

**VERBAL PLURALITY AND ADVERBIAL QUANTIFICATION:  
A CASE STUDY OF SKWŪ7MESH (SQUAMISH SALISH)**

by

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## ABSTRACT

The goal of this thesis is to present an analysis of verbal plurality and adverbial quantification in *Skwú7mesh* (Squamish Salish).

This thesis provides a detailed analysis of a phenomenon in *Skwú7mesh* that has never been explored: the effect of the auxiliary *wa* on predicates from various aspectual classes in both non-quantified and quantified sentences. *wa* has been described as a morpheme referring to a process that has duration either in the form of a single act or the regular performance of it (Kuipers 1967).

Two central questions will be addressed in this thesis. Firstly, what is the function of the auxiliary *wa* in *Skwú7mesh*? In other words, why is *wa* obligatorily present for certain interpretations of predicates and obligatorily absent for others; furthermore, what does *wa* do to a predicate to yield the various readings? Secondly, why is *wa* obligatory with adverbs of quantification? To answer these questions, this thesis proposes that *wa* is a pluractional marker that pluralizes the head of a predicate's event structure or the event type denoted by the predicate.

Assuming Pustejovsky's (1991, 1995) event structure model representing the distinction between three primitive event types (states, processes, transitions), four aspectual classes are analyzed (activities, accomplishments, achievements and states) in both English and *Skwú7mesh*. This thesis argues that *Skwú7mesh* provides crucial evidence that all bare predicates (that is, predicates without *wa*) are telic, with the exception of individual-level predicates. *wa* causes a predicate to be atelic via pluralization; this atelicity is marked by continuous and/or habitual readings for the predicates of the various classes. As a consequence of these claims, this analysis suggests that *activities* and *stage-level states* are not primitives universally.

This thesis argues that Kratzer's (1995) analysis of adverbs of quantification as unselective binders cannot account for *Skwú7mesh*; thus, adopting De Swart's (1993,

1995) event based approach to analyzing adverbial quantification, this thesis claims that Skwxwú7mesh provides crucial evidence that Q-adverbs quantify over events only. The evidence derives from the fact that the pluractional marker *wa* is obligatory with both stage-level stative predicates and individual-level predicates when they combine with a Q-adverb. The analysis presented in this thesis claims that *wa* is the source of the plurality of events over which a Q-adverb quantifies.

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Any errors in this thesis are my own.

**This thesis is dedicated to my brother Joe**

## 1. INTRODUCTION

The goal of this thesis is to present an analysis of verbal plurality and adverbial quantification in Skwxwú7mesh. This thesis contributes to both the theoretical literature and the Salish literature.

Skwxwú7mesh (Squamish) is a Coast Salish language spoken in the Burrard Inlet and Howe Sound area around Vancouver, British Columbia. There are no more than twenty native speakers left, the youngest in his late sixties. This thesis provides a detailed analysis of a phenomenon in Skwxwú7mesh that has never been explored: the effect of the auxiliary *wa* on predicates from various aspectual classes in both non-quantified and quantified sentences. *wa* has been described as "a continuous-iterative clitic [that] refers to a process occupying a stretch of time, as having a duration. This duration may concern either a single act or the regular (iterated) performance of it" (Kuipers 1967:159)<sup>1</sup>. Crucial to an understanding of this phenomenon are the grammatical intuitions of fluent native speakers that are not always available from textual materials; this research thus contributes to the literature by documenting these judgments that may not be available in the near future.

Two central questions will be addressed in this thesis. Firstly, what is the function of the auxiliary *wa* in Skwxwú7mesh?. In other words, why is *wa* obligatorily present for certain interpretations of predicates and obligatorily absent for others; furthermore, what does *wa* do to a predicate to yield the various readings? Secondly, why is *wa* obligatory with adverbs of quantification? The answers to these questions have theoretical implications, implications for Skwxwú7mesh, as well as cross-linguistic implications for Salish.

Pustejovsky (1991, 1995) uses event structures to represent the distinction between three primitive event types: states, processes, transitions (Bach 1986, Dowty 1979, Vendler 1967). The four-way aspectual class distinction can be analyzed in Pustejovsky's model, where *activities* are analyzed as processes, *accomplishments* and *achievements* are analyzed as transitions and *states* are analyzed as states. Of these four classes, *activities* and *states* are, by

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<sup>1</sup>The status of Kuipers's use of the term *clitic* is not clear.

definition, atelic since they involve no culmination point or anticipated result. This thesis argues, however, that *Skwú7mesh* provides crucial evidence that all bare predicates (that is, predicates without *wa*) are telic, including *activities* and *stage-level states*, but with the exception of individual-level predicates. What *wa* does to a predicate is cause it to become atelic; this atelicity is marked by continuous and/or habitual readings for the predicates of the various classes. The analysis presented in this thesis claims that *wa* targets either the head of a predicate's event structure (a subevent), or the event type denoted by the predicate for pluralization, leading to an atelic reading of the predicate. As a consequence of these claims, this analysis suggests that *activities* and *stage-level states* are not primitives universally.

Adverbs of quantification (Q-adverbs), such as *always*, *often*, and *sometimes*, have been analyzed by Kratzer (1995) as unselective binders; that is, either spatiotemporal ('event') variables or individual variables can be bound by a Q-adverb. De Swart (1993, 1995), on the other hand, argues that Q-adverbs strictly quantify over events. It is argued in this thesis that *Skwú7mesh* provides crucial evidence that Q-adverbs quantify over events only. The evidence derives from the fact that the pluractional marker *wa* is obligatory with both stage-level stative predicates and individual-level predicates when they combine with a Q-adverb. The analysis presented in this thesis claims that *wa* is the source of the plurality of events over which a Q-adverb quantifies.

This thesis is organized as follows; Chapter 2 briefly outlines the basic morphology and syntax facts of *Skwú7mesh* that are relevant to an understanding of the data to be presented in the remainder of this thesis. *Skwú7mesh* is identified as a radical headmarking language with supporting data provided. The verbal complex is explored, with particular attention to the sources of temporal reference in *Skwú7mesh* as well as two auxiliaries that are central to the data throughout this thesis. An outline of the distribution of overt DPs is provided, in addition to a discussion of what is, and what is not, encoded in Salish DPs. Closing the chapter is a brief look at the basic *Skwú7mesh* word order pattern.

Chapter 3 outlines the questions to be addressed in the remainder of this thesis. This chapter presents data showing the distribution of *wa* among stage-level stative predicates and individual-level predicates. Differences in interpretations of predicates with and without *wa* are observed, leading to the first question: what is the function of *wa* in Skwxú7mesh? The relevant data illustrating the distribution of *wa* in quantified sentences (sentences with Q-adverbs) is then presented, leading to the second question: why is *wa* obligatory with Q-adverbs? This chapter concludes with the proposal that *wa* is a pluractional marker; the ways in which this proposal solves both questions is briefly outlined, along with the assumptions underlying the analysis to be presented.

Given the proposal that *wa* is a pluractional marker, Chapter 4 then presents Lasersohn's (1995) analysis of pluractional markers. Pluractional markers are defined and their formal representation is given. Following Cusic (1981), Lasersohn incorporates the event level/phase level repetition parameter into his definition of pluractional markers. This distinction is discussed, with appropriate examples provided.

In Chapter 5 the first problem (the function of *wa*) is solved. The chapter begins with an outline of the terminology to be used throughout the chapter; in particular, the way in which the terms *telic* and *atelic* are used throughout the analysis are discussed. The chapter then explores the theoretical model that is adopted for the analysis; Pustejovsky's (1991, 1995) event structure model (state, process, transition) is presented, in addition to a discussion of the notion of *event headedness*. This model is then applied to four aspectual classes in English: achievements, activities, accomplishments and states (Vendler 1967, Dowty 1979). Next, the model is applied to the same four aspectual classes in Skwxú7mesh; for each of the classes, the event structure of the bare predicate and the event structure representing the pluralized form of the predicate are given. As well, the type of repetition that arises from pluralization is noted for each of the classes.

In Chapter 6, the second question (why *wa* is obligatory with Q-adverbs) is solved. The chapter begins with a discussion of Kratzer's analysis of Q-adverbs as unselective binders;

her view of the temporal/atemporal distinction and the stage-level/individual-level distinction is briefly outlined. After presenting both complex and simplex sentences within her framework, it is noted that Kratzer's analysis cannot account for the Skwxwú7mesh data. De Swarts's (1993, 1995) analysis of Q-adverbs as quantifiers strictly over events is then discussed and exemplified with English data. The chapter ends with an application of the analysis to Skwxwú7mesh, incorporating also the proposal that *wa* is a pluractional marker.

Chapter 7 concludes this thesis by summarizing the findings of the analysis. This chapter also outlines two theoretical and cross-linguistic implications that arise from this analysis: the implications for quantification and the implications for aspectual classes. The first section further discusses the notion of unselective binding in Salish; the second section discusses the notion of primitives in Pustejovsky's model of event structures. The chapter ends by addressing the issues that require further research in Skwxwú7mesh.

## 2. SOME BASIC MORPHOLOGY AND SYNTAX FACTS OF SKWXWÚ7MESH

The purpose of this chapter is to outline some of the basic properties of the Skwxwú7mesh language so that are relevant to an understanding of the Skwxwú7mesh data presented in the remainder of this thesis<sup>2</sup>. The properties reviewed in this chapter are, for the most part, properties of Salish languages in general. Section 2.1. identifies Skwxwú7mesh as a radical headmarking language whereby pronominal marking on the head is obligatory and overt lexical DPs are optional. Section 2.2. explores the verbal complex, with particular attention to tense and auxiliaries in Skwxwú7mesh; the subsection on tense identifies Skwxwú7mesh as a language lacking obligatory morphologically encoded tense and outlines the sources of temporal reference available in the language. The subsection on auxiliaries focuses on the distribution of those that are relevant to the data presented in this thesis. Section 2.3. examines the syntactic distribution of overt DPs and the semantic information that they encode. Finally, Section 2.4. provides an outline of the major word order pattern of Skwxwú7mesh.

### 2.1. Radical Headmarking

Skwxwú7mesh is a radical headmarking language; consequently, pronominal marking on the head is obligatory and overt DP arguments are optional. Accordingly, on the one hand, the sentence in (1a) contains both pronominal marking on the head and lexical DPs and is well-formed; on the other hand, the sentence in (1b) contains no pronominal marking on the head, but retains the lexical DPs, and is ill-formed. Furthermore, the sentence in (1c) is well-formed, though the lexical DPs *kwelhi slhánay* 'the lady' and *ta míxalh* 'the bear' are omitted. The fact that pronominal markings, such as subject and object agreement markers, are obligatory in Skwxwú7mesh is illustrated in (1)<sup>3</sup>:

---

<sup>2</sup>See Currie (1997), Demirdache et.al. (1994), Jacobs (1992), Kuipers (1967) for further discussion of morphology, syntax and semantics of Skwxwú7mesh.

<sup>3</sup>Unless otherwise noted, all data presented in this thesis is taken from (Bar-el 1997, 1998); this stems from original fieldwork with fluent native speakers of Skwxwú7mesh.

- (1a) kw'ach-nexw- $\emptyset$ -as      kwélhi slhánay' ta míxalh  
 see-TRANS-3OBJsg-3SUBsg DEM.F lady    DET bear  
 'the lady saw the bear'
- (1b) \*kw'ach-nexw kwélhi slhánay' ta míxalh  
 see-TRANS      DEM.F lady    DET bear  
 'the lady saw the bear'
- (1c) kw'ach-nexw- $\emptyset$ -as  
 see-TRANS-3OBJsg-3SUBsg  
 'he/she/it saw him/her/it.'

Notice that, along with much of the Salish literature, I assume a  $\emptyset$ -marked third person object marker that follows the transitivizer and precedes the third person subject agreement marker; this follows the usual order of pronominal affixes, as shown in the template in (2). This template provides the basic structure of the morphological word (excluding clitics):

- (2) PREFIX-ROOT-ASPECT-LEXICAL.SUFFIX-IN/TRANSITIVE-OBJECT-SUBJECT

(Davis 1997a)

In Skwxwú7mesh, third person pronominal markers are suffixes that attach to the end of the stem while first and second person pronominals that precede the predicate complex and can take temporal clitics, as in (3b) and (3c)<sup>4</sup>. The sentences in (3) provide examples of the first and second person clitics:

- (3a) chen lhki7s lha Valerie  
 1SUBsg know DET.F Valerie  
 'I know Valerie'

<sup>4</sup>Currie (1997) notes that when the first and second person pronominals follow the predicate, they are interpreted as future with certain predicates.

- (3b) chexw-kw      ilhen  
2SUBsg-already eat  
'You already ate'

(Jacobs 1992:10)

- (3c) chen-t          xaam  
1SUBsg-PAST cry  
'I cried'

## 2.2. The Verbal Complex

The purpose of this section is to identify two issues associated with the verbal complex; in the first subsection, I address the topic of tense and provide examples of the sources of temporal reference in Skwxwú7mesh. In the second subsection, I discuss two particular auxiliaries that are of relevance to this thesis.

### 2.2.1. Tense

A property of Skwxwú7mesh, and Salish languages in general, is the lack of obligatory morphologically encoded tense (see Matthewson 1996). Instead, temporal reference is derived from three sources; these sources are listed in (4):

- (4) a. Temporal adverbs, auxiliaries, clitics  
b. The aspectual class of the predicate  
c. Determiners

A temporal adverb, such as *kwi chel'aklh* 'yesterday' can cause a predicate to be translated in the past; this is shown in (5):

(5) *Temporal Adverbs*

chen íhen kwi chel'aklh  
1SUBsg eat DET yesterday  
'I ate yesterday'

(Currie 1997:22)

Clitics, such as the past tense marker *-t* or the future marker *-k'* can cause a predicate to be translated in the past or future, respectively. This is illustrated by the two examples in (6):

(6a) *Clitics*

chen-t kwach-nexw ta push  
1SUBsg-PAST see-TRANS DET cat  
'I saw the cat'

(6b) chen-ek' íhen

1SUBsg-FUT eat  
'I'm going to eat'

(Currie 1997:28)

An auxiliary, such as the local-directional clitic *mi* 'come/become', can cause a predicate to be translated in the past. This is demonstrated in (7):

(7) *Auxiliaries*

chen mi nách-i  
1SUBsg come change-INTRANS  
'My expression changed'

(Kuipers 1967:162)

A predicate from the aspectual class of achievements, such as *t'ik* 'arrive/got here', will be translated in the past, since it identifies an immediate change of state (see Chapter 5 for further discussion). This is illustrated in (8):

(8) *Aspectual Class of the Predicate*

chen t'ik  
 1SUBsg arrive  
 'I arrived/got here'

Determiners have not fully been explored in *Skwxwú7mesh*; however, Demirdache (to appear) shows that an absent determiner in a closely related language, *St'át'imcets* (Lillooet Salish), can restrict the predication time of the matrix predicate and the noun in one sentence. This is illustrated in (9):

(9) *Determiners*

sécsec [ni kel7áqsten-s-a ti US-a]  
 strong DET.ABSENT chief-3sg.POSS-DET DET US-DET  
 'The (**present**, not visible) chief of the US is a fool'  
 'The (**past**, not visible) chief of the US **was** a fool'  
 \*'The (**past**, not visible) chief of the US **is** a fool'

(*St'át'imcets*; Demirdache to appear)

2.2.2. *Auxiliaries*

The set of auxiliaries in *Skwxwú7mesh*, and Salish languages in general, include elements with aspectual, adverbial and quantificational force. With respect to their distribution, they precede the main predicate with which they form a monoclausal unit which takes a single set of

pronominal markers. Little is known about the syntax of auxiliaries in *Skwúwú7mesh*; in this subsection, I focus on two auxiliaries that are relevant to an understanding of the data presented in this thesis: *wa*, "indicating continuity of an action or process" (Kuipers 1967:377)<sup>5</sup>, and *lhik* 'always'.

#### 2.2.2.1. *wa*

When it can appear in a clause, this auxiliary precedes the predicate; the data collected thus far suggests that *wa* itself cannot bear tense markings, such as the past tense marker *-t*. Instead, *na* is often inserted and the past tense marker is suffixed to it<sup>6</sup>. This is demonstrated by the sentences in (10) below<sup>7</sup>:

- (10a) *wa páyim lha slhánay*  
 PA rest DET.F lady  
 'the lady is resting'
- (10b) \**wa-t páyim lha slhánay*  
 PA-PAST rest DET.F lady
- (10c) *na-t wa páyim lha slhánay*  
 RL-PAST PA rest DET.F lady  
 'the lady was resting'

Notice that *wa* is glossed as a pluractional marker (PA) in each of the above examples; this issue is central to this thesis and is discussed in further detail in Chapter 4 and onwards.

<sup>5</sup>Note that the definition of this auxiliary will be refined in Chapter 4 of this thesis and onwards.

<sup>6</sup>This indicates that *wa* must occupy a separate position from *na* and the first/second person pronominals since they can each bear the past tense marker, the future marker and other clitics.

<sup>7</sup>An examination of the morpheme *na* is beyond the scope of this thesis; for further discussion, see Kuipers (1967).

### 2.2.2.2. *lhik'*

The second auxiliary that is relevant to the issues presented in this thesis is the quantificational adverb *lhik'* 'always'. This adverb is consistently positioned at the left edge of the clause, before *wa*<sup>8</sup>; this is illustrated in (11):

- (11) *lhik'* *wa* ʔiʔtut ta mǐxalh  
always PA sleep DET bear  
'the bear is always sleeping'

*lhik'* in *Skwxwú7mesh* can bear tense marking<sup>9</sup>; the past tense marker *-t* can be suffixed to the adverb, as shown in (12b):

- (12a) *lhik'* *wa* páyim  
always PA rest  
'she's resting all the time'

- (12b) *lhik'*-t *wa* páyim  
always-PAST PA rest  
'she used to rest all the time'

## 2.3. Overt DPs

Overt DPs in *Skwxwú7mesh* obligatorily take one of the proclitic determiners from the table in (13):

---

<sup>8</sup>There is evidence that *lhik'* can behave as a predicate:

- (i) *lhik'* kwi-n-s *wa* ts'íts'ap'  
always DET-IPOSS-NOM PA work  
'I am always working'

lit: 'my working is all the time/always'

However, further research is necessary to confirm the category and position of *lhik'*. (H. Davis (p.c.) notes that this is also the case in *St'át'imcets* (Lilloet Salish)).

<sup>9</sup>By the logic of the suggestion in Footnote 5, *lhik'* must be occupying the same position as *na* and the first/second person pronominals, but a position other than the one occupied by *wa*.

(13)

	DEFINITE					INDEFINITE
	PRESENT			NON-PRESENT		
	WEAK	STRONG		WEAK	STRONG	
		PROXIMAL	DISTAL			
MASCULINE	ta	ti	tay'	kwa	kwetsi	kwi
FEMININE	lha	tsi	alhi	kwelha	kwelhi	kwes

(Kuipers 1967:137)<sup>10</sup>

Given recent work on DPs in other Salish languages (Matthewson 1996, Demirdache to appear, 1997 for St'át'imcets), the classification of Skwxwú7mesh DPs may need to be revised<sup>11</sup>.

When a sentence contains both an overt subject DP and an overt object DP, the subject DP precedes the object DP. This is illustrated in (14):

- (14) kw'ach-nexw-ø-as      kwélhi slhánay' ta      míxalh  
see-TRANS-3OBJsg-3SUBsg DEM.F lady      DET bear  
'the lady saw the bear'

When a sentence contains only one overt DP, but the sentence contains a transitive predicate, that overt DP is interpreted as the object; this is known as the "one-nominal interpretation" (Gerds 1988, for Halkomelem). Gerds's generalization, using the notion *absolute*, is given in (15):

<sup>10</sup>The term 'masculine' is used in the chart in (13) to indicate what Kuipers refers to as 'plain'.

<sup>11</sup>See Currie (1997) for further discussion on DPs in Skwxwú7mesh.

(15) *One-nominal interpretation*

In the absence of marking for other persons, a single third person nominal is interpreted as the absolutive.

(Gerds 1988:59)

This generalization holds for *Skwxwú7mesh* as well and is illustrated in (16):

(16) na kwach-nexw-ø-as ta slhen-slhánay'

RL see-TRANS-3OBJsg-3SUBsg DET RED-lady

'he met some women'

\*'the women met him'

Matthewson (1996) proposes that Salish determiners exhibit four properties; these are listed in (17):

- (17) a. Salish determiners do not encode definiteness.
- b. Salish determiners do not encode specificity.
- c. There are no quantificational determiners in Salish.
- d. Salish determiners encode 'assertion of existence'.

(Matthewson 1996:20)

Although the spatiotemporal status of DPs in *Skwxwú7mesh* is not completely understood, Demirdache (1997) has argued that, in *St'át'imcets* (Lillooet Salish), determiners may encode spatiotemporal distinctions; furthermore, she states that the temporal interpretation of an NP can determine the temporal interpretation of the main predicate of a sentence (see (9) above).

## 2.4. Word Order

Skwú7mesh word order, like that of other Salish languages, is predominantly predicate initial<sup>12</sup>. The sentences in (18) below demonstrate that, regardless of its class, the predicate will occur clause initially:

- (18a) *ílhén ta míxalh*  
eat DET bear  
'the bear is eating'
- (18b) *hiyí ta míxalh*  
big DET bear  
'the bear is big'
- (18c) *míxalh kwéci*  
bear DEM.M  
'that is a bear/there is a bear'

---

<sup>12</sup>Other word orders have been documented; however, the issue of word order is not directly related to the discussion at hand. For further discussion, see Currie (1997), Jacobs (1992) and Kuipers (1967).

### 3. THE SKWǾWÚ7MESH PARADOX

The goal of this chapter is to present three sets of SkwǾwú7mesh data which, upon comparison, raise two theoretical questions relating to predicate classes and adverbs of quantification. Recall that *wa* has previously been described as "a continuous-iterative clitic [that] refers to a process occupying a stretch of time, as having a duration. This duration may concern either a single act or the regular (iterated) performance of it" (Kuipers 1967:159). In this chapter, I present preliminary data exemplifying the effect of *wa* on stage-level stative predicates and individual-level predicates. To begin, Section 3.1. looks at the behaviour of *wa* with stage-level stative predicates; next, the behaviour of *wa* with individual-level predicates is investigated in Section 3.2.. Finally, the behaviour of *wa* in quantified sentences containing both stage-level stative predicates and individual-level predicates is explored in Section 3.3.. This chapter concludes with a summary of the two problems that arise from the SkwǾwú7mesh data, as well as providing a brief overview of the proposal that solves both problems.

#### 3.1. Stage-level Stative Predicates

A stage-level predicate expresses a transitory property; it holds true of an individual (or set of individuals) at a particular time and/or place. A stative predicate is described as a predicate that persists for a duration of time, but is not, itself, an action (Mourelatos 1978, Vendler 1967). Thus, a stage-level stative predicate denotes a transitory property that involves no dynamics (i.e. *hungry, tired, angry*).

In SkwǾwú7mesh, a stage-level stative predicate is always introduced by the auxiliary *wa*<sup>13</sup>; When prompted with the English sentence 'the bear is hungry', a speaker volunteers the stage-level stative predicate ('hungry') with *wa*; on the other hand, when prompted with the same sentence in SkwǾwú7mesh, *kw'ay' ta mǾxalh* (excluding *wa*), a speaker suggests that the sentence is ill-formed under the stage-level stative reading of the predicate 'hungry'. This is illustrated in (19):

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<sup>13</sup>For further discussion on *wa* in SkwǾwú7mesh and other Salish languages, see Davis (1996, 1997).

(19a) *wa kw'ay' ta míxalh*  
PA hungry DET bear  
'the bear is hungry'

(19b) *kw'ay' ta míxalh*  
hungry DET bear  
\*'the bear is hungry'  
✓'the bear got hungry'

Under the stage-level stative interpretation, a speaker may accept the sentence in (19b), but will acknowledge the fact that it sounds as though there is something missing; when asked to repeat the sentence, speakers consistently insert *wa*. Note that the sentence in (19b) is well-formed with a change-of-state reading; however, once the sentence is given the change-of-state reading, the predicate is clearly no longer being interpreted as a stative predicate. This contrast is explored in further detail in Chapter 5.

### 3.2. Individual-level predicates

An individual-level predicate (i.e. *big, strong, tall*) denotes a permanent property; it is attributed to an individual only once, but holds of that individual permanently. An individual-level predicate in *Skwú7mesh* cannot be introduced by *wa*. When prompted with the English sentence 'the bear is big', a speaker volunteers the *Skwú7mesh* equivalent of the predicate, *hiyi* ('big') without *wa*; conversely, when prompted with the same *Skwú7mesh* sentence, (this time adding *wa*) *wa hiyi ta míxalh*, a speaker suggests that the sentence is ill-formed under the individual-level reading of the predicate *hiyi* ('big'). This generalization is illustrated by the examples in (20)<sup>14</sup>:

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<sup>14</sup>Notice that the bare form of the individual-level predicate is missing the change-of-state reading that is given to stage-level statives when they lack *wa*.

(20a) hiyi ta mǐxalh

big DET bear

'the bear is big'

(20b) ?wa hiyi ta mǐxalh

PA big DET bear

\*'the bear is big'

In the same way that stage-level predicates are given a different reading when they occur without *wa*, individual-level predicates are observed to yield stage-level interpretations when they occur with *wa*. This contrast in readings is illustrated by the sentences in (21):

(21a) chen iy7ím

1SUBsg strong

'I am strong'

DW 30-07-98

(21b) chen wa iy7ím lh-7an wa ts'ets'kw'a-t-sut

1SUBsg PA strong when-1SUBsg PA run-TRANS-REFL

'I am strong when I'm running'

DW 30-07-98

Notice, however, that to obtain the stage-level interpretation of the individual-level predicate *iy7ím* 'strong', context is required (i.e. the remainder of the sentence *...lh7an wa ts'ets'kw'atsut* '...when I am running'). Again, the contrast in interpretations is examined further in Chapter 5 of this thesis.

### 3.3. Quantified Sentences

The third set of data that raise questions about the function of *wa* are sentences containing the auxiliary *lhik'* 'always'; in *Skwú7mesh*, *wa* is obligatory when a Q-adverb is present, regardless of whether the predicate is a stage-level stative predicate or an individual-level predicate. Thus, when *lhik'* is added to a sentence containing the stage-level predicate *kw'ay'* 'hungry', *wa* is obligatorily present; furthermore, when *lhik'* is added to a sentence containing the individual-level predicate *hiyi* 'big', *wa*, again, is obligatorily present. This generalization is illustrated in (22) below:

(22a) *lhik'* \*(*wa*) *kw'ay'* *ta* *míxalh*  
always PA hungry DET bear  
'the bear is always hungry'

(22b) *lhik'* \*(*wa*) *hiyi* *ta* *mex-míxalh*  
always PA big DET RED-bear  
'these bears are always big'

Note that the speaker suggests that one might use the sentence in (22b) if you were talking about "a group of bears in this area". Moreover, notice that the sentence in (22b) has a plural DP as its subject; there is an additional requirement in quantified sentences with individual-level predicates that the subject be a plural DP. A quantified sentence containing a singular DP as its subject is ill-formed; this is illustrated in (23):

(23) \**lhik'* *wa* *hiyi* *ta* *míxalh*  
always PA big DET bear

The requirement for a plural DP will be discussed in further detail in Chapter 6.

### 3.4. Two Problems

Given the *Skwú7mesh* facts presented in the first three sections of this chapter, two problems arise; these problems have theoretical implications with respect to predicate classes and adverbial quantification. The first problem, in general terms, addresses the question of the function of *wa* in *Skwú7mesh*. This problem can be separated into two smaller issues; Firstly, it is necessary to explain why *wa* is obligatorily present with some predicates under certain readings and obligatorily absent with other predicates under other readings. Secondly, we need to address why *wa* yields different readings when it combines with different classes of predicates.

The second problem raised by the data above is a paradox. It has been shown that *wa* is incompatible with an individual-level reading in a non-quantified sentence (cf. (21)), obligatory with a stage-level stative reading in a non-quantified sentence (cf. (20)), and also obligatory when a Q-adverb combines with either a stage-level stative predicate or an individual-level predicate (cf. (22)). This generalization is summarized in (24) below:

(24)

	STAGE-LEVEL STATIVE READINGS	INDIVIDUAL- LEVEL READINGS
NON- QUANTIFIED SENTENCES	*(wa)	*wa
QUANTIFIED SENTENCES	*(wa)	*(wa)

Thus, the problem to address is why an individual-level predicate in a quantified sentence must be introduced by *wa*, which has been shown to yield ungrammaticality when it combines with an individual-level predicate in a non-quantified sentence.

To answer both of these questions, I propose that *wa* is a *pluractional marker* (Lasnik 1995) that pluralizes the head of a predicate's event structure or the event type denoted by the predicate. Since the event structures of predicates from different aspectual classes vary, it is expected that predicates introduced by *wa* will vary in interpretation according to the type of event structure *wa* pluralizes.

To explain the second problem relating to Q-adverbs, I assume an analysis whereby quantification is strictly over events (De Swart 1993, 1996). Thus, the solution to the second problem (why *wa* is obligatory with Q-adverbs) is divided into three parts; firstly, I assume that Q-adverbs quantify over events. Following De Swart, for quantification to take place, a plurality of events is required. Finally, the proposal that *wa* is a pluractional marker explains why *wa* is obligatory with Q-adverbs because it is *wa* that gives rise to the plurality of events over which the Q-adverb can quantify.

#### 4. PLURACTIONAL MARKERS

The goal of this Chapter is to define pluractional markers (Lasersohn 1995) and outline the parameter that differentiates the readings that arise from the use of pluractional markers. Section 4.1. provides a basic representation of pluractional markers. Section 4.2. then outlines the distinction between event level repetition and phase level repetition and incorporates this distinction into the definition of pluractional markers.

##### 4.1. Defining Pluractional Markers

Pluractional markers are morphemes that "attach to the verb to indicate a multiplicity of actions, whether involving multiple participants, times or locations" (Lasersohn 1995:240). Pluractional markers "do not reflect the plurality of a verb's arguments so much as *plurality of the verb itself*: the verb is understood to represent the occurrence of multiple events" (Lasersohn 1995:241). A pluractional verb (a verb + pluractional marker) will hold true of a group of events if and only if its corresponding "singular" verb (its bare form) holds true of each individual event in the group. This basic meaning of pluractional markers is given by the representation in (25):

$$(25) \quad V-PA(X) \Leftrightarrow \forall e \in X[V(e)] \ \& \ \text{card}(X) \geq n$$

(Lasersohn 1995:242)

where V=verb

PA=pluractional marker

X=ranges over sets of events

e=event

Notice that since the number of events implied by a pluractional marker is pragmatically fixed, the condition on the cardinality of events is specified as  $n$  in the definition but must be stated

simply as no less than 2. Depending on the type of reading that arises from the attachment of a pluractional marker to a verb, further conditions may be added to the representation in (25).

#### **4.2. Event/Phase Level Repetition**

In examining the readings exhibited cross-linguistically by pluractional markers, Cusic (1981) suggests that variation in meaning results from a two-setting parameter between phase repetition and event/occasion repetition which gives rise to the difference between a "repetitive" action and a "repeated" action. For the remainder of this thesis, I refer to this distinction as the phase/event level repetition distinction.

Phase repetition entails multiple events, which may be of a different type, which sum up to form a single token of the event type corresponding to the verb; thus in (26) below, the nibbling event consists of multiple events of small biting and a small biting does not itself constitute a 'nibble':

(26) The mouse nibbled the cheese.

(Lasersohn 1995:243-4)

Notice that phases of an event may be of the same type as the event type of the predicate, only smaller; in other words, the hopping event in (27) is made up of a series of hops, giving rise again to phase repetition where a single hop is distinguished from the larger hopping event. Consider the sentence in (27):

(27) The kangaroo hopped across the field

Event repetition entails multiple events of the type denoted by the verb; thus, the larger nibbling event in (28) is itself repeated, not just the smaller phases internal to a single nibbling:

(28) The mouse nibbled the cheese again and again on Thursday.

With respect to the sentence in (29), the larger hopping event (a series of hops across the field) is being repeated (not simply the smaller hops internal to a single hopping event), yielding event-level repetition. Consider the sentence in (29):

(29) The kangaroo hopped across the field (over and over) on Friday.

To account for the difference between phase level and event level repetition, Lasersohn replaces  $V$  on the right side of the biconditional in the definition for pluractional markers by a free variable ranging over properties of events ( $P$ ). This is illustrated in (30):

(30)  $V-PA(X) \Leftrightarrow \forall e \in X [P(e)] \ \& \ \mathbf{card}(X) \geq n$

(Lasersohn 1995:255)

where  $V$ =verb

$PA$ =pluractional marker

$X$ =ranges over sets of events

$e$ =event

$P$ =free variable ranging over properties of events

In other words, a pluractional verb ( $V-PA$ ) will hold true of a group of events ( $X$ ) if and only if all events ( $e$ ) in the set of events ( $X$ ) holds true of a single event with a certain property ( $P$ ) and there are no less than two events in the set of events ( $X$ ). How  $P$  is identified yields the distinction between phase level and event level repetition; thus, to obtain the event level repetition the free variable ranging over properties of events is equated with the verb ( $P = V$ ). For phase level repetition, the identity of the free variable  $P$  is determined lexically; this is to

say that the phases that make up an event are different for each verb (i.e. 'hop' for the verb 'hopping' and 'small bite' for the verb 'nibbling').

The proposal of this thesis is that *wa* is a pluractional marker that pluralizes the head of an event structure or the event type denoted by the predicate. Thus far, I have focused on stage-level stative predicates and individual-level predicates. In the next chapter, I examine the behaviour of *wa* with predicates from other aspectual classes; this, in turn, will lead to an explanation of why *wa* is necessary with Q-adverbs in Skwxwú7mesh, which I later provide in Chapter 6.

## 5. SOLVING THE FIRST PROBLEM

This chapter addresses the first problem (the function of *wa*) under the proposal that *wa* is a pluractional marker. I examine the distribution of *wa* across four aspectual classes: achievements, accomplishments, activities and states (Dowty 1979, Vendler 1967). I claim that bare predicates in Skwxwú7mesh are always telic, with the single exception of individual-level predicates; predicates are made atelic by the addition of the pluractional marker *wa*. While achievements and accomplishments are already understood as telic, this claim implies that stage-level stative predicates and activities are derived classes.

Section 5.2. outlines the theoretical model that I adopt for this thesis. I follow Pustejovsky's (1991, 1995) analysis of event structures for three primitive aspectual classes: states, processes and transitions; I adopt his notion of event headedness to account for the target of pluralization. In Section 5.3. I apply Pustejovsky's model to English data, which lays the ground for the analysis of Skwxwú7mesh; event structure representations are presented for each of the four aspectual classes: achievements, activities, accomplishments, states. Section 5.4. then takes the Pustejovsky model and applies it to Skwxwú7mesh, noting certain significant differences from English, and taking into particular consideration the event/phase level repetition parameter. Section 5.5. summarizes the findings of this chapter. I begin with an overview of the terminology adopted for this analysis, focusing on the telic/atelic distinction.

### 5.1. Terminology: Telic/Atelic

Dahl (1981) notes that the intuitive semantic difference between a verb phrase that contains a reference to a 'terminal point' in which the action comes to an end and a verb phrase that does not contain a reference to such a point, has been given many labels in the literature<sup>15</sup>. Drawing on Garey's (1957) terms *telic* and *atelic*, for example, Brinton (1988) uses these terms to refer to "situations which include or do not include a goal" (1988:25). Noting that there are various

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<sup>15</sup>For a list of these terms, see Dahl (1980:80).

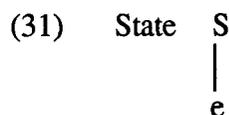
problems with the terminology, in this thesis, I use the terms *telic* and *atelic* to refer to situations that have or lack a culmination point, respectively. With respect to the translations offered for Skwǫwú7mesh sentences, an atelic predicate can involve either a continuation of a single event or the iteration of events.

## 5.2. Theoretical Model: Pustejovsky (1991, 1995)

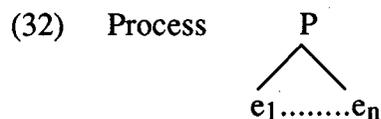
The purpose of this section is to provide an overview of the theoretical model that I adopt to account for the Skwǫwú7mesh data. Pustejovsky proposes a configurational theory of event structure that takes into consideration the aspectual properties of verbs; given that this thesis explores the distribution of *wa* across aspectual classes, Pustejovsky's model provides a structural means to distinguish between the aspectual classes. This section focuses on two central issues: the representation of event structure and the notion of event headedness within an event structure representation.

### 5.2.1. Event Structure

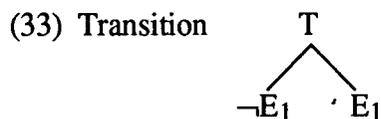
Pustejovsky (1991) suggests that event types fall into three classes: states, processes and transitions; he defines a state (S) as a single event which is evaluated relative to no other event (i.e. *be sick, love*). The event structure of a state is given in (31):



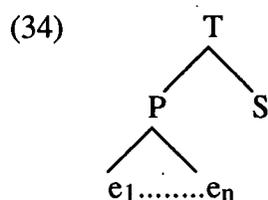
A process (P) is defined as a sequence of events identifying the same semantic expression (i.e. *run, push*); this event structure is given in (32):



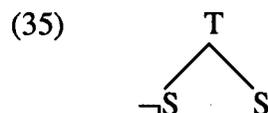
A transition (T) is defined as an event identifying a semantic expression which is evaluated relative to its opposition (i.e. *open, build*); this is shown in (33):



Transitions can have different subeventual structures; an accomplishment may consist of a process as a first subevent with a final resulting state. This is illustrated in (34):



An achievement may consist of an initial  $\neg S$  and a final S; this is illustrated in (35):

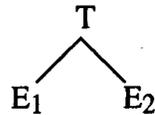


### 5.2.2 Event Headedness

For Pustejovsky, event headedness provides a way of indicating a type of foregrounding of event arguments; he claims that the event structure of a predicate provides a configuration where events are distinguished by relative prominence in addition to temporal precedence.

Although it is a property of all event types, Pustejovsky states that headedness "acts to distinguish the transitions, specifying what part of the matrix event is being focused by the lexical item in question" (1995:72). The head of the transition representing an accomplishment is the initial process ( $E_1$ ); this is illustrated in (36):

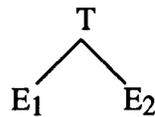
(36)



where E<sub>1</sub>=event head

The event structure of an achievement differs from an accomplishment in that it is the final resulting state (E<sub>2</sub>) that is the event head; this is illustrated in (37):

(37)



where E<sub>2</sub>=event head

Thus, the head is the "most prominent subevent in the event structure of a predicate which contributes to the 'focus' of the interpretation" (Pustejovsky 1995:72).

### 5.3. The Model Applied: English

The goal of this section is to show how Pustejovsky's model applies to the four principal aspectual classes in English: achievements, activities, accomplishments, states. For each aspectual class, a brief description of the properties associated with a predicate from that class is provided, in addition to some examples. The event structures for each of the classes will act as a means of comparison in the upcoming section focusing on *Skwxwú7mesh*.

#### 5.3.1. Achievements

Achievement predicates (i.e. *win, arrive, find*) "capture the inception or the the climax of an act...they can be indefinitely placed within a temporal stretch, but they cannot in themselves occur over or throughout a temporal stretch" (Mourelatos 1978:416).

In English, achievement predicates are uttered in the past; this is illustrated in (38):

- (38a) I won ten dollars
- (38b) I arrived
- (38c) I found a book

Bennett and Partee (1978) suggest that the reason for the past tense reading of achievement predicates is due to the fact that achievements are only true at moments; this suggests that an achievement cannot be truthfully uttered in the present tense because once an achievement is true, it must already be in the past.

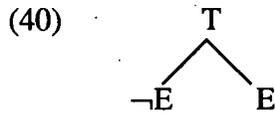
Extending Bennet and Partee's account for past tense readings, we can explain why achievement predicates are odd as present progressives; this is to say that an immediate change of state is difficult to stretch in time. This oddity is illustrated by the sentences in (39):

- (39a) ?I am winning ten dollars
- (39b) ?I am arriving
- (39c) ?I am finding a book

Note that the sentence *I am arriving* in (39b) is well-formed under a future interpretation; the sentence is odd, however, under the present interpretation.

Contrary to the view that the progressive can only apply to predicates true of events which take time, Kearns (1991) claims that the progressive can be applied to predicates such as the ones in the sentences in (39) and are well-formed if uttered with exact timing. This is to say that if you say "I am winning" at the exact moment that you are undergoing the change-of state, the sentence is well-formed; thus, she states that although it is difficult to utter truly, the progressive form of an achievement predicate is not ill-formed.

In Pustejovsky's model, an achievement predicate such as *arrive* would be represented as a transition from  $\neg E$  to  $E$  (where  $E$  is a variable for any event type); this is illustrated in (40):



### 5.3.2. *Activities*

An activity predicate is homogeneous in that "any part of the process is of the same nature as the whole" (Vendler 1967:101); in Mourelatos's terms, "the time stretch of activities is inherently indefinite in that they involve no culmination or anticipated result" (1978:416).

In English, activity predicates are often given in the progressive; this is illustrated in (41):

(41a) I am running

(41b) I am singing

(41c) I am working

Thus, at any stretch of time within the period of *my running, singing or working*, it is true that *I am running, singing or working*; this is what Dowty (1986) refers to as the "subinterval property" of events. The same facts are observed when these predicates are translated into the past; activity sentences translated in the past progressive are provided in (42):

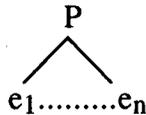
(42a) I was running

(42b) I was singing

(42c) I was working

Pustejovsky represents a predicate from this class as a process (note that we have seen this structure as the initial subevent of an accomplishment predicate; here, however, the process occurs without a culminating state or transition). Consider the representation in (43):

(43)



### 5.3.3. Accomplishments

An accomplishment predicate is not homogenous in that we can refer to the whole of a time segment without referring to a single moment; they "have duration intrinsically" (Mourelatos 1978:416)<sup>16</sup>.

The sentences in (44) provide some examples of accomplishment predicates in English given in the past<sup>17</sup>:

(44a) I built a house

(44b) I ate an apple

(44c) I tore the cloth

Thus, in (44a) the activity of building resulted in the the state of a house that is built, in (44b) the activity of eating resulted in an eaten apple and in (44c) the activity of tearing resulted in a torn cloth. In their past tense forms, an accomplishment predicate is telic.

In its present-progressive form, an accomplishment predicate yields a reading whereby the resulting state is anticipated, but not yet completed. The sentences in (45) are examples of accomplishment predicates in English given in the present-progressive:

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<sup>16</sup>Note that it has been claimed that accomplishment predicates and achievement predicates are not distinguished by event structure (that is they both consist of an initial process and a resulting state); instead, they are distinguished by the duration of the transition: the transition for achievement predicates occurs instantaneously while the transition for accomplishment predicates can take time.

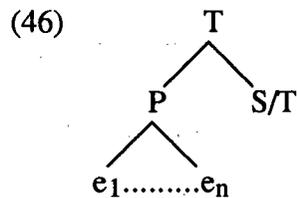
<sup>17</sup>Note that there is no simple present in English; consequently, the sentences are uttered in the past (see Chapter 5 for further discussion).

(45a) I am building a house

(45b) I am eating an apple

(45c) I am tearing the cloth

In Pustejovsky's model, an accomplishment predicate is a transition, *T*, consisting of an initial process, *P*, and final resulting state, *S* or a transition, *T*. This is illustrated in (46):



Notice that whether the initial subevent in the structure of an accomplishment is a state or a transition is not crucial to the analysis presented in this thesis; thus, I note this issue, but ignore it for the remainder of the analysis.

#### 5.3.4. States

State predicates, in English, are those which "may endure or persist over stretches of time...they cannot be qualified as actions...they do not have progressive forms...they involve no dynamics...Though it may arise or be acquired as a result of change, the state itself does not constitute a change" (Mourelatos 1978:416). State predicates can be divided into two classes: stage-level states and individual-level states.

Recall that an individual-level predicate denotes a permanent property; English examples are illustrated in (47):

(47a) I am big

(47b) I am tall

(47c) I am strong

A stage-level predicate, on the other hand, denotes a transitory property; the sentences in (48) each contain a stage-level predicate of the aspectual class "state":

(48a) I am angry

(48b) I am hungry

(48c) I am tired

Pustejovsky (1995) claims that the distinction between a stage-level state and an individual-level state is the fact that a stage-level state has "an inherent reference to that factor that brings this state about...the 'coming into being' factor, the agentive role" (1995:225). Thus, an individual-level predicate is represented as a single event; this is shown in (49):

(49) tall                      S  
   |  
   e

The event structure of a stage-level stative predicate, on the other hand, must make reference to a default initial process subevent that is there only when the sentence overtly marks that it is there; in other words, in the sentence *John is angry from reading the newspaper*, the factor that brought the state of being angry about is overtly specified (reading the newspaper). This would be represented as (50):

(50)                      T  
                            /  \  
                          P    S

However, for the simpler sentence *John is angry*, Pustejovsky notes that this initial process is a default event. This problem will be further discussed in Section 5.4.4.

#### 5.4. The Model Applied: $S_{kwxwú7}$ mesh

Now that Pustejovsky's model has been exemplified in English, the goal of this section is to take this event structure model and apply it to  $S_{kwxwú7}$ mesh. The section proceeds as follows; in each subsection, I provide an event structure representation for an aspectual class and show how its interpretation is modified by *wa*. I examine the phase level/event level distinction as it is applied to each aspectual class. Underlying my analysis is the proposal that *wa* is a pluractional marker; I show how this claim leads to a unified explanation for its effect on the Vendler-Dowty aspectual classes. I argue that bare stage-level predicates in  $S_{kwxwú7}$ mesh are telic and that predicates are made atelic by the addition of *wa*. The first subsection looks at predicates from the aspectual class of achievements.

##### 5.4.1. Achievements

In  $S_{kwxwú7}$ mesh, bare achievement predicates are translated in the past, yielding the same reading as achievement predicates in English. This is illustrated in (51):

(51a) t'l'ik ta John  
arrive DET John  
'John got here'/'John arrived'  
LB 21-07-98

(51b) chen t'exwénk  
1SUBsg win  
'I win/I won'<sup>18</sup>

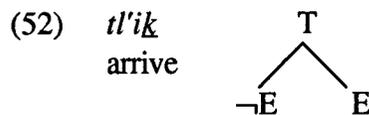
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<sup>18</sup>The status of the gloss "I win" requires further investigation.

- (51c) chen wi7xwem  
 1SUBsg fall  
 'I fell [from above]'  
 LB 25-08-98

The speaker suggests that the event in (51a) must be completed in that it "can't mean he hasn't arrived yet". Recall that Bennet and Partee (1978) account for the past tense reading of an achievement by claiming that it can only be true at a moment and once it is true, it is in the past; this description of an achievement predicate holds for *Skwxwú7mesh* as well. A bare achievement predicate is telic; it is translated into the English simple past in order to convey the fact that a culmination point has been reached.

I assume an event structure for the bare form of an achievement predicate in *Skwxwú7mesh* that parallels English; an achievement predicate is represented by a transition in which an event type (E) is evaluated relative to its opposition. This event structure is given in (52):



When introduced by *wa*, an achievement predicate is translated as a repeated or a habitual action. This is illustrated by the data in (53):

- (53a) ?chen wa tl'ik  
 1SUBsg PA arrive

(53b) chen wa tl'exwénk  
1SUBsg PA win  
'I am a winner/I win all the time'

(53c) chen wa wí7xwem  
1SUBsg PA fall  
'[I'm] making a habit of [falling]'  
LB 25-08-98

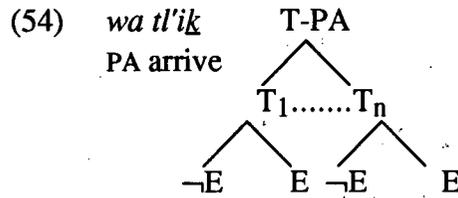
An achievement predicate with *wa* in *Skwxwú7mesh* is atelic since there is no culmination point specified for the habitual actions. The habitual reading follows from the fact that an achievement predicate cannot be made atelic by stretching the time of a single transition; instead, *wa* causes the predicate to become atelic by increasing the number of times that the transition occurs without specifying a culmination point. Note that the speaker's comments in reference to these sentences further emphasize the atelic interpretations of the predicates. Probably due to pragmatic reasons, the speaker neither confirms nor denies the grammaticality of (53a); however, his suggestion that the sentence "would have to mean 'more than once'" indicates that the habitual reading is the expected one with achievement predicates introduced by *wa* as opposed to the interpretation where a single event of arriving is not yet culminated. The gloss given for (53b), 'I am a winner'/I win all the time', also suggests a habitual action in that the event of winning is being repeated. For (53c), the speaker states that the sentence means "you're making a habit of [falling]".<sup>19</sup>

Since a habitual reading arises when *wa* is added to an achievement, I claim that *wa* pluralizes the event type denoted by the predicate, the transition (T); thus the representation of a

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<sup>19</sup>Note that this motivates a distinction between achievements and accomplishments in *Skwxwú7mesh*; accomplishments allow pluractional modification of a subevent (see Section 5.4.3. for discussion) whereas achievements do not.

pluralized achievement predicate consists of an unspecified number of culminated transitions. This event structure is provided in (54):



The representation in (54) denotes both telic and atelic events; this is to say that although the pluralized T indicates that the transition is atelic (here, a habitual event), this atelic event is comprised of a number of telic transitions. Thus, *wa* does not necessarily cause each portion of an event to be atelic; *wa* causes the target of pluralization to be atelic.

When introduced by *wa*, an achievement denotes multiple events of the type denoted by the predicate itself; the plurality comes from the transition (T) from  $\neg E$  to E being repeated over and over. With respect to Cusic's parameter, a pluralized achievement predicate yields event level repetition as opposed to phase level repetition. Recall that event repetition is represented as (55), where the free variable ranging over properties of events (P) is identical to the verb itself (V):

$$(55) \quad V-PA(X) \Leftrightarrow \forall e \in X [P(e)] \ \& \ \text{card}(X) \geq n$$

where  $P=V$

Thus, equating *P* with the class of achievement predicates demonstrates that an achievement yields event level repetition when it is pluralized. Predicates from other aspectual classes allow for both event level repetition and phase level repetition; this is shown in the following subsections.

### 5.4.2. Activities

In Skwú7mesh an activity predicate is translated in the present tense and given a continuous reading for its form with *wa* and without *wa*; thus, the translation 'the woman is singing', which suggests an incomplete event, is provided for both the sentence with *wa* in (56a) and without *wa* in (56b):

(56a) *wa* lulum ta slhánay'  
PA sing DET woman  
'the woman is singing'

(56b) lulum ta slhánay'  
sing DET woman  
'the woman is singing'

However, the sentences in (56a) and (56b) are not equivalent. We can distinguish activity predicates with and without *wa* by the addition of the past tense enclitic, *-t*; thus, a bare activity predicate with *-t* is translated in the simple past. On the other hand, an activity predicate with *-t* introduced by *wa* is given a past continuous reading. This is illustrated in (57) where the activity predicate *xaam* 'cry' in (57b), with a past tense marker but without *wa* is translated as 'I cried' and not 'I was crying':

(57a) chen-t wa xaam  
1SUBsg-PAST PA cry  
'I was crying'  
LB 25-08-98

(57b) chen-t      xaam

1SUBsg-PAST cry

'I cried'

LB 25-08-98

Before presenting the event structure of activity predicates, it is first necessary to understand how the interpretations of these two forms differ.

The reason for the apparent equivalence of the two forms can be attributed to the fact that there is no "real" present in English; this is to say that English only has the present-progressive, as exemplified in (58a) and the generic present, as exemplified in (58b):

(58a) I am singing

(58b) I sing

Thus, *sing* in (58a) is an action occurring now (at utterance time) that has not yet culminated; in (58b), on the other hand, *sing* is understood as a habitual action, not (necessarily) occurring at utterance time. Consequently, the fact that the Skwxwú7mesh sentences in (56a) and (56b) above are often glossed the same way may be attributed to the fact that the only possible English translation for either sentence is the present progressive.

I propose that the distinction between the two forms of the activity predicate is related to inherent telicity; that is, the fundamental difference between the two is that the bare form (the predicate without *wa*) is telic; the addition of *wa* causes the predicate to become atelic. This distinction does not come out in the present in English because the event time, *now*, overlaps with utterance time; this is to say that the only way in English to express the event time *now* is in the present progressive.

I have shown that the two forms of activity predicates in Skwxwú7mesh can be distinguished with the addition of the past tense marker; in the remainder of this section I use telicity tests to further demonstrate this distinction. I draw on data from French as a parallel.

#### 5.4.2.1. A Comparison with French

French utilizes both a simple, morphologically encoded, present and a complex, paraphrastic, present marked by the expression *en train de*; it is the complex present that parallels what I am referring to as the "real" present that is lacking in English. The complex present is characterized by the fact that the event it refers to must be occurring now, and cannot be stretched into the past. The sentences in (59a) and (59b) are examples of the simple present and complex present, respectively:

(59a) La femme chante  
'The woman is singing'

(59b) La femme est en train de chanter  
'The woman is singing (as we speak)'

Note that the French speaker is faced with the same difficulty as the Skwxwú7mesh speaker in providing distinct English glosses for the two sentences in their respective languages.

Notice that, in French, adding the durational temporal modifier *depuis deux heures* 'since two o'clock' to the predicate in the simple present yields a grammatical sentence, while adding it to the predicate in the complex present yields an ungrammatical sentence; this is illustrated in (60):

(60a) Je chante depuis deux heures  
'I've been singing since two o'clock'

(60b) \*Je suis en train de chanter depuis deux heures

Thus, while the predicate in the simple present can be stretched in time, the predicate in the complex present cannot.

Turning to the data from *Skwú7mesh*, the proposal that *wa* causes a predicate to be atelic predicts that the addition of a durational temporal modifier to an activity predicate introduced by *wa* will yield a grammatical sentence; the sentence in (61) demonstrates that this is the case<sup>20</sup>:

(61) chen(-t)        wa lulum ti-na7 kwi chela<sub>kl</sub>h  
1SUBsg(-PAST) PA sing from DET yesterday  
'I've been singing since yesterday'  
LB 21-07-98

Note that the speaker specifies that at speech time "you're still singing". Compare this with the simple present form of 'sing' in French *Je chante depuis deux heures*.

We expect, then, that adding the durational temporal modifier to a sentence containing an activity predicate without *wa*, will yield an ill-formed sentence since it is not possible to stretch the event time of the telic predicate to indicate that the event began in the past; this is illustrated by the ungrammatical sentence in (62):

(62) \*chen lulum ti-na7 kwi chela<sub>kl</sub>h  
1SUBsg sing from DET yesterday  
LB 21-07-98

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<sup>20</sup>The glosses of the two morphemes in *ti-na7* is not certain and has thus been glossed simply as 'from'.

Note that the speaker emphasizes the fact that the event time of the predicate is *now* when he states that the sentence in (62) is a "contradiction" and that you seem to be saying that "you're singing now, since yesterday".

Next let us consider what happens in French when a temporal modifier specifying the exact point at which the activity is taking place is added to sentences containing the simple present and complex present forms of the predicate. Introducing the phrase *a deux heures* 'at 2 o'clock' to a sentence containing the simple present form of an activity predicate yields a well-formed sentence translated in the future; this is illustrated in (53):

(63) Je chante à deux heures

'I'm singing at 2 o'clock'/I will be singing at 2 o'clock'

Thus, the sentence is understood to mean that the *singing* event is not taking place at speech time, but will be taking place at some specified time, *two o'clock*, in the future.

Adding the same temporal modifier to the complex present form of the predicate is ill-formed, since the predicate can only be interpreted as occurring at speech time; this is illustrated by the sentence in (64):

(64) \*Je suis en train de chanter à deux heures

In addition to lacking an interpretation in the future, unlike its simple present counterpart, the sentence in (64) cannot be interpreted in the past either; this is to say that 'I sang at 2 o'clock' is not a possible translation, further emphasizing that the event time of a complex present predicate is *now*.

Continuing with the predictions for *Skwxwú7mesh*, and using the data from French as a means of comparison, we expect that the addition of a temporal modifier indicating a specific point in time to an activity predicate introduced by *wa* will yield a well-formed sentence; this

prediction is borne out and can be seen with the addition of the phrase *na7 t-kwi an7us-k* 'at two o'clock'. The translation of the sentence in (65) demonstrates that the singing event will occur in the immediate future and cannot mean that the singing took place at some point in the past:

- (65) chen wa lulum na7 t-kwi an7us-k  
 1SUBsg PA sing LOC OBL-DET two-IRR  
 'I am singing at two o'clock'  
 LB 21-07-98

Unlike in French, when *wa* is omitted from the sentence, the sentence remains well-formed, under a different interpretation. Recall that in French, neither the future nor the past readings were available for the sentence containing a predicate in the complex present as well as a temporal modifier referring to a particular point in time. In *Skwxwú7mesh*, on the other hand, the past interpretation is available; this is illustrated by the sentence in (66):

- (66) chen lulum na7 t-kwi an7us-k  
 1SUBsg sing LOC OBL-DET two-IRR  
 'I sang at two o'clock'  
 LB 21-07-98

The fact that the sentence in (66) is translated in the past follows from the fact that a *Skwxwú7mesh* predicate lacking *wa* is telic; this is to say that since in English the two present forms of an activity predicate (progressive and generic) are atelic, the only way to indicate the telic form of an activity predicate is to translate it into the simple past.

Lastly, the telicity distinction is further reinforced with the addition of a subordinate clause containing a telic predicate *kwi ses tl'ik ta John* 'when John got here'; this clause is

compatible with both the telic and atelic forms of the matrix predicate. Beginning with the atelic form of the activity predicate (i.e. the predicate introduced by *wa*), we observe that in (67), adding the subordinate clause yields an overlapping interpretation where the event of the matrix predicate is already underway when the event of the subordinate predicate occurs:

- (67) chen wa lulum kwi s-es tli'ik' ta John  
 1SUBsg PA sing DET NOM-3POSS arrive DET John  
 'I was singing when John got here'  
 DW 30-07-98

Given the proposal that predicates lacking *wa* are telic, we do not expect an overlapping interpretation to be possible; instead, we find that adding the subordinate clause to a sentence in which the matrix predicate is not introduced by *wa* yields an consecutive interpretation in which the *singing* started at the time that *John got here*. This is shown in (68):

- (68) chen lulum kwi s-es tli'ik' ta John  
 1SUBsg sing DET NOM-3POSS arrive DET John  
 'I sang when John got here'  
 DW 30-07-98

The fact that the sentence is translated in the past, though no overt past tense marker is used, again supports the claim that the predicate is telic<sup>21</sup>.

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<sup>21</sup>The French data crucially differs from *Skwú7mesh* with respect to this test. Recall that, unlike *Skwú7mesh*, French marks tense overtly; thus, the sentences in (67) and (68) cannot be reproduced in French with the simple/complex present. Instead, the sentences are offered with the simple past and the imperfect. They yield a consecutive interpretation and an overlapping interpretation, respectively:

- (ii) J'ai chanté quand Jean est arrivé  
 'I sang when John arrived'  
 (iii) J'étais en train de chanter quand Jean est arrivé  
 'I was singing when John arrived'

This is the exact opposite pattern that we observe in *Skwú7mesh*.

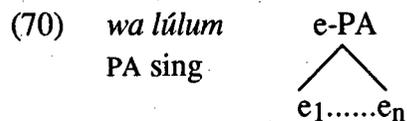
The chart in (69) summarizes the similarities and differences between French and Skwxwú7mesh.

(69)

		SINCE/DEPUIS X	AT/À X
FRENCH	EN TRAIN DE	x	x
	SIMPLE PRESENT	✓	✓ (future)
SKWXWÚ7MESH	-WA	x	✓ (past)
	+WA	✓	✓ (future)

#### 5.4.2.2. The Event Structures of Activities

The data above entails that the representation of an activity predicate in Skwxwú7mesh is different from that in English or French; however, when an activity predicate in Skwxwú7mesh is introduced by *wa*, it is translated as a continuous event, much like those in English. Consequently, for an activity predicate introduced by *wa*, I will assume the event structure that Pustejovsky (1991) suggests for a process predicate; recall that Pustejovsky represents process predicates as a sequence of events identifying the same semantic expression. Thus, the event structure of a pluralized activity predicate is represented as in (70):



Consequently, this proposal for Skwxwú7mesh crucially claims that a process is derived, as opposed to being a primitive; this is to say that a sequence of events only arises with the

addition of *wa*. The next issue to consider, then, is the event structure of the bare form of an activity predicate; in other words, we must ask 'from what is this process derived?'

The *Skwxwú7mesh* sentences above, all of which contain the bare form of the activity predicate 'sing', are consistently translated in the simple past; this is accounted for by the proposal that bare predicates in *Skwxwú7mesh* denote telic events. Since an atelic activity predicate is represented by a sequence of events, I propose that the telic form of an activity predicate is represented by a single event, *e*, with no further structure; the representation for activity predicates lacking *wa* is given in (71):

(71) *lulum*            *e*  
      sing

Although it may be difficult to conceive of a *singing* event being divided into a sequence of single events of *sing*, there are other activity predicates in which the distinction between a single event and a sequence of events is much clearer. Notice that when the predicate *xwítem* 'jump' is introduced by *wa*, the present-progressive reading is given; the atelic form of the predicate is given in (72):

(72) *chen wa xwítem*  
      1SUBsg PA jump  
      'I am jumping'

However, the predicate in its bare form is not only translated in the past, but is interpreted as a single event, having occurred one time; this is illustrated in (73):

(73) *chen xwítem*  
      1SUBsg jump  
      'I jumped (once)'

Thus, we can answer the question above ('from what are complex activity predicates derived?') by stating that activity predicates are derived from single events; pluralizing *e* yields an atelic process in the form of a continuous reading.

Thus, when introduced by *wa*, an activity denotes multiple singular, telic events which sum up to form an atelic token of the predicate. With respect to Cusic's parameter, a pluralized activity predicate yields phase level repetition. Recall that phase level repetition is represented as in (74), where the free variable ranging over properties of events (*P*) is fixed lexically:

$$(74) \quad V\text{-}PA(X) \Leftrightarrow \forall e \in X [P(e)] \ \& \ \text{card}(X) \geq n$$

where *P*=lexically fixed

*P*, in this case, would be a single event of the predicate 'sing'.

The continuous event reading, however, is not the only possible reading available for an activity predicate introduced by *wa*; a habitual reading is also available. Consequently, pluralizing an activity predicate can also yield event level repetition.

Much like in English and French, a *Skwxwú7mesh* activity predicate can yield a habitual reading. Firstly, notice that in English, the habitual reading arises when an activity predicate is given in the present (without the progressive markings); this is illustrated by the sentences in (75):

- (75a) I run            ('I am a runner')
- (75b) I sing         ('I am a singer')
- (75c) I work        ('I am a worker')

In French, we observe that the habitual reading is available for an activity predicate in its simple present form, but not in its complex present form; thus, the sentence in (76a) can

have a habitual interpretation in addition to its continuous interpretation. In contrast, the sentence in (76b) does not yield a habitual reading. This contrast is illustrated in (76):

(76a) Je chante

✓'I sing [habitually]'

✓'I am singing'

(76b) Je suis en train de chanter

\*'I sing [habitually]'

✓'I am singing (as we speak)'

In *Skwúwú7mesh*, the habitual reading is available for an activity predicate only if it is introduced by *wa*, given an appropriate contextual set-up; thus, as an answer to a question about one's daily morning actions, an activity predicate must appear in its pluralized form to indicate that the event is a habitual event. This pattern is illustrated by the sentences in (77); the two sentences in (77b) and (77c) can each be matched with the sentence in (77a) to form question-answer pairs:

(77a) chexw wa chanem i7xw natlh k'-axw wa úmsem

2SUBsg PA do.what all morning IRR-2SUBsg PA wake.up

'What do you do every morning when you get up?'

(lit: 'you do what every morning when you wake up')

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(77b) chen wa lulum

1SUBsg PA sing

'I sing'

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(77c) chen wa ts'its'ap'

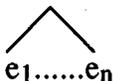
1SUBsg PA work

'I work [every morning]'

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The habitual reading follows from the proposal that *wa* causes a predicate to be atelic. Recall that an achievement predicate yields a habitual reading when pluralized; thus, in that same way that an achievement predicate becomes atelic by the addition of *wa*, so too can an activity predicate become atelic and yield a habitual reading when introduced by *wa*. We must then explain how to represent a pluralized activity predicate in *Skwxwú7mesh* that yields a habitual reading.

Given the fact that a bare activity predicate is represented as a single event, *e*, with no further structure, the event structure of a pluralized activity predicate yielding a habitual reading is identical to the event structure of an activity predicate yielding a continuous reading. This structure is shown in (78):

(78) *wa lulum*      e-PA  
PA sing      

Since the reading represented by the structure in (78) is a habitual one, the type of repetition that arises from this pluralization of an activity predicate is event level, where the pluractional marker yields multiple events of the type denoted by the predicate; that is pluralized *e* gives rise

to a number of singing events that are understood to occur on separate occasions. Thus, the definition for the pluractional marker for an activity predicate that yields a habitual reading will be identical to one proposed for an achievement predicate, where the free variable ranging over a set of properties (P) is equated with the verb itself (V); in this case, the verb is a member of the aspectual class of activity predicates. This representation is shown in (79):

$$(79) \quad V-PA(X) \Leftrightarrow \forall e \in X [P(e)] \ \& \ \text{card}(X) \geq n$$

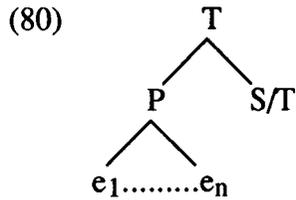
where  $P=V$

Consequently, an activity predicate differs from an achievement predicate in that a pluralized achievement predicate only yields the habitual reading, and hence event level repetition; a pluralized activity predicate can yield either a habitual reading or a continuous reading, and hence event level repetition or phase level repetition.

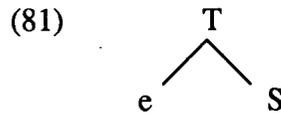
The implication of this analysis of an activity predicate is that, at least in *Skwxwú7mesh*, it will be impossible to distinguish between a habitual reading and a continuous reading in the event structure of a pluralized activity predicate. This is not true of predicates from all aspectual classes, however, since a pluralized accomplishment predicate yields both types of repetition that are marked differently in the event structure. This issue is explored in the following subsection.

#### *5.4.3. Accomplishments*

An accomplishment predicate is made up of an activity and a culmination point; recall that Pustejovsky's representation for an accomplishment predicate is a transition (T) consisting of an initial subevent (P) and a final resulting state (S) (or a final transition (T)). This representation is shown again in (80):



In *Skwxwú7mesh*, however, I have claimed that the bare form of an activity predicate is represented by *e*; thus, we expect the bare form of an accomplishment predicate to be a transition consisting of an initial subevent *e* and a final resulting state. This representation is provided in (81):



To verify that this representation is the correct one, it is necessary to examine the appropriate data.

When it occurs without *wa*, an accomplishment predicate yields a reading whereby the event has culminated; the sentence is, consequently, translated in the past. This is illustrated by the sentences in (82):

- (82a) *chen ti-lam7*  
 1SUBsg make-house  
 'I made a house'  
 DW 30-07-98

(82b) chen sɪkw'-it t-en yekwáy

1SUBsg cut-TRANS OBL-1POSS dress

'I tore my dress'

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For the sentence in (82a), the speaker states that it "sounds like [the house is finished]"; thus, it is not surprising that the sentence is translated in the past even though no overt past tense marker is present<sup>22</sup>. We can take the speaker's translation and comment to reinforce the fact that a bare accomplishment predicate in *Skwxwú7mesh* denotes a completed event. Thus, the data in (82) and the speaker's comments support the representation in (81).

Recall Pustejovsky's claim that the event head (i.e. the portion of the matrix event that is in focus) of an accomplishment predicate is the initial process subevent. Given that the event structure of a *Skwxwú7mesh* accomplishment predicate consists of an initial subevent *e*, the proposal that a pluractional marker pluralizes the head of an event structure predicts that *e* is the target of pluralization. Since a pluralized *e* can yield a continuous reading of an activity, we expect that a pluralized accomplishment predicate yields a continuous reading of its initial subevent. This prediction is confirmed by the data in (83); when an accomplishment predicate is introduced by *wa*, a present continuous reading arises. This is illustrated by the sentences in (83):

(83a) chen wa ti-lam7

1SUBsg PA make-house

'I am making a house'

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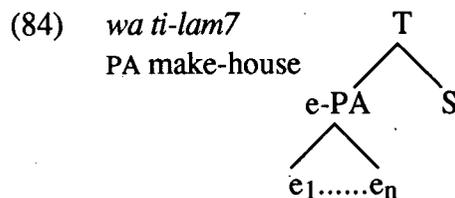
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<sup>22</sup>Recall from Chapter 2 that the aspectual class of the predicate may define the temporal interpretation of a sentence in the absence of overt tense marking.

- (83b) chen wa s'kw'-it ten yekwáy  
 1SUBsg PA cut-TRANS 1POSS dress  
 'I was cutting my dress'  
 EJ 27-08-98

The speaker emphasizes the fact that the predicate with *wa* is not yet culminated when she states that the house is "not finished"; this again demonstrated that the pluractional marker, *wa*, causes the event to be atelic.

I propose that an accomplishment predicate introduced by *wa* is represented by a transition consisting of an initial pluralized subevent *e* and a resulting state. This structure is given in (84):



This representation raises a question about the status of phase level repetition; according to Cusic (1981), phase repetition entails multiple events which sum up to form a single token of the type denoted by the verb. Though it is clear that *e* is being pluralized, it is not clear whether it is *e* in the aspectual representation of a process that is being pluralized, or *e* that dominates a sequence of such primitive subevents (i.e. the *e* that is a phase of the transition). This is an analogue of the problem alluded to above with respect to an activity predicate where, recall, it was impossible to distinguish between phase-level repetition and event-level repetition.

For an accomplishment predicate, the distinction between event level and phase level repetition is found in the event structure since the event structure of an accomplishment is complex; that is, there is further structure in the representation of an accomplishment predicate, namely, a higher transition (T).

Recall that an achievement predicate is represented by a transition; when pluralized, the *T* in the event structure of the achievement predicate is targeted, yielding a habitual reading. We already know that it is possible for one predicate to yield two different readings when pluralized; furthermore, we know that transitions can be targets for pluralization. Thus, we predict that an accomplishment predicate can also yield a habitual reading, in which case, the transition denoted by the predicate will be pluralized (as opposed to the initial subevent). Before examining this representation, let us confirm that this prediction holds true in the data.

Given the appropriate context, an accomplishment predicate in *Skwúwú7mesh* can indeed yield a habitual reading; thus, specifying a person's present occupation should yield a statement in which a particular event occurs multiple times without indicating a culmination point. Since this type of statement denotes an atelic event, we expect that in *Skwúwú7mesh*, an accomplishment predicate with a habitual reading should be pluralized. The fact that the predicate is introduced by *wa* demonstrates that this is exactly the case; this is illustrated in (85):

- (85) Peter na wa tehím ta lam7 nilh s-ts'íts'ap'-s  
 Peter RL PA make DET house FOC NOM-work-3POSS  
 'Peter builds houses, that's his job'

A pluralized accomplishment predicate that yields a habitual reading is represented as a pluralized *T* consisting of an unspecified number of *Ts*. This representation is given in (86):

- (86) *wa ti-lam7*  
 PA make-house
- 
- ```

graph TD
    TPA[T-PA] --- T1[T1.....]
    TPA --- Tn[Tn]
    T1 --- e1[e]
    T1 --- S1[S]
    Tn --- e2[e]
    Tn --- S2[S]
  
```

With this representation, the pluractional marker *wa* is not pluralizing the event head, but the event type denoted by the accomplishment predicate<sup>23</sup>.

#### 5.4.4. States

Recall that a state is a predicate that persists over a stretch of time and apparently involves no dynamics. There are two types of stative predicates: stage-level and individual-level. In the first subsection, I discuss stage-level stative predicates and in the second subsection, I discuss individual-level predicates.

##### 5.4.4.1. Stage-level Stative Predicates

We observe, once again, that in *Skwxwú7mesh* a stage-level state is introduced by *wa*; this is illustrated in (87):

(87a) *wa kw'ay' ta míxalh*

PA hungry DET bear

'the bear is hungry'

(87b) *chen wa t'ayak na7 t-kwi an7us-k*

1SUBsg PA angry LOC OBL-DET two-IRR

'I was mad at two o'clock'

DW 30-07-98

---

<sup>23</sup>Preliminary data shows that reduplication of the predicate, as well as the addition of *wa*, yields a reading whereby the transitions are occurring continuously in time; this is apparent from the speaker's explanation that you are building houses "one after the other":

(iv) *chen wa te-thím ta lam7*

1SUBsg PA RED-make DET house

'I'm making houses, one after the other'

Note that the speaker also offers a sentence where the predicate is not reduplicated, but the object is and says that this is an alternative to the sentence where the predicate is reduplicated. I leave this issue to further research.

(87c) chen wa lhchiws

1SUBsg PA tired

'I am tired'

LB 25-08-98

However, stage-level state predicates are well-formed without *wa*, but yield a different interpretation; in their bare form, stage-level state predicates are translated with a *change-of-state* reading. This is illustrated in (88):

(88a) chen t'ayak<sub>k</sub> na<sup>7</sup> t-kwi an<sup>7</sup>us-<sub>k</sub>

1SUBsg angry LOC OBL-DET two-IRR

'I got mad at two o'clock'

DW 30-07-98

(88b) chen kw'ay'

1SUBsg hungry

'I got hungry'

LB 25-08-98

(88c) chen kw'ay' kwi-n-s na kwach-nexw-an ta sch'exw<sub>k</sub>

1SUBsg hungry DET-1POSS-NOM RL see-TRANS-1SUBsg DET fried.food

'I got hungry when I saw the bannock'

LB 25-08-98

(88d) chen lhchiws

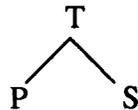
1SUBsg tired

'I got tired'

LB 25-08-98

Recall that Pustejovsky suggests that the feature that distinguishes between a stage-level predicate and an individual-level predicate is that a stage-level predicate has an "inherent reference to that factor that brings this state about" (1995:225). Thus, for Pustejovsky, the event structure of a stage-level predicate is represented by a transition with an initial default subevent process (P) and a final resulting state (S), where the resulting state is the event head. This was shown in (50) and is repeated in (89):

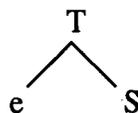
(89)



where S=event head

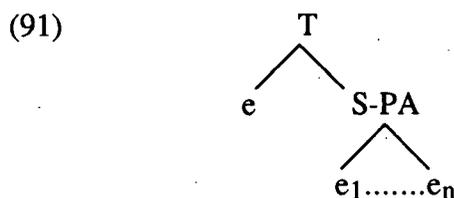
Pustejovsky must claim that the initial subevent is a default because he does not want to represent a change-of-state reading; Pustejovsky's goal is to represent the reading of a stage-level predicate. The complex structure that Pustejovsky proposes is not a problem for  $\text{Skwxwú7mesh}$ , however, since the change-of-state reading is exactly the reading that a bare stage-level predicate yields. Taking into consideration the representation proposed for a bare activity predicate (cf. (71)), I propose that a bare stage-level predicate is represented by a transition (T) with an initial subevent  $e$  and a final resulting state (S). This event structure is given in (90):

(90)



Assuming this structure for the bare form of the stage-level predicate (with the change-of-state reading), we must then explain what portion of this event structure is the target for pluralization; in other words, what is *wa* pluralizing in order to yield the stative reading?

Since the resulting state of the transition is the head of the event structure, it should be the target for pluralization; moreover, the fact that the stage-level stative reading arises when *wa* is added to the predicate also demonstrates that it is the final state that is being pluralized. Thus, the transition representing a complex stage-level predicate consists of an initial subevent *e* and a final pluralized state (S-PA); this event structure is given in (91):



Thus, I am claiming that a stage-level stative predicate is derived; however, my claim is that it is derived from a transition, not an individual-level predicate; moreover, notice that the pluralized state now resembles a derived process.

With respect to phase level repetition, the same issue that is raised with a pluralized accomplishment applies to complex stage-level stative predicates. The event structure of a stage-level predicate, like that of an accomplishment predicate, is complex; pluralization targets a subevent portion of the event structure. Thus, it is unclear whether it is pluralized *e* that yields the phase level repetition or the fact that *S* is merely a phase of the transition representing a bare stage-level predicate that yields phase level repetition<sup>24</sup>.

---

<sup>24</sup>Since the structure provided in (91) is that of a transition, we expect that a habitual reading should be available (as with accomplishments and achievements). At this point, there is not enough data to conclude whether the habitual reading is simply missing from predicates of this class; I leave this issue to further research.

#### 5.4.4.2. Individual-Level Predicates

Since an individual-level predicate denotes a property that can only be attributed to an individual once and whose duration is not bounded, it is, by definition, atelic. Thus, contrary to predicates from all other aspectual classes, the bare form of an individual-level predicate in *Skwxwú7mesh* is expected to be atelic. Consequently, we expect that individual-level predicates are not compatible with *wa* since the pluractional marker would entail a plurality that is not available for predicates of this class; this, in fact, is the case. This is illustrated by the sentences in (92):

(92a) *hiyi ta míxalh*  
big DET bear  
'the bear is big'

(92b) *wa hiyi ta míxalh*  
PA big DET bear  
\*'the bear is big'

(92c) *chen iy7ím*  
1SUBsg strong  
'I am strong'  
DW 30-07-98

Follow Pustejovsky, I assume the event structure of a state for a predicate from the class of individual-level predicates; this is illustrated in (93)<sup>25</sup>:

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<sup>25</sup>For the analysis presented in this thesis, I distinguish this representation from the representation of a single event *e* with no further structure.

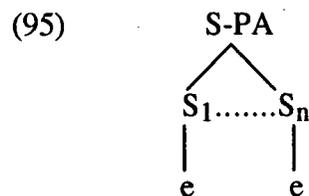
(93)            S  
                   |  
                   e

Notice, however, when a clause specifying a time frame in which the matrix predicate holds is added to the sentence, the predicate is introduced by *wa*. This is illustrated in (94), with the addition of the clause *lh-7an wa ts'ets'kw'a-t-sut* 'when I'm running':

(94)    chen    wa   iy7im   lh-7an            wa   ts'ets'kw'a-t-sut  
           1SUBsg PA   strong when-1SUBsg PA   run-TRANS-REFL  
           'I am strong when I'm running'  
           DW 30-07-98

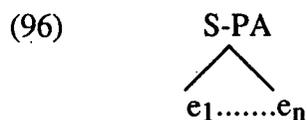
This would suggest that the individual-level predicate is being treated as a stage-level predicate in that the predicate becomes a temporary property that can be attributed to the individual more than once<sup>26</sup>. What, then, is the event structure of a stage-level predicate that is derived from an individual-level predicate?

There are two ways to answer this question; firstly, we might represent a stage-level stative predicate derived from an individual-level predicate as a pluralized state yielding event level repetition. It is not clear how this event structure should be represented; however, a first attempt might appear as the structure in (95):



<sup>26</sup>As noted in Kratzer (1995), "if the distinction between stage-level and individual-level predicates is operative in natural language, it cannot be a distinction that is made in the lexicon of a language once and for all" (125-6).

Secondly, the representation of a stage-level predicate that is derived from an individual-level predicate may appear exactly as a pluralized state. This structure is illustrated in (96):



This representation parallels the final subevent of a pluralized stage-level stative predicate that is derived from a transition (cf. (91) above). The next issue to address would then be whether the change-of-state reading is available for a stage-level stative predicate derived from an individual-level predicate; if the change-of-state reading is available, we would expect the event structure of a stage-level stative predicate that is derived from an individual-level predicate and one that is derived from a transition, to be the same. The next question would then be whether the change-of-state reading is available for an individual-level predicate; at this point in the analysis, this reading does not seem to be available. I leave this issue to further research.

#### 5.4. Summary

The chart in (97) provides a summary of the findings of this chapter; for each aspectual class, the type of repetition that arises from pluralization is given, along with a specification of what portion of the event structure is pluralized to yield that reading.

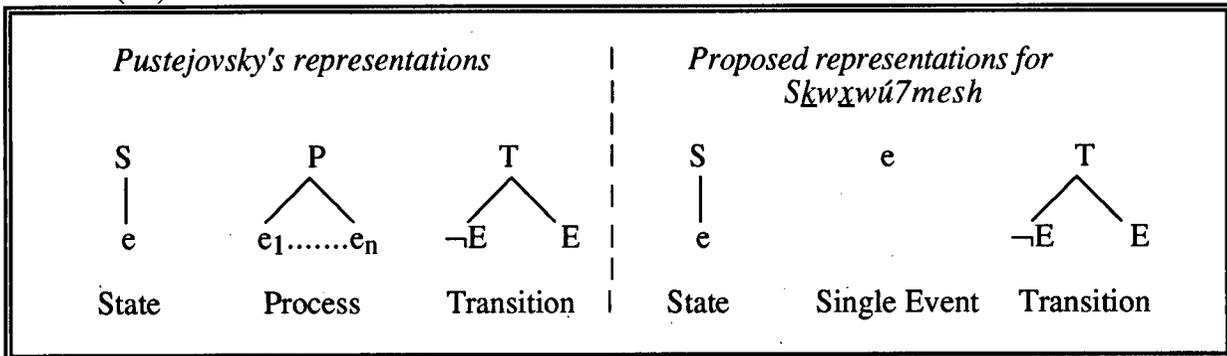
(97)

|                |     |     | EVENT-LEVEL | PHASE-LEVEL |
|----------------|-----|-----|-------------|-------------|
| ACHIEVEMENT    | +WA |     | ✓ (T)       | ✗           |
| ACTIVITY       | +WA |     | ✓ (e)       | ✓ (e)       |
| ACCOMPLISHMENT | +WA |     | ✓ (T)       | ✓ (e)       |
| STATE          | I-L | +WA | ✗           | ✗           |
|                | S-L | +WA | ? (T)       | ✓ (S)       |

The ✗ in both columns for individual-level predicates indicates that pluralization of an individual-level predicate is simply not possible; however, since individual-level predicates can yield stage-level stative readings when they are introduced by *wa*, it should be noted that the stage-level stative reading of the predicate is a pluralized form, though it remains unclear whether the type of repetition is phase level or event level.

The two event structure models discussed in this chapter are summarized in (98):

(98)



The event structures proposed for Skwxwú7mesh differ from those proposed by Pustejovsky in one crucial way; according to Pustejovsky's model, a process is a primitive. According to

the model presented in this thesis, a process is derived from a single event, represented by  $e$ .  
The issue of primitives is discussed further in Chapter 7.

## 6. SOLVING THE SECOND PROBLEM

As outlined in Chapter 3, the Skwxwú7mesh data brings about an interesting paradox with respect to adverbs of quantification. Recall that *wa* is incompatible with an individual-level predicate reading in a non-quantified sentence, yet *wa* is obligatory with an individual-level predicate in a quantified sentence. This is repeated in (98):

(98a) hiyi ta míxalh

big DET bear

'the bear is big'

(98b) ?wa hiyi ta míxalh

PA big DET bear

\*'the bear is big'

(98b) lhik' \*(wa) hiyi ta mex-míxalh

always PA big DET RED-bear

'these bears are always big'

In this chapter, I argue that these facts provide crucial evidence that Q-adverbs should be analyzed as quantifiers strictly over events (De Swart); furthermore, I use the proposal that *wa* is a pluractional marker to explain how quantification over events operates in Skwxwú7mesh.

Section 6.1. outlines the most widely known proposal for Q-adverbs (Kratzer 1995); Kratzer analyzes Q-adverbs as unselective binders in which a Q-adverb can either bind a spatio-temporal variable or an individual variable, yielding a temporal and an atemporal interpretation, respectively. Thus, to begin this section, I present Kratzer's view of the temporal/atemporal distinction together with her view of the stage-level/individual-level distinction (Subsection 6.1.2.). I show how Kratzer analyzes 'when-clause' data in her unselective binding approach

and then informally apply her analysis to simplex sentences. I conclude Section 6.1. by explaining how Kratzer's analysis of Q-adverbs cannot account for the *Skwú7mesh* data. Section 6.2. presents an analysis of Q-adverbs that does capture the *Skwú7mesh* facts; I claim that *Skwú7mesh* provides crucial evidence for De Swart's (1993, 1995) event-based approach to analyzing Q-adverbs whereby quantification is strictly over events. Her analysis of sentences containing a stage-level predicate/individual-level predicate is presented and then applied to *Skwú7mesh*. Crucially, De Swart's analysis assumes that a plurality of events is required for quantification; consequently, while De Swart claims that the set of events is either encoded in the predicate or arises from an (in)definite NP, I argue that *Skwú7mesh* provides evidence that the set of events is always created overtly, by the pluractional marker *wa*.

### **6.1. Quantification over Events/Individuals: Kratzer (1995)**

It is Kratzer's (1995) claim that adverbs of quantification (Q-adverbs), such as *always*, *usually*, *rarely*...can bind either spatiotemporal ("event") variables or individual variables. This section outlines this approach to analyzing Q-adverbs; I begin with a discussion of the two types of interpretations that arise from quantification by Q-adverbs.

#### *6.1.1. Temporal and Atemporal Interpretations*

There are two possible interpretations of sentences containing Q-adverbs: temporal and atemporal interpretations. The sentence in (99a) below is an example of a sentence that yields a temporal interpretation while the sentence in (99b) yields an atemporal interpretation:

(99a) John is always hungry            (temporal)

(99b) A bear is always big            (atemporal)

Informally, the interpretation in (99a) is described as temporal since the sentence seems to be providing information about the times that *John is hungry*; that is, the sentence in (99a) can be paraphrased *At all times, John is hungry*. Although the same adverb, *always*, is used in (99b), the sentence is paraphrased *All bears are big*; this is to say that the interpretation is atemporal since the sentence does not provide any information about the *times* at which bears are big.

In Kratzer's unselective binding approach to analyzing Q-adverbs, temporal and atemporal interpretations are understood to arise from different types of quantification; this is to say that the readings that arise are dependent on the variable that is quantified over by the Q-adverb. Thus, when a Q-adverb quantifies over a variable that ranges over a spatio-temporal location, a temporal interpretation arises; on the other hand, an atemporal interpretation arises in the case where a Q-adverb binds an atemporal entity, or an individual variable. Before examining Kratzer's analysis of Q-adverbs, I provide an outline of her proposal on the distinction between stage-level and individual-level predicates.

### 6.1.2. The Stage-level/Individual-level Distinction

Recall that a stage-level predicate expresses a transitory property while an individual-level predicate expresses a permanent property. These two types of predicates are exemplified again in (100);

(100a)      John is tired    (stage-level predicate)

(100b)      John is tall      (individual-level predicate)

The predicate *tired* in (100a) is understood to describe a temporary property of *John*; the predicate *tall* in (100b), on the other hand, is understood to describe a property of *John* that holds at all times. Kratzer captures the distinction between stage-level and individual-level predicates in terms of argument structure; she claims that stage-level predicates have an extra spatiotemporal argument that individual-predicates lack. Thus the argument structure of the

stage-level predicate *tired* in (100a) is represented as in (101a) while the argument structure of the individual-level predicate *tall* in (100b) is represented as in (101b) below:

(101a)        *tired* (x, l)     where *l* = spatiotemporal argument

(101b)        *tall* (x)

According to this proposal, a stage-level predicate will be true of its subject at a certain time (or place), while an individual-level predicate cannot select a particular time (or place) in which it will hold true of its subject; thus, the extra argument of stage-level predicates specifies the time/location where the event takes place. This captures the fact that a stage-level predicate denotes a temporary property and an individual-level predicate denotes a permanent property. Consequently, the grammaticality of (102a) and the ungrammaticality of (102b) below are accounted for:

(102a)        John is tired today

(102b)        \*John is tall today

The interpretation of (102a) is that there is a specific time, namely *today*, when *John has the property of being tired*, accounted for by the fact that *tired* has an extra argument position that is reserved for that information. In contrast, specifying the time at which John has the property of being tall yields an ungrammatical sentence; Kratzer attributes the ungrammaticality of (102b) to the fact that the predicate *tall* does not have a spatiotemporal argument that can be assigned to the temporal modifier *today*.

Notice that (102b) can be judged grammatical in a particular context; for example, if John is a short person but was seen walking on stilts on a particular day, the sentence *John is tall today* may not sound odd. Kratzer notes this problem and attributes it to the issue of classification; she claims that the stage-level/individual-level distinction is not made in the

lexicon "once and for all" but it varies in context because it is a distinction that is "operative in natural language". This is to say that if John walked on stilts once a week, *the property of being tall* would be a stage-level property for John (that is, if it assumed that the stilts themselves can actually vary John's "height"). Taking this into consideration, Kratzer generalizes that a predicate's argument structure will change depending on its classification as a stage-level or individual-level predicate. She couches the distinction between stage-level predicates and individual-level predicates in a discussion of adverbs of quantification in order to derive the meaning effects of temporal and atemporal readings.

### 6.1.3. *When-clauses*

Kratzer suggests that 'when-clause' data provide independent evidence for the extra argument position in stage-level predicates. Consider her examples in (103) below:

(103a)        When Mary speaks French, she speaks it well.

(103b)        \*When Mary knows French, she knows it well.

(Kratzer 1995:129)

Kratzer states that 'when-clause' sentences contain a null operator with the meaning of *always*; thus an informal representation of (103a) and (103b) above would appear as (104a) and (104b) below respectively:



predicates); furthermore, the pronoun *it* in the nuclear scope must also introduce an individual variable. Consequently, the non-overt operator *always* will bind these variables in their respective sentences, yielding the following analyses:

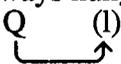
(106a)  $\text{Always}_x$  [foreign language (x) & knows (Mary, x)] [knows well (Mary, x)]

(106b)  $\text{Always}_x$  [Moroccan (x) & knows (x, French)] [knows-well (x, French)]

Thus in Kratzer's analysis, both spatio-temporal variables and individual variables can be bound by a Q-adverb, yielding temporal and atemporal interpretations, respectively.

#### 6.1.4. Simplex Clauses

Although Kratzer does not address mono-clausal sentences in her analysis, the same facts are observed for them. In the sentence *John is always hungry*, *always* binds the event variable introduced by the stage-level predicate *hungry*; this is illustrated in (107a) (formal representations have not been shown):

(107a) John is always hungry  

 A diagram showing a bracket under the word 'always' in the sentence 'John is always hungry'. The bracket starts under 'always' and ends under the letter 'l' in '(l)', which is positioned above the word 'hungry'. An upward-pointing arrow is at the end of the bracket under 'l'.

Kratzer thus accounts for the temporal reading that arises.

In the sentence *A bear is always big*, there is no stage-level predicate introducing an event variable; instead, there is an individual-level predicate, *big*, that does not introduce an event variable, nor does it introduce an individual variable. There is, however, an indefinite NP, *a bear*, that introduces a free individual variable; thus, *always* binds the variable introduced by the indefinite NP. This is shown in (108):

(108) A bear is always big  

 A diagram showing a bracket under the word 'always' in the sentence 'A bear is always big'. The bracket starts under 'always' and ends under the letter 'x' in '(x)', which is positioned above the word 'big'. An upward-pointing arrow is at the end of the bracket under 'x'.

Kratzer thus accounts for the atemporal reading that arises.

Finally, Kratzer must account for the fact that *John is always big* is an ill-formed sentence; the ungrammaticality is explained by the fact that there is no free variable for the Q-adverb to bind. The individual-level predicate *big* does not introduce an event variable and the proper name *John* does not introduce a free individual variable; this is illustrated in (109):

(109) \*John is always big  
Q

Recall that Kratzer assumes that natural language does not permit vacuous quantification; thus, the sentence in (109) cannot yield a temporal nor an atemporal interpretation.

Kratzer's analysis demonstrates that temporal and atemporal readings result from two types of quantification; quantification over events yields a temporal reading and quantification over individuals yields an atemporal reading. The issue is whether Kratzer's analysis of Q-adverbs can account for the generalizations observed in Skwxwú7mesh. The analysis of the Skwxwú7mesh data presented in this thesis argues that a plural DP is not sufficient to make a sentence containing a Q-adverb well-formed; instead, the claim is that all predicates must be pluralized when they occur in a sentence containing a Q-adverb. Thus, this thesis claims that the unselective binding approach to quantification cannot account for Skwxwú7mesh. Others have proposed that quantification is strictly over events and that quantification over individuals is not necessary to account for atemporal readings (De Swart 1993, 1995); it is this account of Q-adverbs that I will adopt. The following section outlines De Swart's analysis of Q-adverbs and demonstrates how the Skwxwú7mesh facts can be explained.

## 6.2. The Event-Based Approach: De Swart (1993, 1996)

De Swart claims that Q-adverbs require a plurality of events (situations) on which to operate; this set arises if one of the predicate's arguments is variable. Rather than distinguishing between stage-level and individual-level predicates by whether the predicate introduces an extra argument position for events or spatiotemporal locations (the Davidsonian argument), de Swart suggests that a Davidsonian argument can be added to every predicate. She then introduces a uniqueness presupposition on the Davidsonian argument to account for the fact that individual-level predicates and 'once-only' predicates do not combine with a Q-adverb:

- (110) **Uniqueness presupposition on the Davidsonian argument:**  
If not empty, the set of events that is in the denotation of a 'once-only' predicate is a singleton set for all models and each assignment of individuals to the arguments of the predicate

(de Swart 1996:179)

Although uniqueness blocks quantification, sentences containing an individual-level predicate or 'once-only' predicate can combine with Q-adverbs if an NP in the sentence introduces a variable; to account for this, de Swart offers the following plurality condition on quantification:

- (111) **Plurality condition on quantification:**  
A Q-adverb does not quantify over a set of situations if it is known that this set has a cardinality less than two.  
A set of situations is known to be a singleton set if:  
1) the predicate contained in the sentence satisfies the uniqueness presupposition on the Davidsonian argument, and  
2) there is no (in)definite NP present in the sentence which allows indirect binding by means of quantification over assignments.

(de Swart 1993:130)

Thus, the crucial difference between Kratzer's approach and De Swart's approach is that Kratzer's approach allows for either spatiotemporal variables or individual variables to be bound by a Q-adverb. De Swart's approach, on the other hand, does not allow for direct binding of individual variables, but for indirect binding by means of quantification of assignments.

De Swart claims that the temporal and atemporal interpretations do not result from two different types of quantification predicted by unselective binding; instead, she claims that the meaning effects result from pragmatics. In the event-based analysis, the mapping relationship between participants and events will vary depending on the predicate. The next subsection applies De Swart's analysis to English sentences containing Q-adverbs.

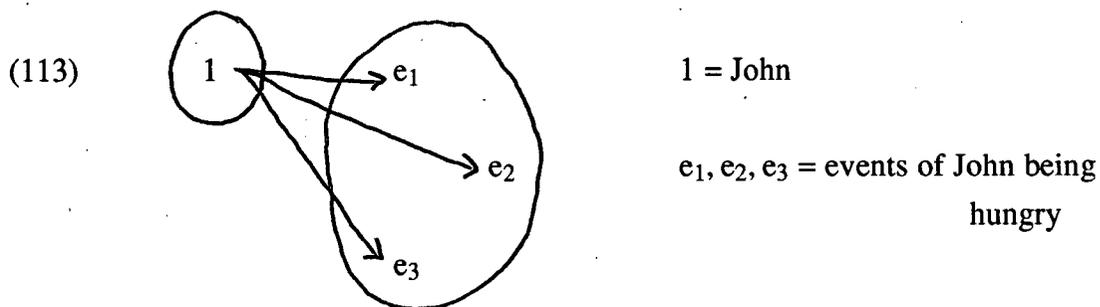
### 6.2.1. The Analysis of Q-adverbs in English

#### 6.2.1.1. Stage-level Stative Predicates

With a stage-level predicate, a number of events can have the same participant; that is to say that there is no exact one-to-one mapping of participants and events. Consider the example in (112) below:

(112) John is always hungry

The event-based analysis assumes that *John being hungry* is an event; in (112), there is a plurality of events in which *John* is the participant of every *event of John being hungry*. The sentence in (112) denotes a set of participants and a set of events; there is only one participant, *John*, in the set of participants, and there are a number of events in the set of events. Crucially, the Q-adverb requires that *John* be associated with each and every one of the events in the set; the Q-adverb then quantifies over the *events of John being hungry*. This is illustrated in (113) below:



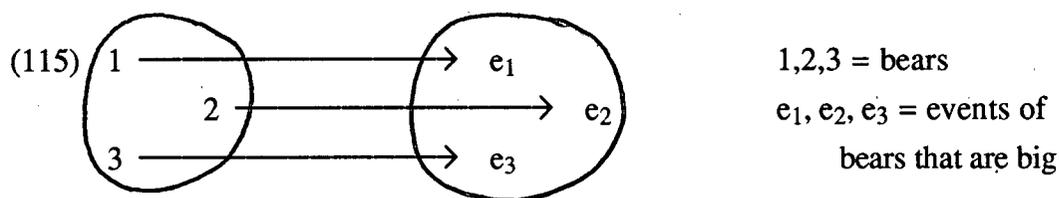
To explain how the set of events arises, De Swart would say that the fact that *hungry* is a stage-level predicate that does not satisfy the uniqueness presupposition on its Davidsonian argument suggests that the set of situations has a cardinality of more than one.

#### 6.2.1.2. Individual-Level Predicates

An individual-level predicate differs from a stage-level predicate with respect to the mapping relation that exists between the set of participants and the set of events; for a stage-level stative predicate, a number of events can have the same participant. For an individual-level predicate, however, each event can have one and only one participant. Consider the sentence in (114):

(114) Bears are always big

Under De Swart's analysis, every *event of a bear that is big* will have its own *bear*; that set of events is in a one-to-one correspondence with the set of *bears that are big*. Thus, no two events in which there is a big bear will involve the same bear; this corresponds to 'once-only' predicates (i.e. *die*) in that the same action cannot be repeated with respect to the same individual. The mapping of events and participants for individual-level predicates is shown in (115) below:



The one-to-one mapping relationship between the set of participants and the set of events can be explained by stating that the Q-adverb requires each event to have one and only one participant. De Swart claims that the plurality in the set of events is created by the generic subject; although, according to her plurality condition on quantification, an individual-level predicate (i.e. *big*) satisfies the uniqueness presupposition on the Davidsonian argument, there

is an NP (the generic subject, *bears*) present in the sentence that allows for "indirect binding by means of quantification over assignments" (De Swart 1993:130). Given the *Skwxwú7mesh* facts, a different explanation is required. The next subsection applies De Swart's analysis to *Skwxwú7mesh* data.

### 6.2.2. The Analysis of Q-adverbs in *Skwxwú7mesh*

#### 6.2.2.1. Stage-level Stative Predicates

Recall that in *Skwxwú7mesh*, *wa* is obligatory with a stage-level predicate when it combines with a Q-adverb; this is repeated in (116):

(116a)        *lhik' wa kw'ay' ta míxalh*  
                  always PA hungry DET bear  
                  'the bear is always hungry'

(116b)        \**lhik' kw'ay' ta míxalh*  
                  always hungry DET bear

Given the proposal that *wa* is a pluractional marker in *Skwxwú7mesh*, we can account for the temporal reading of the sentence in (116a) results from the quantification over a plurality of events, *events of the bear being hungry*, for one participant, *the bear*. Thus, De Swart's analysis can account for the *Skwxwú7mesh* data in that a plurality of events is required for quantification. However, the analysis for *Skwxwú7mesh* assumed in this thesis differs from De Swart's analysis in one crucial respect; while De Swart claims the plurality of events results from the the fact that a stage-level predicate does not satisfy the uniqueness presupposition, *Skwxwú7mesh* provides evidence that the plurality of events is marked overtly. Under the claim that *wa* is a pluractional marker, we account for the set of plural events by stating that *wa* pluralizes the predicate, yielding a set of events over which the Q-adverb can quantify.

### 6.2.2.2. Individual-Level Predicates

Thus far, I have claimed that the plurality in the set of events in *Skwú7mesh* is created by a pluralized predicate (i.e. a predicate introduced by *wa*). Recall that an individual-level stative predicate in *Skwú7mesh* is not introduced by *wa*; in the cases where they are introduced by *wa*, they are glossed as stage-level predicates. However, the translation for a quantified sentence containing an individual-level predicate demonstrates that the predicate is not being used as a stage-level predicate; this is illustrated in (117):

- (117) *lhik' wa hiyi ta mex-míxalh*  
always PA big DET RED-bear  
'these bears are always big'  
speaker: "a group of bears in this area"

Since the predicate is not pluralized in its non-quantified form, I claim that the predicate is pluralized in order to satisfy a plurality condition on quantification. This explains why an individual-level predicate is introduced by *wa* when it combines with a Q-adverb, but lacks *wa* in its non-quantified form. However, there is still a question remaining as to why a plural DP is required.

Notice that in *Skwú7mesh*, a quantified sentence containing an individual-level predicate and *wa* must also have a plural DP as its subject; with a singular DP, the sentence is judged ungrammatical. This is illustrated in (118):

- (118) \**lhik' wa hiyi ta míxalh*  
always PA big DET bear

Recall Matthewson's (1996) claim that DPs in Salish do not encode a distinction between definiteness and indefiniteness; under this view, the judgment in (118) is expected since the DP selects one bear, not a group of them. Consequently, the DP in (118), unlike the generic subject in English, does not denote any plurality. In the event-based approach, the ungrammaticality of (118) is explained by the fact that there is no plurality of events over which the Q-adverb can quantify; since there is only one event of a bear being big, the quantification is, according to de Swart, "in some sense trivial" (1996:179). However, according to the analysis proposed in this thesis, the source of the plurality of events is the pluralized predicate and not the DP; thus, we would expect the sentence in (118) to be grammatical since it contains a pluralized predicate. We can explain the requirement for a plural DP by stating that the one-to-one mapping relationship between the set of events and the set of participants would not hold if the DP was singular; this is to say that with a singular DP there would be one bear in the set of participants and a plurality of events in the set of events. This mapping relationship is only available for stage-level predicates (cf. (113)); in order to satisfy the one-to-one mapping requirement for a Q-adverb in combination with an individual-level predicate, a plural DP must be introduced.

## 7. THEORETICAL/CROSS-LINGUISTIC IMPLICATIONS AND FURTHER ISSUES

This thesis has argued that *wa* is a pluractional marker that pluralizes the head of a predicate's event structure or the event type denoted by the predicate. This proposal explains the distribution of *wa* across four aspectual classes (achievements, activities, accomplishments and states). Furthermore, this proposal accounts for the different interpretations that arise when a predicate is introduced by *wa*. Whether a pluralized predicate yields event level repetition or phase level repetition can be identified in the event structure of the predicate (with the exception of activity predicates). This proposal leads to the claim that bare predicates (with the exception of individual-level predicates) in *Skwxwú7mesh* are telic; thus, what *wa* does to a predicate is cause it to become atelic. Atelicity is marked by either the continuation of a single event or the iteration of an event<sup>27</sup>. This analysis of *Skwxwú7mesh wa* is a formalization of Kuipers's description of *wa* as a morpheme referring to a process that has duration either in the form of a single act or the regular performance of it.

The proposal of *wa* as a pluractional marker also accounts for the fact that *wa* is obligatory with a stage-level stative predicate and an individual-level predicate in *Skwxwú7mesh* quantified sentences; this thesis argued that this obligatoriness provides evidence that Q-adverbs quantify strictly over events.

The analysis presented in this thesis has both cross-linguistic and theoretical implications. This chapter outlines two major implications of this analysis; Section 7.1. outlines the implications for aspectual classes with respect to Pustejovsky's event structure representations and the event structures proposed for *Skwxwú7mesh*. In particular, this section addresses the issue of cross-linguistic primitives. Section 7.2. outlines the implications of this analysis for quantification; in particular, the question of whether unselective binding is available in *Skwxwú7mesh*, and other Salish languages, is revisited. This chapter concludes with a discussion of some issues related to this thesis that require further investigation; some

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<sup>27</sup>Recall that the status of the pluralization of an individual-level predicate remains unclear.

preliminary data on the role of predicate reduplication and different types of quantification in Skwxwú7mesh is presented and briefly discussed.

### **7.1. Cross-Linguistic/Theoretical Implications for Aspectual Classes: On Primitives in Event Structure models**

In Chapter 5 I presented Pustejovsky's event structure model and illustrated how Skwxwú7mesh predicates are analyzed within his theory; I argued that a process in Skwxwú7mesh is derived. Since Pustejovsky's model is intended to be a universal representation of predicate classes, this claim has a larger theoretical implication; in other words, if a process is derived in at least one language, namely Skwxwú7mesh, Pustejovsky's model cannot be a universal representation of predicate classes. There are two approaches to setting out an explanation of these facts, both of which raise further questions.

The first approach assumes that event structures *are* universal; this approach will require further cross-linguistic research to verify if this, in fact is the case. However, on a much simpler level, the question to address is whether English can be accounted for within a model that does not assume *process* as a primitive class.

The second approach assumes that event structures are *not* universal; if this is the correct approach, we are left with the task of finding a parameter. This is to say that a parameter must be established in order to account for each of the world's languages; a common thread must be identified to determine for which language the parameter is on and for which it is off.

### **7.2. Cross-Linguistic Implications for Quantification: On the Availability of Unselective Binders in Salish**

In Chapter 6 I claimed that Kratzer's unselective binding approach to analyzing Q-adverbs cannot account for the fact that *wa* is obligatory in Skwxwú7mesh quantified sentences. Consequently, I argued that quantification is strictly over events (following De Swart). Crucial

to Kratzer's analysis is the fact that indefinite NPs introduce variables that can be bound by a Q-adverb; recall, however, that Matthewson (1996) claims that DPs in Salish languages do not encode a distinction between definiteness and indefiniteness. Thus, it may not be the case that Kratzer's analysis is, in fact, wrong; instead, we might say that, due to the status of DPs in Salish, Kratzer's account of Q-adverbs is blocked from applying. Consequently, De Swart's claim that Q-adverbs only quantify over events may be the default analysis that applies to a language such as *Skwxwú7mesh* when quantification over individuals is prevented.

Jelinek (1995) claims that Straits Salish has unselective adverbial quantification. She argues that Straits Salish lacks nouns and thus, D-quantification is not available. Instead, she states that A-quantification is the only type of quantification available, and consequently, adverbial quantification is unselective. Since Salish languages are thought to exhibit many of the same properties, the analysis of adverbial quantification presented in this thesis demonstrates that at least one Salish language does not have unselective quantification. Further research regarding this issue is required.

### **7.3. Issues for Further Research in *Skwxwú7mesh***

#### **7.3.1. The Role of Predicate Reduplication**

Reduplication is a related issue to a discussion of quantification. Demers and Jelinek point out that "reduplication is a process...[that] falls into the class of A-quantifiers" (1996:75). Furthermore, they state that "while particular reduplication patterns mark particular quantitative notions, these patterns are not confined to a particular root class, but produce a reading constrained by the lexical semantic properties of the root and other morphological material present" (1996:78). Kuipers (1967) classifies reduplication patterns in *Skwxwú7mesh* into two general classes: total reduplication (i.e. CVC) and partial reduplication (i.e. CV). He states that "total reduplication serves to express plurality or collectiveness in nouns, iteration, intensity or distributiveness in verbs..."; partial reduplication, on the other hand is said to express "continuous in verbs...diminutiveness in nouns and verbs" (1967:98). Preliminary

research has shown that the stage-level/ individual-level distinction is of relevance to reduplication; stage-level predicates can be reduplicated but individual-level predicates cannot be reduplicated. The purpose of this section is to outline some preliminary reduplication facts, and to show that reduplication of a stage-level predicate is not enough to license a Q-adverb.

In non-quantified sentences containing stage-level stative predicates, some speakers allow *wa* to be dropped if the predicate is reduplicated (recall that non-reduplicated stage-level predicates require *wa*); this is illustrated in (119):

- (119) kw'a-kw'ay' ta mǐxalh  
RED-hungry DET bear  
'the bear's hungry' , 'the bear's getting hungry'

Kuipers (1967:346) glosses this reduplicated form as 'be very hungry'; however, speakers do not tend to offer the intensifier gloss. In general, speakers seem to prefer both *wa* and the reduplicated predicate; this is shown in (120):

- (120) wa kw'a-kw'ay' ta mǐxalh  
PA RED-hungry DET bear  
'the bear is hungry'

Although *wa* can sometimes be omitted from non-quantified sentences, quantified sentences containing stage-level reduplicated predicates require *wa* for a judgement of well-formedness. This is illustrated in (121):

- (121) lhik' chen wa kw'a-kw'ay'  
always 1SUBsg PA RED-hungry  
'I'm always hungry'

What is of major importance is discovering the differences, if any, in interpretations of a reduplicated predicate and a non-reduplicated predicate. The second gloss given for the sentence in (119) above suggests that reduplication may yield an inchoative reading of the predicate. The question that arises from these facts is whether reduplication of a predicate can quantify directly over individuals, as is predicated by Kratzer's unselective binding approach, or must reduplication of a predicate also quantify only over events, as claimed by De Swart's event-based approach? Further examination of reduplication patterns in *Skwxwú7mesh* will confirm which analysis can account for the reduplication facts<sup>28</sup>.

### 7.3.2. Types of Quantification

Thus far, the focus of this research has been on the Q-adverb *always*. Demirdache et.al. (1994) investigate, and provide a case for, D-quantification in three Salish languages, one of which is *Skwxwú7mesh*; their focus was on the quantifier *all*. Further research is required in order to establish exactly how many types of quantification exist in *Skwxwú7mesh*. Although little is known about the the behaviour of other Q-adverbs in *Skwxwú7mesh* some preliminary data sketches an outline for further investigation.

*Skwxwú7mesh* has an alternative construction for *always*, which is also translated as *often* or *usually*; it appears as though *wa* is obligatory with this construction as well. An example of a sentence containing this construction is given in (122):

- (122) men huy            kwi-s    wa-s    lulum ta    slhen-lhánay'  
           just be.finished DET-NOM PA-3POSS sing    DET RED-woman  
           'the ladies are always singing' , 'the ladies are usually singing'

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<sup>28</sup>Refer to Chapter 5 (footnote 21) for other evidence of predicate reduplication.

The other interpretations of *always* follow from the fact that generics are not universal; that is, there can be an exception, but the sentence can still be true.

There appear to be two constructions available for a translation of *sometimes*; they contain morphemes whose glosses are not yet determined. These are shown in (123):

- (123) na(7) tɬ-(7)an    kw'iyɪlsh  
LOC (t)lh-1SUBsg dance  
'Sometimes I dance' lit: 'there are times when I dance'

- (123) ye tɬ'-axw    kw'iyɪlsh  
ye (t)lh-2SUBsg dance  
'Sometimes you dance'

The construction for *rarely* is formed by the negation marker + *always*; the status of the obligatoriness of *wa* in this construction is undetermined. This is illustrated in (124):

- (124) haw-k-elh    lhik' (wa) lulum kwélhi slhánay'  
NEG-IRR-(e)lh always PA sing DEM.F woman  
'that woman rarely sings'

The position of *lhik'* in this type of construction appears to be fixed; this is illustrated by the ill-formedness of (125):

- (125) \*lhik'    haw-k-elh    lulum  
always NEG-IRR-(e)lh sing

Further research will determine the status of these constructions and how they fit within the analysis presented in this thesis.

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**APPENDIX 1: KEY TO SKW̥WÚ7MESH ORTHOGRAPHY**

| <i>orthography</i> | <i>phonetic symbol</i> | <i>orthography</i> | <i>phonetic symbol</i> |
|--------------------|------------------------|--------------------|------------------------|
| p                  | p                      | xw                 | x <sup>w</sup>         |
| p'                 | p̥                     | <u>k</u>           | q                      |
| m                  | m                      | <u>k'</u>          | q̥                     |
| m'                 | m̥                     | <u>k</u> w         | q <sup>w</sup>         |
| t                  | t                      | <u>k</u> w'        | q̥ <sup>w</sup>        |
| t'                 | t̥                     | <u>x</u>           | χ                      |
| ts                 | c                      | <u>x</u> w         | χ <sup>w</sup>         |
| ts'                | c̥                     | h                  | h                      |
| s                  | s                      | w                  | w                      |
| n                  | n                      | y                  | y                      |
| ch                 | č                      | y'                 | ŷ                      |
| ch'                | č̥                     | e                  | ə                      |
| sh                 | š                      | i                  | i, e, ε                |
| lh                 | ɬ                      | u                  | u, o, ɔ                |
| lh'                | ɬ̥                     | a                  | a                      |
| l                  | l                      | 7                  | ʔ                      |
| k                  | k                      |                    |                        |
| k'                 | k̥                     |                    |                        |
| kw                 | k <sup>w</sup>         |                    |                        |
| kw'                | k̥ <sup>w</sup>        |                    |                        |

## APPENDIX 2: LIST OF ABBREVIATIONS

|         |                                                                          |
|---------|--------------------------------------------------------------------------|
| *       | ill-formed sentence                                                      |
| ✓       | (used to contrast with '*' when a different interpretation is available) |
| ?       | well-formedness/ill-formedness of the sentence is unclear                |
| 1POSS   | first person possessive                                                  |
| 3POSS   | third person possessive                                                  |
| 1SUBsg  | first person singular subject                                            |
| 2SUBsg  | second person singular subject                                           |
| 3SUBsg  | third person singular subject                                            |
| 3OBJsg  | third person singular object                                             |
| DEM.F   | feminine demonstrative                                                   |
| DEM.M   | masculine demonstrative                                                  |
| DET     | determiner                                                               |
| DET.F   | feminine determiner                                                      |
| (e)     | epenthetic schwa                                                         |
| FOC     | focus marker                                                             |
| FUT     | future                                                                   |
| INTRANS | intransitivizer                                                          |
| IRR     | irrealis                                                                 |
| LOC     | locative                                                                 |
| NEG     | negative                                                                 |
| NOM     | nominalizer                                                              |
| OBL     | oblique                                                                  |
| PA      | pluractional marker                                                      |
| PAST    | past tense marker                                                        |
| RED     | reduplicant                                                              |

REFL reflexive  
RL realis  
TRANS transitivizer

*For St'át'imcets*

3sgPOSS third person singular possessive  
DET determiner  
DET.ABSENT absent determiner