade (eds.). Berlin: Mouton de Gruyter. 1-68.

Davis, John. 1978. Pronominal paradigms in Sliammon. In *Papers for the 13th International Conference on Salish and Neighbouring Languages*, 208-236.

Davis, Henry. 1996. Deep unaccusativity and zero syntax in St'át'imcets. In *Papers for International Conference on Salish and Neighbouring Languages 31*:39-58. Vancouver, B.C.

Davis, Henry. 1997. Deep unaccusativity and zero syntax in St'át'imcets. In *Theoretical issues at the morphology-syntax interface*, ed. Amaya Mendiko-Etxea and Myriam Uribe-Etchebarria, 55-96. Bilbao: Supplements of the International Journal of Basque Linguistics and Philology.

Davis, Henry. 2000. Remarks on Proto-Salish Subject Inflection. *International Journal of American Linguistics 66*:499-520.

Davis, Henry. 2005. On the Syntax and Semantics of Negation in Salish. *International Journal of American Linguistics* 71:1-55.

Davis, Henry. in prep. *A teacher's grammar of Upper St'át'imcets*. ms.

Davis, Henry and Hamida Demirdache 2000. On Lexical Verb Meanings: Evidence from Salish. In J. Pustejovsky and C. Tenny (eds.), *Proceedings of the Workshop on Events as Grammatical Objects.* Standford: CSLI. 97-142.

Davis, Henry, Lisa Matthewson and Hotze Rullmann. To appear. A Unified Modal Semantics for Out-of-control in St'at'imcets.*The Proceedings of the TAMTAM conference,* ed. Lotte Hogeweg, Helen de Hoop and Andrey Malchukov.

Dahl, Östen. 1985. *Tense and Aspect Systems*. Oxford: Basil Blackwell.

Demers, Richard and Eloise Jelinek. 1996. Reduplication, Quantification and Aspect in Straits Salish. In *Papers for the International Conference on Salishan and Neighboring Languages* 31.

Demirdache, Hamida 1997. Out of control in Salish and event (de)composition. In A. Mendikoetxea and M. Uribe-Etxebarria (eds.), *Theoretical Issues in the Morphology-Syntax Interface*, supplement to the International Journal of Basque Linguistics and Philology, 97-143.

Dowty, David R. 1977. Toward a Semantic Analysis of Verb Aspect and the English 'Imperfective' Progressive. *Linguistics and Philosophy 1*.45-78.

Dowty, David R. 1979. *Word Meaning and Montague Grammar*. Dordrecht: D. Reidel.

Dowty, David R. 2002. Toward a Semantic Analysis of Verb Aspect and the English "Imperfective" progressive. In Paul Portner and Barbara H. Partee (eds.). *Formal Semantics: The Essential Readings*. Blackwell: 261-288.

Fujii, Tadashi. 1976. Doosi + te- iru' no imi (The meaning of 'verb + te- iru'). In Haruhiko Kindaichi (ed.). *Nihongo doosi no asupekuto (Aspect of Japanese verbs).* Tokyo: Mugi Shobo: 97-116.

Galloway, Brent. 1990. *A Phonology, Morphology, and Classified Word List for the Samish Dialect of Straits Salish.* Hull, Québec: Canadian Museum of Civilization. Canadian Ethnological Service. (Mercury Series Paper 116.)

Giorgi, Alessandra. & Fabio Pianesi. (1997). *Tense and Aspect: From Semantics to Morphosyntax.* Oxford University Press.

Gordon, Raymond G., Jr. (ed.), 2005. *Ethnologue: Languages of the World*, *Fifteenth edition*. Dallas, Tex.: SIL International.

Hasegawa, Yoko. 1992. On the Ambiguity between the Perfect and Resultative V-te ar- Construction in Japanese. *Proceedings of the Annual Meeting of the Berkeley Linguistics Society 18*.88-99.

Hasegawa, Yoko. 1996. The (Non-Vacuous) Semantics of TE-Linkage in Japanese. *Journal of Pragmatics 25*.763-90.

Higginbotham, James. 2004. The English Progressive . J. Guéron and J. Lecarme (eds.), *The Syntax of Time.* Cambridge, Mass.: MIT Press: 329-358.

Hinrichs, Erhard. 1983. The Semantics of the English Progressive: A Study in Situation Semantics. In *Proceedings of the Regional Meeting, Chicago Linguistic Society 19*.171-82.

Huang, Chu-Ren, Kathleen Ahrens, Li-Li Chang, Keh-Jiann Chen, Mei-Chun Liu, and Mei-Chih Tsai. 2000. The module-attribute representation of verbal semantics: From semantics to argument structure. *Computational Linguistics and Chinese Language Processing 5.1*:19-46.

Hukari, Thomas E. 1984. The Truth about Cowichan Imperfectives. *Paper presented at International Conference on Salish and Neighboring Languages 19*.

Iatridou, Sabine, Elena Anagnostopoulou, and Roumyana Izvorski. 2001. Observations about the form and meaning of the perfect. In M. Kenstowicz (ed.), *Ken Hale: a Life in Language.* Cambridge, MA: MIT Press, 189-238.

Iatridou, Sabine, Elena Anagnostopoulou, and Roumyana Izvorski. 2003. Observations about the form and meaning of the perfect. In *Perfect explorations*, eds. M. Rather Alexiadou and A. von Stechow, 153–204. New York: Mouton de Gruyter.

Inoue, Kyoko. 1979. An analysis of the English present perfect. *Linguistics 17*, pp 561-589.

Jacobs, Peter. 2007. Txw as an out of control marker in S<u>k</u>w<u>x</u>wú7mesh. In Kristin M. Johannsdottir and Martin A. Oberg (eds.), *Papers for the International Conference on Salishan and Neighboring Languages 42*. UBCWPL Vol.20: 256-284.

Jacobsen, Wesley M. 1984. Lexical Aspect in Japanese. In David Testen, Veena Mishra, and Joseph Drogo (eds.), *Papers from the Parasession on Lexical Semantics*. Chicago: Chicago Linguistic Society, 150-61.

Jacobsen, Wesley M. 1992. *The Transitive Structure of Events in Japanese*. Tokyo: Kurosio.

Jacobsen, William. 1982. Vendler's Verb Classes and the Aspectual Character of Japanese te iru. In Proceedings of the Annual Meeting of the Berkeley Linguistics Society 8.322-34.

Jelinek, Eloise. 1994. Transitivity and Voice in Lummi. In *Papers for the International Conference on Salishan and Neighboring Languages 29*.

Kamp, Hans. 1981. A Theory of Truth and Semantic Representation, in J. Groenendijk et al. (eds.) *Formal Methods in the Study of Languages*. Foris, 1984.

Kamp, Hans and Christian Rohrer. 1989. *A Discourse Representation Theory Account of Tense in French*. ms.

Kamp, Hans and Uwe Reyle. 1993. *From Discourse to Logic.* Dordrecht: Kluwer Academic Publishers.

Katz, Graham (2003). A modal account of the English present perfect puzzle. In Robert B. Young and Yuping Zhou, eds., *Proceedings of SALT XIII,* CLC publications, Cornell University, USA.

Kearns, Kate. 2003. Durative Achievements and Individual-Level Predicates on Events. *Linguistics and Philosophy 26*.595-635.

Kenny, Anthony. 1963. *Action, emotion and will*. London: Routledge and Kegan Paul.

Kindaichi, Haruhiko. 1955. Nihongo Doosi no Tensu to Asupekuto. [Tense and Aspect of Japanese Verbs.] *Nagoya Daigaku Bungaku-bu Kenkyuu-Ronsyuu 10*, Bungaku 4.63-89.

Kindaichi, Haruhiko. 1976. *Nihongo doshi no tensu to asupekuto*. Nihongo Doshi no Asupekuto, ed. by Haruhiko Kindaichi. Mugi Shobo: Tokyo.

Kinkade, M.D. 1996. Reconstructing Aspect in Salishan Languages. *ICSNL 31.* Vancouver, B.C. 185-196

Kinkade M, Dale and Masaru Kiyota. 2004. Changing state in Salishan languages [with M. Dale Kinkade]. In Brown, J.C. and Tyler Peterson (eds.). *Papers for ICSNL XXXIX - the 39th International Conference on Salish and Neighboring Languages*. UBCWPL. Volume14. Vancouver.

Kiyota, Masaru. 2003a. Patterns of reduplication in Northern Straits Salish. Paper presented at the 19th Northwest Linguistics Conference. University of Victoria.

Kiyota, Masaru. 2003b. Plural Allomorphs and Stress in Saanich. Paper presented at the 38th International Conference on Salish and Neighboring Languages. Lillooet, BC.

Kiyota, Masaru. 2003c. *Cross-linguistic variation of verb classification: English, Japanese, and Sənčáθən*. University of British Columbia Lingusitics Research Seminar, Vancouver.

Kiyota, Masaru. 2004a. Aspectual classification of verbs in Sənčáθən. In *Papers for International Conference on Salish and Neighbouring Languages 39:* 253-268. Vancouver, B.C.

Kiyota, Masaru. 2004b. Aspectual classification and properties of verbs in Sənčáθən. Semantics Generals Paper. University of British Columbia, Vancouver.

Kiyota, Masaru. 2004c. Cross-linguistic variation in verb classification: Evidence from Straits Salish. Paper presented at CLA Conference 2004. University of Manitoba.

Kiyota, Masaru. 2005. Derived accomplishment and culmination in Saanich. Paper presented at the 20th Northwest Linguistics Conference. University of British Columbia.

Kiyota, Masaru. 2006b. The Aspectual Marker -teiru and Event Representations in Japanese. *Proceedings for Logic and Engineering of Natural Language Semantics 2006*. Tokyo, Japan.

Kiyota, Masaru. 2006a. Semantics of the Particle *kʷɬ* and Event Representations in Sənčáθən. In Fujimori, Atsushi and Maria Amélia Reis Silva (eds.). *Proceedings of WSCLA XI: The Eleventh Workshop on Structure and Constituency in Languages of the Americas.* UBCOPL Volume 19. Vancouver.

Kiyota, Masaru. 2006c. Semantics of an aspectual particle kwlh and verbs in Saanich. Paper presented at LSA Summer Meeting 2006. Michigan State University, East Lansing, Michigan.

Kiyota, Masaru. 2007. The Perfect Marker -*tei* in Japanese. *Proceedings of the 4th Conference of Formal Approaches to Japanese Linguistics.* MIT Working Papers in Linguistics, vol. 55: 125-136.

Klein, Wolfgang. 1992. The present perfect puzzle. *Language 68*:525–552.

Klein, Wolfgang. 1994. *Time in language*. London: Routledge.

Klein, Wolfgang, Li, P., and Hendriks, H. 2002. Aspect and Assertion in Mandarin Chinese. In: *Natural Language and Linguistic Theory 18:* 723 - 770.

Koenig, J.-P. and N. Muansuwan. 2000. How to end without ever finishing: Thai semi perfectivity. *Journal of Semantics 17*:147-184.

Kratzer, Angelika. 1994. The Event Argument and the Semantics of Voice, ms., University of Mass., Amherst.

Kratzer, Angelika. 1995. Stage-Level and Individual-Level Predicates. Carlson, Gregory N. and Francis Jeffry Pelletier, eds., *The Generic Book*. Chicago: The University of Chicago Press. 125-175.

Kratzer, Angelika. 1998. More Structural Analogies Between Pronouns and Tenses. In *Proceedings of SALT VIII*, D. Strolovitch and A. Lawson (eds.). Ithica, NY: Cornell University. 92-110.

Kratzer, Angelika. 2004. Telicity and the Meaning of Objective Case. In Jacqueline Guéron and Jacqueline Lecarme (eds.), *The Syntax of Time. Cambridge*: Mass: MIT Press. 289-423

Krifka, Manfred. 1998. The Origins of Telicity. Susan Rothstein (ed.), *Events and Grammar*. Dordrecht: Kluwer

Kroeber, Paul D. 1986. Antipassives and the Differentiation of Progressive Aspect in Southern Interior Salish. In *Proceedings of the Regional Meeting, Chicago LinguisticSociety 22*.75-89.

Kudo, Mayumi. 1995. *Asupekuto-tensu taikei to tekusuto*. [Aspect-tense system and text.] Tokyo: Hituzi Syobou.

Kuno, Susumu. 1973. *The structure of the Japanese Language*, MIT Press, Cambridge.

Kusumoto, Kitomi. 2004. The Semantics of Kara 'Since' and the Ambiguity of the *Teiru* Construction, ms. Hirosaki Gakuin University.

Landman, Fred. 1992. The Progressive. *Natural language semantics* 1992. 1-32.

Leech, Geoffrey. N. 1971. *Meaning and the English verb*. Longman, Singapore.

Levin, Beth and Malka Rappaport Hovav. 2004. The Semantic Determinants of Argument Expression: A View from the English Resultative Construction . J. Guéron and J. Lecarme (eds.), *The Syntax of Time*. Cambridge, Mass.: MIT Press, 477-494.

Marchand, Hans. 1969. *The Categories and Types of Present-day English Word-formation* (2nd Edition). Munich, Federal Republic of Germany: C.H. Beck'sche Verlagsbuchhandlung.

Matthewson, Lisa. 2004. On the Absence of Telic Accomplishments in St'át'imsets. In Cristine Ravinski and Yunhee Chung (eds.), *Proceedings of WSCLA IX, The Ninth Workshop on Structure and Constituency in Languages of the Americas*. UBCWPL Vol.15.

Matthewson, Lisa. 2006. Temporal Semantics in a Supposedly Tenseless Language. *Linguistics and Philosophy 29*:673-713.

Mattina, Anthony. 1993. Okanagan aspect: A working paper. International Conference on Salish and Neighboring Languages 28, 233-263. Seattle: Univ. of Washington.

Mattina, Nancy. 1996. *Aspect and category in Okanagan word formation.* Ph.D. Dissertation, Simon Fraser University.

McCoard, Robert W. 1978. *The English Perfect: Tense choice and pragmatic inferences.* Amsterdam: North-Holland.

McCawley, James D. 1971. Prelexical Syntax. In O'Brien (ed.), *Report of the 22nd Roundtable Meeting on Linguistics and Language Studies*. Washington: Georgetown University Press.

McClure, William. 1994a. The Progressive: Japanese vs. English . *Acta Linguistica Hungarica 42*.149-70.

McClure, William. 1994b. *Syntactic Projections of the Semantics of Aspect*. PhD Dissertation, Cornell University.

McClure, William. 1996. *Japanese Aspect and Kinds of Eventualities.* Language Sciences 18.277-93.

Mizuta, Yoko. 2003. *A Discourse-Semantic Analysis of Tense and Aspect in English and Japanese*. Ph.D. Dissertation. University of Chicago.

Mittwoch, Anita. 1991. In defense of Vendler's Achievements. *Belgian journal of Linguistics 6*: Perspectives on aspect and aktionsart.

Molsing, Karina Veronica. 2006. The Present Perfect at the Semantics/Pragmatics Interface: American English and Brazilian Portuguese. Christian Ebert & Cornelia Endriss (eds.), *Proceedings of the Sinn und Bedeutung 10.* ZASPIL - ZAS Papers in Linguistics, Vol.44: 239-250. Berlin.

Montler, Timothy. 1986. *An Outline of the Morphology and Phonology of Saanich, North Straits Salish.* Occasional Papers in Linguistics. University of Montana.

Montler, Timothy. 1989. Infixation, Reduplication, and Metathesis in the Saanich Actual Aspect. *Southwest Journal of Linguistics. 9.1*.

Montler, Timothy. 1991. *Saanich, North Straits Salish: Classified Word List.* Canadian Museum of Civilization.

Morzycki, Marcin. 2001. 'Almost and its kin, across categories'. In Jackson, Brendan, Rachel Hastings, and Zsofia Zvolenszky, eds., *Proceedings from Semantics and Linguistic Theory XI.* CLC Publications, Ithaca, New York.

Morzycki, Marcin. 2004. *Mediated Modification: Functional Structure and the Interpretation of Modifier Position*. Ph.D. Dissertation. University of Massachusetts Amherst.

Nakau, Minoru. 1976. Tense, Aspect and Modality. Masayoshi Shibatani (ed.), *Japanese Generative Grammar*. New York City: Academic Press, 421-82.

Nishiyama, Atsuko. 2006. The Meaning and Interpretations of the Japanese Aspect Marker *-te-i-*. *Journal of Semantics 23*: 185-216.

Ogihara, Toshiyuki. 1987. On 'Past Tense' in Japanese. *Texas Linguistic Forum 28*.73-90.

Ogihara, Toshiyuki. 1989. *Temporal Reference in English and Japanese*. PhD dissertation, University of Texas at Austin; 1992, Indiana University Linguistics Club.

Ogihara, Toshiyuki. 1998a. The Ambiguity of the *-te iru* Form in Japanese. *Journal of East Asian Linguistics 7*.87-120.

Ogihara, Toshiyuki. 1998b.Tense, Aspect, and Argument Structure. Devon Strolovitch and Aaron Lawson (eds.), In *Proceedings of Semantics and Linguistic Theory VIII.* Ithaca, New York: CLC Publications, 169-84.

Ogihara, Toshiyuki. 2004. Adjectival Relatives. *Linguistics and Philosophy 27*.557-608.

Pancheva, Roumyana. 2003. The Aspectual Makeup of Perfect Participles and the Interpretations of the Perfect", in A. Alexiadou, M. Rathert, and A. von Stechow (eds.) *Perfect Explorations*. Mouton de Gruyter, 277-306. (Ms. USC, 2002).

Pancheva, Roumyana. 2004a. Another Perfect Puzzle. In V. Chand, A. Kelleher, A.J. Rodríguez, and B. Schmeiser (eds.) *WCCFL 23*. Cascadilla Press. 621-634.

Pancheva, Roumyana. 2004b. "Balkan Possessive Clitics: The Problem of Case and Category", in O. Tomić (ed.) *Balkan Syntax and Semantics.* John Benjamins, 175-219.

Pancheva, Roumyana. and von Stechow. 2004. "On the Present Perfect Puzzle", In K. Moulton and M. Wolf (eds.) *NELS 34*.

Parsons, Terence. 1989. The Progressive in English: Events, States and Processes. *Linguistics and Philosophy 12*.213-41.

Parsons, Terence. 2002. Eventualities and Narrative Progression. *Linguistics and Philosophy 25*.681-699.

Portner, Paul. 2003. The (temporal) semantics and (modal) pragmatics of the perfect. *Linguistics and Philosophy 26*: pp 459-510.

Pustejovsky, James. 1991. The Syntax of Event Structure. *Cognition 41*:47-81.

Pustejovsky, James. 1995. *The Generative Lexicon.* Cambridge, MA: MIT Press.

Raffo, Yolanda A. 1971. Songish Aspectual System. In *Sacramento Anthropological Society Papers 11*.117-123.

Reichenbach, Hans. 1947. *Elements of Symbolic Logic*. MacMillan, New York.

Rothstein, Susan. 2004a. *Structuring Events*. Blackwell Publishing. Oxford. UK.

Rothstein, Susan. 2004b. Derived Accomplishments and Lexical Aspect. J. Guéron and J. Lecarme (eds.), *The Syntax of Time*. Cambridge, Mass.: MIT Press, 539-553.

Saunders, Ross and Philip W. Davis. 1993. Natural Aspect in Bella Coola. In Anthony Mattina and Timothy Montler (eds.) *American Indian Linguistics and Ethnography in Honor of Laurence C. Thompson (University of Montana Occasional Papers in Linguistics 10)*: 265-277.

Shibatani, Masayoshi. 1990. *The languages of Japan.* Cambridge: Cambridge University Press.

Shirai, Yasuhiro. 2000.The Semantics of the Japanese Imperfective -*teiru*: An Integrative Approach. *Journal of Pragmatics 32*.327-361.

Singh, Mona. 1991. "The Perfective Paradox: Or, How to Eat Your Cake and Have It Too. In *Proceedings of the Annual Meeting of the Berkeley Linguistics Society 17*: 469-479.

Singh, Mona. 1994. Perfectivity, Definiteness, and Specificity: A Classification of Verbal Predicates in Hindi. PhD dissertation, University of Texas: Austin.

Singh, Mona. 1998. On the semantics of the perfective aspect. *Natural Language Semantics 6*:171-199.

Shinzato, Rumiko. 1993. A Unified Analysis of Japanese Aspect Marker Te Iru. *The Language Quarterly 31*.41-57.

Smith, Carlota. 1997. *The Parameter of Aspect*. Dordrecht: Kluwer.

Soga, Matsuo. 1983. *Tense and Aspect in Modern Colloquial Japanese*. UBC Press.

Suttles, Wayne. 2004. *Musqueam Reference Grammar.* UBC Press.

Tatevosov, Sergei and Mikhail Ivanov. 2006. Event structure of non-culminating accomplishments. Paper presented at PIONIER workshop TAM TAM: Cross-linguistic semantics of Tense, Aspect, and Modality, Radboud University Nijmegen.

Tenny, Carol. 1994. *Aspectual roles and the syntax-semantics interface*. Dordrecht: Kluwer.

Terry, J. Michael. 2004. *On the Articulation of Aspectual Meaning in African-American English.* Ph.D. Dissertation.University of Massachusetts, Amherst.

Thompson, Laurence C. 1979. The Control System: A Major Category in the Grammar of Salishan Languages. *British Columbia Provincial Museum Heritage Record No. 4*, Barbara Efrat (ed.). 156-176.

Travis, L. 2000. Event Structure in Syntax. *Events as Grammatical Objects: The converging perspectives of lexical semantics and syntax*, ed. by C. Tenny & J. Pustejovsky. Stanford: CSLI Publications. pp. 145-185.

Tsujimura, Natsuko. 2003. Event Cancellation and Telicity, *Japanese/Korean Linguistics 12,* 388- 399. CSLI Publications.

Tsujimura, Natsuko and Masayo Iida. 1999. Deverbal Nominals and Telicity in Japanese. *Journal of East Asian Linguistics 8*.107-130.

Turner, Claire K. 2005. Resultatives and Actuals in SENĆOŦEN. In *UBCWPL 16: Papers for the 40th International Conference on Salish and Neighboring Languages*. Vancouver, BC.

Turner, Claire K. 2007. The SENĆOŦEN Resultive Construction. *Northwest Journal of Linguistics. Vol. 1*, Issue 3: 1–92. [http://www.sfu.ca/nwjl/index.html]

Van Valin, R.D. Jr. 2006. Some universals of verb semantics. Ricardo Mairal & Juana Gil (eds.), *Linguistic Universals,* 155-78. Cambridge: Cambridge University Press.

Vendler, Zeno. 1967. *Linguistics in Philosophy*. Ithaca, NY: Cornell University Press.

Verkuyl, Henk J. 1972. *On the Compositional Nature of the Aspects.* Dordrecht: Reidel.

Verkuyl, Henk J., 1989. Aspectual Classes and Aspectual Composition. *Linguistics and Philosophy 12*, 39-94.

Verkuyl, Henk J. 1993 *A Theory of Aspectuality: The Interaction between Temporal and Atemporal Structure.* Cambridge: Cambridge University Press.

Von Stechow, Arnim. 1999. Eine Erweiterte Extended Now-Theorie für Perfekt und Futur. *Zeitschrift für Literaturwissenschaft und Linguistik 113*: 86-118.

Von Stechow, Arnim. 2002. German seit "since" and the ambiguity of the German perfect. In: *More than Words. A Festschrift for Dieter Wunderlich*, eds. Ingrid Kaufmann and Barbara Stiebels, pp. 393-432. Berlin: Akademie.

Watanabe, Honore. 2003. *A morphological description of Sliammon, Mainland Comox Salish.* Osaka: Endangered Languages of the Pacific Rim Publications.

Wilhelm, Andrea. 2003. *Grammatization of telicity and durativity in Dëne Sųłiné (Chipewyan) and German.* PhD Dissertation, University of Calgary.

Yamagata, Ayako. 2000. The Stage-Level/Individual-Level Distinction: An Analysis of *-te-iru-*. *MIT Working Papers in Linguistics 36.*237-249.

Yoshimoto, Kei. 1998. Tense and Aspect in Japanese and English. *European University Studies: Series 21, Linguistics,* 200. Frankfurt/Main: Peter Lang.

Zucchi, Sandro. 1997. Incomplete Events, Intensionality and Imperfective Aspect. *Natural Language Semantics 7*.179-215.

Appendix

In this appendix, I present additional predicates which were tested with the diagnostics invoked in this thesis. The number at the right-hand side indicates the elicited date and number of the predicate (MM-DD-YY-NN).

1. Out-of-the-blue sentence interpretation

1.1 Homogeneous states: a present state interpretation

(1) sx̣éʔəs tiʔə Jack
bad D Jack
'Jack is bad.' 07-27-07 -24a

(2) ʔəy' tiʔə Jack
good D Jack
'Jack is good.' 09-12-07-21

(3) x̣əm' tiʔə x̣θəm'
heavy D box
'This box is heavy.' 08-27-07-41

(4) qəqəl'em kʷθə nə siləʔ
weak D my grandparent
'My grandmother is weak.' 09-12-07-38

(5) č'en' ƛ̓aqteʔɬ
really tall
'He is really tall.' 09-26-07-37

(6) čəq tiʔə nə pus
big D my cat
'My cat is big.' 09-12-07-26

(7) héwa kəʔ tə Jack
be.away INF D Jack
'Jack is away.' 03-23-07-13

(8) k’^{w}eləs tiʔə sk^{w}ečəl
warm D weather
‘It is warm (the weather is warm).’ 08-02-05-37a

(9) t’$^{\theta}$əɬəŋ tiʔə sk^{w}ečəl
cold D weather
‘It is cold (the weather is cold).’ 08-23-05-01a

(10) x̣iƛ̓ tiʔə sk^{w}ečəl
windy D weather
‘It’s windy (the weather is windy).’ 08-23-05-03

(11) sqənəx^{w} tə Jack
hoggish D Jack
‘Jack is hoggish.’ 08-23-05-14

(12) sex^{w}səx^{w} tsə Jack
lazy D Jack
‘Jack is lazy.’ 04-26-06-23

(13) q^{w}əl’q^{w}əl’ tiʔə Jack
talkative D Jack
‘Jack is talkative.’ 04-26-06-26

(14) siʔem’ tsə Jack
rich D Jack
‘Jack is rich.’ 04-26-06-29

(15) tsas tsə Jack
poor D Jack
‘Jack is poor.’ 04-26-06-30

(16) t’$^{\theta}$am’əŋ tiʔə ʔən’ kapu
wet D your coat
‘Your coat is wet.’ 04-21-04-32

(17) nənəw’ ƛ̓iʔ
really difficult
‘It’s really difficult.’ 02-06-07-44

1.2 Inchoative states: a current state or a past inceptive interpretation

(18) xi̓ʔxəʔ sən ʔə tsə Bill
get.embarrassed 1.sg OBL D Bill
'I'm embarrassed with Bill / I just got embarrassed.' 08-27-07-29a

(19) seʔsiʔ sən ʔə tə Bill
get.scared 1.sg OBL D Bill
'I'm scared of Bill / I just got scared of Bill / Bill scared me.' 08-27-07-30a

(20) k'^{w}ey sən
get.hungry 1.sg
'I'm hungry / I got hungry.' 04-13-04-06

(21) hiləkʷ sən
get.happy 1.sg
'I'm happy / I got happy.' 04-13-04-07

1.3 Activities: an on-going process interpretation

(22) xʷ̓ə-ŋ θə Mary
cry-CMDL D Mary
'Mary is crying.' 08-27-07-04

(23) ʔeɬtiʔ ɬə́məxʷ
AUX rain
'It's raining.' 08-27-07-05

(24) ʔeɬəʔ sən t'ə́pəl'
AUX 1.sg play.cards
'I am playing cards (short).' 08-27-07-06

(25) ləʔə kʷəʔ qekʷ-əŋ
AUX INF rest-CMDL
'He is taking a rest.' 02-06-04-19

(26) q'^{w}iiləš tiʔə Jack
dance D Jack
'Jack is dancing.' 02-24-04-42

(27) sečˇ-əŋ tiʔə nə t’eləw’
ache-CMDLD my arm
‘My arm is aching.’ 08-27-07-04

(28) ləʔətə č’t-əŋ
AUX creep-CMDL
‘He’s creeping.’ 04-21-04-51

1.4 Accomplishments: a simple past interpretation

(29) ləʔə sən k^{w}əʔ $t’^{\theta}ek^{w}$-ət tsə nə ʔeʔləŋ
AUX 1.sg INF get.clean-CTR D my house
‘I washed my house.’ 09-26-07-17

(30) ŋaa-t łtə k^{w}əʔ mək’^{w} k^{w}sə sčeenəx^{w}
eat-CTR 1.pl INF all D salmon
‘We ate all the salmon.’ 09-26-07-24a

(31) ləʔə sən k^{w}əʔ q’ep’-ət tsə nə sqex̣əʔ
AUX 1.sg INF get.tied-CTR D my dog
‘I tied up my dog.’ 08-27-07-21

(32) ʔásə q’^{w}ál-ət tə sčeenəx^{w}
1.sg get.cooked-CTR D salmon
‘I cooked the salmon.’ 02-24-04-06

(33) ləʔə sən k^{w}əʔ θim-ət tsə q^{w}əʔ
AUX 1.sg INF freeze-CTR D water
‘I froze the water.’ 05-31-05-28

(34) čən-ət łtə k^{w}əʔ tsə st’θəm’
get.buried 1.pl INF D bone
‘We buried the bone.’ 06-14-05-15

(35) ləʔə sən k^{w}əʔ x^{w}əč-ət tə Jack
AUX 1.sg INF wake.up-CTR D Jack
‘I woke Jack up.’ 06-07-05-34

(36) ẋéč-ət sən tsə sčeenəx^{w}
get.dry-CTR 1.sg D salmon
'I dried the salmon.' 06-14-05-21c

(37) ləʔə sən k^{w}əʔ ɬek^{w}-ət tə Jack
AUX 1.sg INF get.healed-CTR D Jack
'I healed (helped heal) Jack.' 06-14-05-41b

(38) ləʔə sən čəq^{w}-ət tsə ʔeʔləŋ
AUX 1.sg burn-CTR D house
'I burned the house (intentionally).' 06-27-05-28a

(39) ləʔə sən k^{w}əʔ tk^{w}-ét tsə sčeyəʔ
AUX 1.sg INF break-CTR D stick
'I broke the stick.' 09-21-05-46

(40) ləʔə sən k^{w}əʔ ɬít'$^{\theta}$-ət tsə sqəleŋəx^{w}
AUX 1.sg INF cut-CTR D tree
'I cut down the tree.' 08-23-05-34

(41) q^{w}əq^{w}-ət sən tsə nə speq'əŋ
get.water-CTR 1.sg D my flower
'I watered my flower.' 04-06-04-59

(42) ləʔə sən k^{w}əʔ q'əm'-ət tə laplaš
AUX 1.sg INF break-CTR D board
'I broke the board.' 09-12-07-09

1.5 Achievements: a simple past interpretation

1.5.1 Unaccusatives (intransitive achievements):

(43) č'əq' tə Jack ʔə tiʔə sq'^{w}əl'q^{w}'əl'
get.surprised D Jack OBL D news
'Jack was surprised at the news.' 03-15-04-36

(44) ẋəɬ tiʔə Bill
get.hurt D Bill
'Bill got hurt.' 08-27-07-34

(45) meʔkʷəɬ tə Bill
get.hurt D Bill
‘Bill just got hurt.’ 08-27-07-35

(46) ʔeɬəʔ sən ɬew’
AUX 1.sg heal
‘I am all better (lit. I’m healed).’ 09-12-07-06

(47) ƛ̓iw’ tsə nə sqeχ̣əʔ
run.away D my dog
‘My dog ran away.’ 09-12-07-07

(48) ləʔətə q’ʷəl tə sčeenəxʷ
AUX get.cooked D salmon
‘The salmon is ready (cooked).’ 02-18-04-41

(49) ləʔə kʷəʔ χ̣ʷəyl’ kʷs Jack
AUX INF die/lose D Jack
‘Jack died.’ 03-15-04-37

(50) čəq tiʔə ʔeʔləŋ
burn D house
‘The house burned down.’ 05-24-05-52

(51) q’ʷəy θə speʔəs
die D bear
‘The bear died.’ 06-27-05-26a

(52) šəč’ tiʔə nə sq’ʷəŋiʔ
get.hit D my head
‘I got hit in the head.’ 12-06-05-18

(53) ləʔə kʷəʔ təkʷ tsə nə sxʷənəʔ
AUX INF get.broken D my leg
‘I broke my leg (my leg is broken).’ 05-10-06-48b

(54) ɬ̓it’$^{\theta}$ tiʔə nə seləs
get.cut D my hand
‘I cut my hand (lit. My hand got cut).’ 05-04-04-16b

(55) k’^{w}es tsə nə seləs
get.burned D my hand
‘I burned my hand (lit. My hand got burned).’ 04-21-04-12

(56) ləʔə k^{w}əʔ ʔəw’k’^{w} tsə sčeenəx^{w}
AUX INF get.finished.off D salmon
‘The salmon is all gone.’ 09-19-07-38

(57) čeq’ sən
fall.down 1.sg
‘I fell down.’ 06-28-06-25c

(58) x̣^{w}əyl sən
get.lost 1.sg
‘I got lost / I am lost.’ 01-23-07-03

1.5.2 Non-control transitives (transitive achievements)

(59) ləʔə sən k^{w}əʔ t’^{θ}ew-nəx^{w} tsə nə ʔeʔləŋ
AUX 1.sg INF get.clean-NCTR D my house
‘I washed down my house.’ 09-26-07-21

(60) x̣əɬ-nəx^{w} sən tə Jack
get.hurt-NCTR 1.sg D Jack
‘I hurt Jack.’ 06-07-05-39

(61) ləʔə sən k^{w}əʔ k^{w}ən-nəx^{w} k^{w}sə sčey
AUX 1.sg INF get-NCTR D job
‘I got a job.’ 08-27-07-49

(62) ləʔə ɬtə k^{w}əʔ ʔəwk’^{w}-nəx^{w} tsə sčeenəx^{w}
AUX 1.pl INF finish-NCTR D salmon
‘We finished up the salmon.’ 09-26-07-24b

(63) ləʔə sx^{w} k^{w}əʔ x^{w}ə́yl-nəx^{w}
AUX 2.sg INF get.lost-NCTR
‘You lost it.’ 09-12-07-12

(64) ləʔə sən kʷəʔ ɬew'-nəxʷ tə Jack
AUX 1.sg INF get.healed-NCTR D Jack
'I healed Jack up.' 06-14-05-41a

(65) qʼʷəy-nəxʷ sən θə speʔəs
die-NCTR 1.sg D bear
'I killed the bear.' 06-27-05-27a

(66) ləʔə sən čəqʷ-nəxʷ tsə ʔeʔləŋ
AUX 1.sg burn-NCTR D house
'I burned the house (unintentionally).' 06-27-05-28b

(67) ɬítʼᶿ-nəxʷ sən tiʔə nə seləs
get.cut-NCTR 1.sg D my hand
'I cut my hand.' 05-04-04-16a

2. Interpretation with *kʷɬ*

2.1 Homogeneous states:

According to my consultant, *kʷɬ* with a homogeneous state sounds odd, though understandable. The reflexive suffix *–sat* or the mutative prefix *txʷ-* is normally required.

(68) a. ʔkʷɬ kʼʷeləs tiʔə skʷečəl
PERF hot D weather 08-02-05-37a

b. kʷɬ kʼʷes-sət tiʔə skʷečəl
PERF hot-REFL D weather
'It's getting hot.' 08-23-05-50b

(69) a. ʔkʷɬ tʼᶿəɬəŋ tiʔə skʷečəl
PERF cold D weather 08-23-05-01b

b. ʔeɬtiʔ kʷɬ tʼᶿəɬəŋə-sat
AUX PERF cold-REFL
'It's getting cold.' 08-23-05-02

(70) a. ʔkʷɬ čəq tsə nə sqeχ̣əʔ
PERF big D my dog 04-26-06-12a

b. kʷɬ čəq-sat tiʔə nə sqeχ̣əʔ
PERF big-REFL D my dog
'My dog is getting bigger.' 04-26-06-12b

(71) a. ʔkʷɬ məmímən tiʔə nə sqeχ̣əʔ
PERF small D my dog 04-26-06-14a

b. kʷɬ txʷə-məmímən tiʔə nə sqeχ̣əʔ
PERF MUT-small D my dog
'My dog is getting smaller.' 04-26-06-14b

(72) a. ʔkʷɬ χ̣əm tsə qeq
PERF heavy D baby 04-26-06-18

b. kʷɬ χ̣əm-sat tsə qeq
PERF heavy-REFL D baby
'The baby is getting heavier.' 04-26-06-19

(73) a. ʔkʷɬ θakʷəŋ tsə ʔəɬtənəŋ'
PERF sweet D berries 04-26-06-20a

b. kʷɬ txʷə-θakʷəŋ tsə ʔəɬtənəŋ'
PERF MUT-sweet D berries
'The berries have turned sweet.' 04-26-06-20b

(74) a. ʔkʷɬ sexʷsəxʷ tsə Jack
PERF lazy D Jack 04-26-06-25

b. kʷɬ txʷə-sexʷsəxʷ tsə Jack
PERF MUT-lazy D Jack
'Jack has got lazy.' 04-26-06-24

(75) a. ʔkʷɬ qʷəl'qʷəl' tiʔə Jack
PERF talkative D Jack
'Jack's got talkative.' 04-26-06-27

b. kʷɬ txʷə-qʷəl'qʷəl' tiʔə Jack
PERF MUT-talkative D Jack
'Jack has got too talkative.' 04-26-06-28

(76) a. ? kʷɬ siʔem' tsə Jack
PERF rich D Jack 04-26-06-31a

b. kʷɬ siʔem'-sət tsə Jack
PERF rich D Jack
'Jack's got rich.' 04-26-06-31b

(77) a. ? ʔeɬtiʔ kʷɬ x̣əƛ̓
AUX PERF windy-REFL 08-23-05-04a

b. ʔeɬtiʔ kʷɬ x̣əƛ̓-sat
AUX PERF windy-REFL
'It's getting windy.' 08-23-05-04b

2.2 Inchoative states: an inceptive reading (perfect of inception)

(78) kʷɬ seʔsiʔ sən
PERF get.scared 1.sg
'I'm getting scared of rats.' 08-23-05-10

(79) kʷɬ k'ʷey sən
PERF get.hungry 1.sg
'I'm getting hungry.' 11-21-06-12b

2.3 Activities: an inceptive reading (perfect of inception)

(80) kʷɬ x̣ʷə-ŋ θə Mary
PERF cry-CMDL D Mary
'Mary is crying (Mary has just begun to cry).' 08-27-07-04c

(81) ləʔətə kʷɬ ɬpákʷ-əŋ tsə qʷəʔ
AUX PERF boil-CMDL D water
'The water is boiling (The water has just begun to boil).' 05-31-05-32

(82) kʷɬ ɬap' sən
PERF have.soup 1.sg
'I have just started having soup.' 01-23-07-34f

2.4 Accomplishments: an event completion reading (existential perfect)

(83) ləʔə sən kʷɬ čəqʷ-ət tsə ʔeʔləŋ
AUX 1.sg PERF burn-CTR D house
'I have burned the house now.' 06-27-05-28c

(84) ləʔə sən kʷɬ čə́n-ət tsə st'θəm'
AUX 1.sg PERF get.buried-CTR D bone
'I have buried that bone.' 08-02-05-28b

(85) ləʔə sən kʷəʔ kʷɬ ɬít'θ-ət tsə sqəleŋəxʷ
AUX 1.sg INF PERF get.cut-CTR D tree
'I have cut down the tree.' 08-23-05-35

(86) ləʔə sən kʷəʔ q'ep'-ət tsə nə sqeχ̣əʔ
AUX 1.sg INF get.tied-CTR D my dog
'I tied up my dog.' 08-27-07-21

2.5 Achievements: an event completion reading (existential perfect)

2.5.1 Unaccusatives (intransitive achievements)

(87) ləʔətə kʷɬ q'əm' tsə laplaš
AUX PERF break D board
'The board has broken.' 09-12-07-05

(88) ləʔətə kʷɬ q'ʷəl tə sčeenəxʷ
AUX PERF get.cooked D salmon
'The salmon has been ready (cooked).' 02-18-04-41

(89) ləʔə kʷəʔ kʷɬ χ̣ʷəyl' kʷs Jack
AUX INF PERF die/lose D Jack
'Jack is already dead (Jack has died).' 03-15-04-37

(90) kʷɬ qʷəy θə speʔəs
PERF die D bear
'The bear is dead (the bear has died).' 06-27-05-26b

(91) kʷɬ xʷəy tiʔə Jack
PERF wake.up D Jack
'Jack's awake (Jack has waken up).' 01-26-06-11

(92) ləʔətə kʷɬ ɬew' tə Jack
AUX PERF heal D Jack
'Jack has already healed.' 05-31-05-33

(93) ləʔə sən kʷəʔ kʷɬ məq'
AUX 1.sg INF PERF get.full(stomach)
'I am already full (I've got full).' 08-02-05-18

(94) kʷɬ x̣əɬ tiʔə nə q'ʷələŋ
PERF get.hurt D my ear
'I am getting an earache.' 12-06-05-21

(95) ləʔətə kʷɬ čeq' tiʔə Jack
AUX PERF fall.down D Jack
'Jack is already down (Jack has just fallen down).' 06-28-06-26b

2.5.2 Non-control transitives (transitive achievements)

(96) kʷɬ q'ʷəy-nəxʷ sən θə speʔəs
PERF die-NCTR 1.sg D bear
'I have killed the bear.' 06-27-05-27b

(97) ləʔə sən kʷɬ čəqʷ-nəxʷ tsə ʔeʔləŋ
AUX 1.sg PERF burn-NCTR D house
'I have burned the house (unintentionally).' 06-27-05-28d

(98) ləʔə sən kʷəʔ meʔkʷəɬ-nəxʷ tsə nə sq'ekʷəŋ
AUX 1.sg INF get.hurt-NCTR D my knee
'I hurt my knee.' 09-21-05-54

3. (Un)availability of the stative prefix *s-*

3.1 Homogeneous states: not elicited

3.2 Inchoative states:

(99) ? shiʔəl'k^{w}
s-get.happy(IMP)
'He's happy.'
* This form is listed in Montler (1991), but Stella Wright does not use this form. Instead she uses *hiʔəl'k^{w}* without *s-*.

3.3 Activities:

(100) ? sqeqəw'
STAT-IMP-rest
'He's resting.' (Montler 1986: 117)
* Though the translation of the root is an activity in English, the root cannot stand alone. This form is recorded in Montler (1989). However, Stella Wright does not use this form.

3.4 Accomplishments: not elicited

3.5 Achievements

(101) s-q'^{w}á-q'^{w}iʔ θə speʔəθ
STAT-IMP-die D bear
'The bear is dead.' 12-12-06-14

(102) s-t'^{θ}e-t'^{θ}əw' tsə nə ʔeʔləŋ
STAT-IMP-get.clean D my house
'My house is clean (cleaned up).' 09-26-07-20

(103) ʔəɬtiʔ s-ɬa-ɬəq'^{w}
AUX STAT-IMP-become.naked
'He is naked.' 05-02-04-73

(104) ləʔətə s-x^{w}k^{w}eq'-əɬ tsə saaɬ
AUX STAT-open(IMP)-DUR D door
'The door is open.' 06-07-05-52

(105) ləʔətə k^{w}ɬ s-tak^{w}-əɬ tsə sčeyəʔ
AUX PERF STAT-break(IMP)-DUR D stick
'The stick is broken.' 09-21-05-51

(106) ləʔətə k^{w}ɬ s-q'ém'-əɬ
AUX PERF STAT-break(IMP)-DUR
'It's already broken.' 09-12-07-03

(107) ləʔətə k^{w}ɬ s-q'^{w}ál'-əɬ tə ʔəɬtənəŋ'
AUX PERF STAT-ripen(IMP)-DUR D berries
'The berries are ripe.' 03-15-04-45

(108) s-nə́w'-əɬ tə Jack
STAT-enter(IMP)-DUR D Jack
'Jack is inside.' 03-23-04-10

(109) ləʔə k^{w}əʔ s-seq-əɬ
AUX INF STAT(?)-get.out(IMP)-DUR
'She is outside.' 02-06-04-16

(110) ləʔətə s-le-ləʔ tə latem
AUX STAT-IMP-get.fixed D table
'The table is fixed.' 04-06-04-68

4. Punctual adverbial test

4.1 Homogeneous states: no additional data elicited

4.2 Inchoative states: the inceptive reading with the perfective form; the on-going situation reading with the imperfectvie form.

(111) a. hiləkʷ tə Jack kʷs tečəls θə Mary
become.happy D Jack SUB arrive-3.sg D Mary
'Jack got happy when Mary arrived.' 04-13-04-08a

b. hi-ʔə-ləkʷ tə Jack kʷs tečəls θə Mary
become.happy(IMP) D Jack SUB arrive-3.sg D Mary
'Jack was already happy when Mary arrived.' 04-13-04-08b

(112) a. č'en' sən ʔəw' k'ʷəy kʷnəs k'ʷən-nəxʷ tsə słaap
reall 1.sg COMT get.hungry SUB s ee-NCTR D soup
'I got so hungry when I saw the soup.' 11-21-06-13

b. k'ʷe-k'ʷəy' sən kʷnəs k'ʷən-nəxʷ tsə słaap
IMP-get.hungry 1.sg SUB see-NCTR D soup
'I was (already) hungry when I saw the soup.' 11-21-06-14

(113) ləʔə sən kʷəʔ x̣iʔx̣əʔ kʷs kʷɬ x̣əyl'-nəxʷ
AUX 1.sg INF get.embarrassed SUB PERF get.lost-NCTR
'I got embarrassed when I lost it.' 01-23-07-12

(114) sey'siʔ sən kʷnəs k'ʷən-nəxʷ θə speʔəθ
get.scared 1.sg SUB-1.sg get.seen-NCTR D bear
'I got scared when I saw the bear.' 01-23-07-31

4.3 Activities: the inceptive reading with the perfective form; the on-going situation reading with the imperfectvie form.

(115) a. št-əŋ tsə nə qeq kʷ-nəs ʔeɬəʔ č'eŋ'
walk-CMDL D my baby SUB-my here come.home
'My baby started walking when I came home.' 05-17-06-17

b. šət-əŋ tsə nə qeq kʷ-nəs ʔeɬəʔ č'eŋ'
walk(IMP)-CMDL D my baby SUB-my here come.home
'My baby was already walking when I came home.' 05-17-06-18

(116) a. ʔiɬ-əŋ tsə nə ŋən-ŋənəʔ kʷ-nəs č’eŋ’
eat-CMDL D my PL-child SUB-my come.home
‘My children ate (started eating) when I came home.’ 12-06-05-37

b. ʔiʔɬ-əŋ tsə nə ŋənŋənəʔ kʷ-nəs č’eŋ’
eat(IMP)-CMDL D my PL-child SUB-my come.home
‘My children were already eating when I came home.’ 12-06-05-39

(117) a. ʔeɬəʔ ɬtə ɬap ʔiʔ tečəls kʷsə Jack
AUX 1.pl eat.soup ACC arrive-3.sg D Jack
‘We started eating soup when Jack arrived.’ 01-23-07-36b

b. ʔeɬəʔ ɬtə ɬa-ɬəp ʔiʔ tečəls kʷsə Jack
AUX 1.pl IMP-eat.soup ACC arrive-3.sg D Jack
‘We were (already) eating soup when Jack arrived.’ 01-23-07-36a

(118) q’ʷəq’ʷəʔ sən ʔə tsə ti kʷnəs ʔeɬəʔ č’eŋ’
drink 1.sg OBLD tea SUB-my here come.home
‘I started drinking some tea when I came home.’ 05-17-06-22

(119) šəl-əŋ tə Jack ʔə tsə sŋenət ʔə-t təxʷq’ilət
climb.up-CMDL D Jack OBLD mountain OBL-D noontime
‘Jack started climbing up the mountain at noon.’ 09-26-07-42

(120) q’ʷiiləš tiʔə Jack kʷs tečəls tə Masaru
dance D Jack SUB arrive-3.sg D Masaru
‘Jack started dancing when Masaru arrived.’ 02-24-04-43

(121) x̣ʷəŋ tə Jack kʷs tečəls tə Masaru
cry-CMDL D Jack SUB arrive-3.sg D Masaru
‘Jack cried when Masaru arrived.’ 02-24-04-54

(122) t’iləm sən kʷs kʷɬ tečəls tə Jack
sing 1.sg SUB PERF arrive-3.sg D Jack
‘I started singing when Jack arrived.’ 04-27-04-06

(123) nəčəŋ sən kʷs kʷɬ tečəls tə Jack
smile-CMDL 1.sg SUB PERF arrive-3.sg D Jack
‘I smiled (started smiling) when Jack arrived.’ 04-27-04-09

(124) hesəŋ tə Jack kʷ-nəs tečəl
sneeze-CMDL D Jack SUB-my arrive
'Jack sneezed / started sneezing when I arrived.' 03-02-04-69

(125) ʔeɬəʔ ɬtə t'ə́pəl' kʷs kʷɬ tečals tə Jack
AUX 1.pl play.cards SUB PERF arrive-3.sg D Jack
'We stared playing cards when Jack arrived here.' 09-05-07-25

(126) x̱əθəm θə Mary ʔətsə TV ʔiʔ ʔənʔe sən nəw'
watch D Mary OBL D TV ACC come 1.sg enter
'Mary started watching TV when I came in.' 09-05-07-36

4.4 Accomplishments: only one sentence was elicited.

(127) ləʔə sən kʷə kʷɬ čə́nət kʷsə nə sqəlelnəxʷ kʷnəs č'eŋ'
AUX 1.sg INF PERF buried-CTR D my tree SUB come.home
'I have planted my tree since I came home.' 05-17-05-29

4.5 Achievements

(128) náqʷ tiʔə Jack ʔiʔ tečəl sən
fall.asleep D Jack ACC arrive 1.sg
'Jack fell asleep when I arrived here.' 05-04-04-40

(129) náqʷ-nəŋət tiʔə Jack ʔiʔ tečəl sən
fall.asleep-NCMDL D Jack ACC arrive 1.sg
'Jack fell asleep when I arrived here.' 05-04-04-41

(130) məq' sən kʷnəs hay ʔə tsə słaap
get.full 1.sg SUB-1.sg fish OBL D soup
'I got full when I finished the soup.' 11-21-06-20

5. Imperative test with the command marker *čə*

5.1 Homogeneous states: infelicitous

(131) ? k'^{w}amk'^{w}əm čə
strong CMD 12-12-06-37

(132) ? sex^{w}səx^{w} čə
lazy CMD 12-12-06-38

5.2 Inchoative states: infelicitous

(133) ? łčik^{w}əs čə
get.tired CMD 12-12-06-36a

(134) ? hiləkʷ čə
get.happy CMD 12-12-06-36b

(135) ? t'ečəq čə
get.mad CMD 12-12-06-36c

5.3 Activities: felicitous

(136) t'iləm čə
Sing CMD
'Sing!' 12-12-06-22

(137) štəŋ čə
walk-CMDL CMD
'Walk!' 12-12-06-24

(138) q'^{w}iiləš čə
dance CMD
'Dance!' 12-12-06-26

(139) x^{w}itəŋ čə
Jump-CMDL CMD
'Jump!' 12-12-06-29

5.4 Accomplishments: felicitous

(140) čənət čə
get.buried-CTR CMD
'Bury it!' 12-12-06-31

(141) x̣əl'-ət čə ts ʔən sne
get.written-CTR CMD D your name
'Write your name down!' 12-12-06-32

(142) q'^{w}əč-ət čə θə speʔəθ
die-CTR CMD D bear
'Kill the bear!' 12-12-06-33a

5.5 Achievements: infelicitous

(143) ? q'^{w}əy-nəx^{w} čə θə speʔəθ
die-NCTR CMD D bear
'Kill the bear!' 12-12-06-33b

(144) ? x̣^{w}il'-nəx^{w} čə
lose-NCTR CMD
'Throw it away!' 12-12-06-35d

6. The culmination cancellation test

6.1 Homogeneous states: no predicate tested

6.2 Inchoative states: no predicate tested

6.3 Activities: no predicate tested

6.4 Accomplishments (control transitives): no contradiction

(145) ləʔə sən kʷəʔ t'$^{\theta}$ekʷ-ət tsə nə ʔeləŋ
AUX 1.sg INF get.clean-CTR D my house
'I washed my house.'
ʔiʔ ʔawa səns hay-nəxʷ
ACC NEG 1.sg-S finish-NCTR
'but I did not finish it.' 09-26-07-17a

(146) ləʔə sən kʷəʔ tkʷ-ət tə laplaš
AUX 1.sg INF break-CTR D board
'I broke the board.'
ʔiʔ ʔawas təkʷ
ACC NEG-S break
'but it did not break.' 09-12-07-08

(147) ləʔə sən kʷəʔ čə́n-ət tsə sqəlelnəxʷ
AUX 1.sg INF plant-CTR D tree
'I planted the tree.'
ʔiʔ x̣əw'e sən səʔ hay
ACC not.yet 1.sg UNREAL finish
'but I have not finished it yet.' 04-26-06-40

(148) ləʔə sən kʷəʔ čəqʷ-ət tsə st'$^{\theta}$at'$^{\theta}$əɬəʔ
AUX 1.sg INF burn-CTR D leaf-PL
'I washed my house.'
ʔiʔ ʔawa kʷsəčəqʷ-s niɬ kʷs t'$^{\theta}$am'əŋ-s
ACC NEG SUB burn-3.sg 3.sg SUB wet-3.sg
'but they did not burn because they were wet.' 05-10-06-56

(149) xʷəč-ət sən tə Jack ʔiʔ ʔawa kʷs xʷəys
wake.up-CTR 1.sg D Jack ACC NEG SUB wake.up-3.sg
'I woke up Jack but he did not wake up.' 05-24-06-27

(150) ləʔə sən kʷəʔ q'əm'-ət tə laplaš
AUX 1.sg INF break-CTR D board
'I broke the board.'
ʔiʔ ʔawas q'əm'
ACC NEG-S break
'but it did not break.' 09-12-07-09

(151) ʔeɬəʔ sən lət'$^{\theta}$-at kʷsiʔə pool
AUX 1.sg get.filled-CTR D pool
'I filled the pool.'
ʔiʔ ʔawa kʷs lət'$^{\theta}$
ACC NEG D get.filled
'but it did not get full.' 01-23-07-38

6.5 Achievements (non-control transitives): contradiction

(152) ləʔə sən kʷəʔ t'$^{\theta}$ew-nəxʷ tsə nə ʔeʔləŋ
AUX 1.sg INF get.clean-NCTR D my house
'I finally washed my house.'
ʔiʔ ʔawa səns haynəxʷ
ACC NEG 1.sg-S finish-NCTR
'but I did not finish it.' 09-26-07-17a
Speaker's comment: In this case, your washing event must be completed.

(153) lət'$^{\theta}$-nəxʷ sən kʷsiʔə pool
get.filled-NCTR 1.sg D pool
'I filled the pool.'
ʔiʔ ʔawa kʷs lət'$^{\theta}$
ACC NEG D get.filled
'but it did not get full.' 01-23-07-37

7. The almost test

7.1 Homogeneous states: infelicitous without the reflexive suffix or the mutative prefix

(154) a. ? kʷɬ čəlel ʔiʔ kʷamkʷəm
PERF almost ACC strong 02-06-07-62a
b. kʷɬ čəlel ʔiʔ kʷamkʷəm-sət
PERF almost ACC strong-REFL 02-06-07-62b
'It's just about getting strong.'

(155) a. ?čəlel ʔiʔ s-le-ləʔ
almost ACC STAT-IMP-get.fixed 12-12-06-46a
b. čəlel ʔiʔ txʷə-sleləʔ tsə nə snəxʷəɬ
almost ACC MUT-STAT-IMP-get.fixed D my canoe
'My canoe is almost fixed.' 12-12-06-46b

7.2 Inchoative states: the event cancellation reading

(156) čəlel sən ʔiʔ t'ečəq'
almost 1.sg ACC get.mad
'I almost got mad. 02-06-07-56b

(157) kʷɬ čəlel sən ʔiʔ ɬčikʷəs
PERF almost 1 .sg ACC get.tired
'I am just about tired. 02-06-07-57

(158) kʷɬ čəlel sən ʔiʔ k'ʷəy
PERF almost 1.sg ACC get.hungry
'I am just about hungry. 02-06-07-58b

7.3 Activities: the event cancellation reading

(159) čəlel sən ʔiʔ qʷaʔqʷəʔ ʔə tsə tii
almost 1.sg ACC drink OBL D tea
'I almost started to drink tea.' 04-27-04-45

(160) xʷeləq sən ʔiʔ qʷaʔqʷəʔ ʔə tsə tii
almost 1.sg ACC drink OBL D tea
'I almost started to drink tea.' 04-27-04-46

(161) čəlel sən ʔiʔ t'iləm ʔə kʷs čaleqəɬ
almost 1.sg ACC sing OBL D yesterday
'I almost started singing yesterday.' 04-27-04-47a

(162) čəlel sən ʔiʔ štəŋ
almost 1.sg ACC walk-CMDL
'I almost started walking.' 04-06-04-01

(163) xʷeləq sən ʔiʔ štəŋ
almost 1.sg ACC walk-CMDL
'I almost started walking.' 04-06-04-02

(164) čəlel sən ʔiʔ q'ʷəl-əŋ ʔə tsə sčeenəxʷ
almost 1.sg ACC barbecue-CMDL OBL D salmon
'I almost started barbecuing salmon.' 04-06-04-16

(165) xʷeləq sən ʔiʔ q'ʷəl-əŋ ʔə tsə sčeenəxʷ
almost 1.sg ACC barbecue-CMDL OBL D salmon
'I almost started barbecuing salmon.' 04-06-04-17

(166) čəlel sən ʔiʔ xʷit-əŋ
almost 1.sg ACC jump-CMDL
'I almost jumped / started jumping.' 04-06-04-18

(167) xʷeləq sən ʔiʔ xʷit-əŋ
almost 1.sg ACC jump-CMDL
'I almost jumped / started jumping.' 04-06-04-19

(168) čəlel sən ʔiʔ xʷəy'em'
almost 1.sg ACC tell.a.story
'I almost started story-telling.' 11-21-06-38

7.4 Accomplishments:

7.4.1 *čəlel*: ambiguous between the event cancellation and event non-completion readings

(169) čəlel sən ʔiʔ xə̓l-ət tsə nə sne
almost 1.sg ACC get.written-CTR D my name
'I almost started writing my name. / I almost finish writing my name.' 03-23-04-69

(170) čəlel sən ʔiʔ le-t tsə latem
almost 1.sg ACC get.fixed-CTR D table
'I almost started fixing my table. / I almost finished fixing my table.' 04-27-04-42

(171) čəlel sən ʔiʔ qʷə́cˇ-ət θə speʔəθ
almost 1.sg ACC die-CTR D bear
'I almost killed the bear.' 05-24-05-07a

(172) čəlel sən ʔiʔ qʷə́č-ət θə speʔəθ
almost 1.sg ACC die-CTR D bear
'I almost killed the bear.' 05-24-05-07a

7.4.2 *xʷeləq*: the event cancellation reading

(173) xʷeləq sən ʔiʔ qʷə́č-ət θə speʔəθ
almost 1.sg ACC die-CTR D bear
'I almost killed the bear ' 05-24-05-07b

(174) xʷeləq sən ʔiʔ le-t tsə latem
almost 1.sg ACC get.fixed-CTR D table
'I almost started to fix my table.' 04-27-04-41

7.5 Achievements: the event cancellation reading

(175) čəlel sən ʔiʔ nəqʷ
almost 1.sg ACC fall.asleep
'I almost fell asleep.' 04-06-04-23

(176) xʷeləq sən ʔiʔ qʷə́y-nəxʷ θə speʔəθ
almost 1.sg ACC die-NCTR D bear
'I almost killed the bear.' 05-24-05-07b

(177) čəlel sən ʔiʔ qʷə́y-nəxʷ θə speʔəθ
almost 1.sg ACC die-NCTR D bear
'I almost killed the bear.' 05-24-05-07a

(178) xʷeləq sən ʔiʔ čaq-nəxʷ tsə nə ʔeʔləŋ
almost 1.sg ACC burn-NCTR D my house
'I almost burned my house down.' 05-24-05-11a

(179) čəlel sən ʔiʔ čaq-nəxʷ tsə nə ʔeʔləŋ
almost 1.sg ACC burn-NCTR D my house
'I almost burned my house down.' 05-24-05-11b

(180) čəlel ʔiʔ lətʼθ tiʔə sqʷatəŋ
almost ACC get.full D bucket
'The bucket is almost full.' 12-12-06-45b

(181) kʷɬ čəlel ʔiʔ ɬewʼ tə Jack
PERF almost ACC heal D Jack
'Jack is almost healed.' 05-31-05-35

(182) kʷɬ xʷeləq ʔiʔ ɬewʼ tə Jack
PERF almost ACC heal D Jack
'Jack is almost healed.' 05-31-05-35

(183) čəlel sən ʔiʔ ɬələŋʼ ʔə tə ferry
almost 1.sg ACC miss OBL D bear
'I almost missed the ferry.' 09-21-05-05

(184) čəlel sən ʔiʔ θiɬəŋ
almost 1.sg ACC stand.up
'I almost stood up.' 09-21-05-42

(185) čəlel ʔiʔ qʼʷəy θə speʔəθ
almost ACC die D bear
'The bear is almost dead.' 12-12-06-16

(186) čəlel sən ʔiʔ hay tsə nə tii
almost 1.sg ACC finish D my tea
'I am just about to finish my tea. / I almost finished my tea.' 04-27-04-45c

(187) čəlel sən ʔiʔ ʔaw'k'^{w}-nəx^{w} k^{w}sə nə tii
almost 1.sg ACC finish-NCTR D my tea
'I almost finished my tea.' 04-27-04-45d

(188) k^{w}ɬ čəlel ʔiʔ tečəl k^{w}s Jack
PERF almost ACC arrive D Jack
'Jack is just about arriving.' 06-28-06-9b

8. Evidence that *k^{w}ɬ* is a perfect marker:

The same temporal adverbial phrase with the oblique marker ʔə is interpreted differently depending on the absence/presence of *k^{w}ɬ*.

(189) a. x̣^{w}əŋ θə Mary ʔə tiʔə k^{w}əcíl'
cry-CMDL D Mary OBL D morning
'Mary cried this morning.' 08-27-07-07a

b. x̣^{w}əʔəŋ θə Mary ʔə tiʔə k^{w}əcíl'
cry-IMP-CMDL D Mary OBL D morning
'Mary was crying this morning.' 08-27-07-07b

c. k^{w}ɬ x̣^{w}əŋ θə Mary ʔə tiʔə k^{w}əcíl'
PERF cry-CMDL D Mary OBL D morning
'Mary began to cry this morning.' 08-27-07-07c

d. k^{w}ɬ x̣^{w}əʔəŋ θə Mary ʔə tiʔə k^{w}əcíl'
PERF cry-IMP-CMDL D Mary OBL D morning
'Mary has been crying since this morning.' 08-27-07-07d

(190) a. ɬəməx^{w} ʔə tiʔə k^{w}əcíl’

rain OBL D morning

‘It rained this morning.’ 08-27-07-11a

b. ɬəm’x^{w} ʔə tiʔə k^{w}əcíl’

rain-IMP OBL D morning

‘It was raining this morning.’ 08-27-07-11b

c. k^{w}ɬ ɬəməx^{w} ʔə tiʔə k^{w}əcíl’

PERF rain OBL D morning

‘It began to rain this morning.’ 08-27-07-11c

d. k^{w}ɬ ɬəm’x^{w} ʔə tiʔə k^{w}əcíl’

PERF rain-IMP OBL D morning

‘It has been raining since this morning.’ 08-27-07-11d