

# The Structure of Multiple Tenses in Inuktitut

by

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for the degree of doctor of philosophy

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## Abstract

This thesis presents and analyzes the tense system of South Baffin Inuktitut (SB), a Canadian variety of the Inuit language. It demonstrates that, although closely related dialects are argued to be tenseless (Shaer, 2003; Bittner, 2005), SB has a complex tense system where the present, past, and future are distinguished, and the past and future are divided into more fine-grained temporal domains.

I demonstrate that SB has present tense, which is indicated by the absence of a tense marker. A sentence without an overt tense marker may describe a past eventuality if it contains a punctual event predicate; otherwise, it describes an eventuality that holds at the utterance time. I argue that all zero-marked sentences have present tense and any past interpretation is aspectual. I also investigate six different past markers and demonstrate that they all instantiate grammatical tense. The analysis shows that these markers can be semantically classified into two groups, depending in part on whether or not they block more general tenses (e.g., *-qqau*, the ‘today’ past blocks the use of the general past *-lauq* when the time of eventuality falls within ‘today’). I label both the general tenses and the group which can block the general tenses as primary tense, whereas the other group which does not block more general tenses is labelled secondary tense. This distinction may have broad cross-linguistic applicability. I examine the distribution of four different future markers and argue that three of them indicate grammatical future tense. They are also grouped into two groups, in the same manner as the past tenses. Finally, I analyse the temporal interpretations of primary tenses in dependent clauses. I show that when tense is interpreted relative to the time of the superordinate eventuality, the domain of tense may not necessarily shift accordingly (e.g., the domain of hodiernal tense in a main clause is the day of utterance, and in an embedded clause the domain can still be the day of utterance). Embedded tenses with remoteness specifications have not been investigated before, and this thesis opens up a new area to our understanding of tenses in human language.

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## List of Abbreviations

- 1 = first person
- 2 = second person
- 3 = third person
- 3R = third person reflexive
- Abl = ablative case
- Acc = accusative case
- All = allative case
- AP = antipassive
- Caus = causative mood
- Cond = conditional mood
- Conj = conjunctive mood
- Cop = copula
- Dat = dative case
- Dist.Past = distant past tense
- Emp = emphatic
- Erg = ergative case
- Fut = general future tense
- Gen = genitive case
- H.Past = hodiernal past tense
- H.Future = hodiernal future tense
- Imp = imperative mood
- Impf = imperfective aspect
- Inc = Inceptive
- Ind = indicative mood
- Int = interrogative mood
- Intr = Intransitiver
- Loc = locative case
- Neg = negation
- Nom = nominalizer

p = plural (i.e., 1p = first person plural)

Part = participial mood

Past = general past tense

Perf = perfect aspect

PH.Past = pre-hodiernal past tense

Poss = possessed noun

Pres = present tense

Prog = progressive aspect

Pros = prospective aspect

R = reflexive

R.Past = recent past tense

s = singular

Term = terminative aspect

Top = topic

Tr = transitiviser

/ = transitive agreement (e.g., 1s/3s = agreement for the first person singular subject and the third person object), or agreement on possessed noun (e.g., 1s/s =, a singular object possessed by 1st person possessor)

# Chapter 1

## Introduction

### 1.1 The goal of the thesis

This thesis aims to provide a semantic analysis of the tense system in South Baffin Inuktitut (SB), a dialect of the Inuit language belonging to the Inuktitut dialect group.

It will be argued that SB has a complex tense system, where the present, past, and future are distinguished, and furthermore the future and past respectively are divided into more fine-grained temporal domains. Generally a SB sentence must convey information about the temporal location of the described event or state based on a five-point scale, which consists of (i) ‘the time prior to the day of the utterance’, (ii) ‘the time prior to the time of utterance and within the day of utterance’, (iii) ‘the time of utterance’, (iv) ‘the time subsequent to the time of utterance and within the day of utterance’, and (v) ‘the time subsequent to the day of utterance’. The five temporal domains correspond to five tenses, which will be called the general past, the hodiernal (‘today’) past, the present, the hodiernal future, and the general future, respectively. These five tenses will be categorized as *primary tenses*. Finer distinctions may be expressed by means of what will be called *secondary tenses*.

Semantic analyses of the five primary tenses and some secondary tenses will be provided, and it will be discussed how temporal interpretations of clauses are derived through interactions between tenses and other grammatical components such as aspect and modality.

The contribution of this thesis is three-fold. Firstly, it is one of the first few works to provide a detailed description and analysis of the system of temporal reference in a variety of the Inuit language. Secondly, it has significant implications for the ongoing debate as to whether the Inuit language has tense or not, demonstrating that at least a variety thereof, SB, has a grammatical tense system. Thirdly, it advances the typological understanding of tense systems, by providing detailed discussion of ‘division of labor’ by multiple past tenses and multiple future tenses within a single language, both in matrix and embedded environments.

The remainder of this chapter is organized as follows. Firstly, it will present working definitions of grammatical concepts that play key roles in the thesis. Secondly, it will illustrate basic geographical and genealogical facts about SB/Inuktitut/Inuit, as well as essential features of the SB grammar. Thirdly, it will present a brief overview of the existing literature on temporal reference in the Inuit language. Fourthly, it will explain the overall structure of the thesis, and offer previews of the chapters to follow. Lastly, it will explain how the SB data presented in this thesis was collected.

## 1.2 Working definitions of some basic concepts

### 1.2.1 Tense

Time is often conceptualized as a straight line, flowing in one direction. The present moment is understood as a point on the line; from there on, the past spreads backwards, and the future spreads forwards.

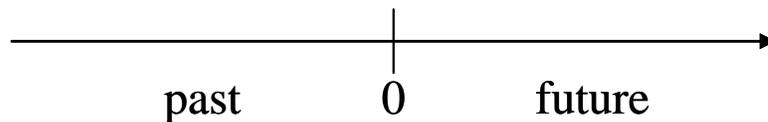


Figure 1: Representation of time (Comrie, 1985:2)

Tense has been traditionally understood as a grammatical means to locate the situation described in a clause on the time line, relative to a temporal reference point, which typically is the utterance time (Comrie, 1985:14).

There is room for debate, however, as to what counts as a *grammatical* means. It is commonplace to assume that tenses may be indicated by various categories, including inflectional affixes, auxiliaries, and particles (see Comrie, 1985:11; Bittner, 2005:9; Tonhauser, 2006:5, among others), and such an assumption makes it difficult to define tense based on morpho-syntactic criteria. How, then, can we identify tenses, distinguishing them from other temporal expressions (e.g., adverbials like *yesterday*, *formerly*, *in the future*, *tomorrow*)?

A commonly adopted criterion is *obligatoriness* (Comrie, 1985:10; Dahl and Velupillai, 2005). That is, as long as a given language has a tense system, a finite clause in that language must, as a rule, be tensed. In other words, tenses are grammatical features that the grammar forces a sentence to instantiate, whether or not they are necessary for interpretation (Shaer, 2003:144). Consider, for example, sentences (1a,b):

- (1) a. John left.
- b. John left yesterday.

In (1a), the past tense on the verb (and nothing else) conveys the information that John's leaving takes place prior to the utterance time. In (1b), the same information is conveyed both by the past tense and the temporal adverb *yesterday*. In neither (1a) or (1b), however, can one leave out the tense. Generally, a tense 'is used not only where it is supplying [...] new information', but also 'where this information has already been supplied, either explicitly or by the context' (Bybee et al., 1994:8). In other words, a language with tense forces the speaker to communicate the temporal information regarding the state of affairs described in an utterance.

I adopt the following as the working definition of tense:

- (2) A tense is a grammatical feature that is always present in a finite clause and indicates the location of the described eventuality on the time line relative to the utterance time or some other temporal anchoring point.

### 1.2.2 Aspect

The term aspect has been also given various definitions in the literature. It is widely agreed, however, that two types of aspect must be distinguished: grammatical aspect (also referred to as viewpoint aspect) and lexical aspect (also referred to as aspectual classes or *Aktionsarten*, Vendler (1957)).

Grammatical aspect is commonly understood as 'different ways of viewing the internal temporal

constituency of a situation' (Comrie, 1976:3). Verbs in the perfective aspect (e.g., *John read the book*) presents the described eventuality as an unanalyzable whole, while verbs in the progressive or imperfective aspect (e.g., *John was reading the book*), make reference to an internal portion of the described eventuality. To put it in a different way, a verb in the perfective aspect describes the situation from outside, whereas a verb in the progressive/imperfective aspect looks at the situation from inside. Grammatical aspects can be treated as operations on *eventuality descriptions*,<sup>1</sup> i.e., denotations of predicates combined with their arguments and modifiers (Kamp and Reyle, 1993; de Swart, 1998:348; 2007:6; Tonhauser, 2006:20).

Lexical aspects, on the other hand, refer to temporal properties of eventuality descriptions,<sup>2</sup> and are described with such terms as dynamicity (dynamic vs. stative), telicity (telic vs. atelic), and durativity (durative vs. punctual). Different ways to classify lexical aspects have been proposed in the literature (Vendler, 1957; Garey, 1957; Mourelatos, 1978; Bach, 1981; Smith, 1991:22). The classical and influential taxonomy of Vendler (1957) involves four classes: (i) States (states with no boundary; e.g., *know*), (ii) Activities (events that last for a period of time with no boundary; e.g., *walk*), (iii) Accomplishments (events that last for a period of time and lead up to the culmination point; e.g., *build a house*), (iv) Achievements (events idealized to occur at a non-divisible point in time; e.g. *recognize it*). Smith (1991:29) adds to this list the fifth class called Semelfactives, events with no extended duration or natural culmination point (e.g., *cough*, *knock on the door*).

The five classes can be described in terms of three features [+/-dynamic], [+/-durative], and [+/-telic] (Table 1).

---

<sup>1</sup> Eventuality is a term covering both (dynamic) events and states (Parsons, 2002).

<sup>2</sup> The temporal property of a clause is partly determined by the inherent lexical meaning of its predicate, but also is affected by the properties of arguments and modifiers. For example, a verb like *drink* can be either telic or atelic, depending on whether its direct object is quantized or not.

- (i) a. John drank wine.
- b. John drank a glass of wine.

As is widely acknowledged, the term *lexical* aspect is somewhat misleading in this respect (see Rothstein 2004 for relevant discussion).

<b>Class</b>	<b>Examples</b>	<b>dynamic</b>	<b>durative</b>	<b>telic</b>
State	<i>know, believe, love, have,</i>	–	+	–
Activity	<i>run, swim, drive a car, push a cart</i>	+	+	–
Accomplishment	<i>paint a picture, build a house, deliver a sermon, recover from illness</i>	+	+	+
Achievement	<i>find, lose, arrive at the station, reach the summit</i>	+	–	+
Semelfactive	<i>cough, knock the door, hiccup, blink</i>	+	–	–

Table 1: Aspectual classes and their semantic specifications

In the discussions in Chapter 2, the distinction between durative and punctual predicates (eventualities) plays an important role; as can be seen in Table 1, durative predicates correspond to States, Activities, and Accomplishments, and punctual predicates correspond to Achievements and Semelfactives.

### 1.2.3 Modality

Modality is concerned with the concepts of necessity and possibility. In a language like English, modality is indicated by such categories as auxiliaries (e.g., *can, may, must*) and adverbs (e.g., *necessarily, possibly*) (Kratzer, 1981, 1991; Palmer, 2001; Kaufmann et al, 2006).

There are various kinds of modality, including circumstantial modality, deontic modality, and epistemic modality. Circumstantial modality is concerned with what the circumstances would let happen and what would not. Deontic modality deals with obligation and permission. Epistemic modality is concerned with what follows from or is compatible with the set of known facts. It is commonly agreed that modalities in general are concerned with quantification over possible worlds, and different types of modality correspond to different ways of restricting the domain of quantification (Kripke, 1980; Kratzer, 1981, 1991; Lewis, 1986; Iatridou, 2000; Condoravdi, 2002; Copley, 2002; Matthewson et al, 2006; Rullmann et al, 2008, among others).

Modality is not a temporal category *per se*, but it has been alleged to have an intimate relation with reference to the future. Regarding so-called ‘future tenses’ (individual instances thereof or the whole genus), there has been extensive debate as to whether their meaning is purely temporal or involves a modal component (a strong quantification over possible worlds) (Comrie, 1985;

Enç, 1996; Copley, 2002; Matthewson et al., 2006, among others). Authors like Iatridou (2000), Cowper (2003, 2005) and Matthewson (2006), in particular, advocate the view that ‘future tenses’ do not exist or at least cannot be treated simply as mirror images of past tenses.

### 1.3 Overview of Inuit and the South Baffin dialect

The Inuit language belongs to the Eskimo branch of the Eskaleut family (also known as the Eskimo-Aleut family) (Figure 2).

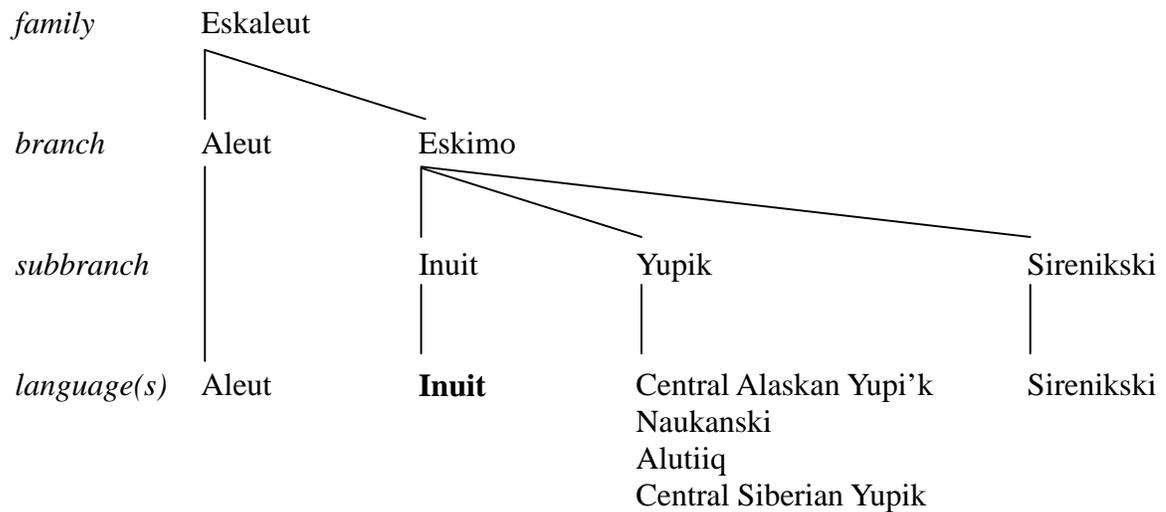


Figure 2: Eskaleut languages (adapted from Dorais, 2003:15)

Geographically, the Eskaleut language family extends from the Bering Sea area to the shores of the Strait of Denmark, which covers an area overlapping with four countries: Russia (Siberian Chukotka; Commander Islands); U.S.A. (coastal Alaska); Canada (the Inuvialuit area of the Northwest Territories, the Province of Nunavut, Arctic Quebec, and northern Labrador) and Greenland (Dorais, 2003:5).

The Inuit language is subdivided into four main dialectal groups (Figure 3). South Baffin Inuktitut, the subject of the current thesis, belongs to the Eastern Canadian Inuktitut dialect group, as shown in Figure 3.

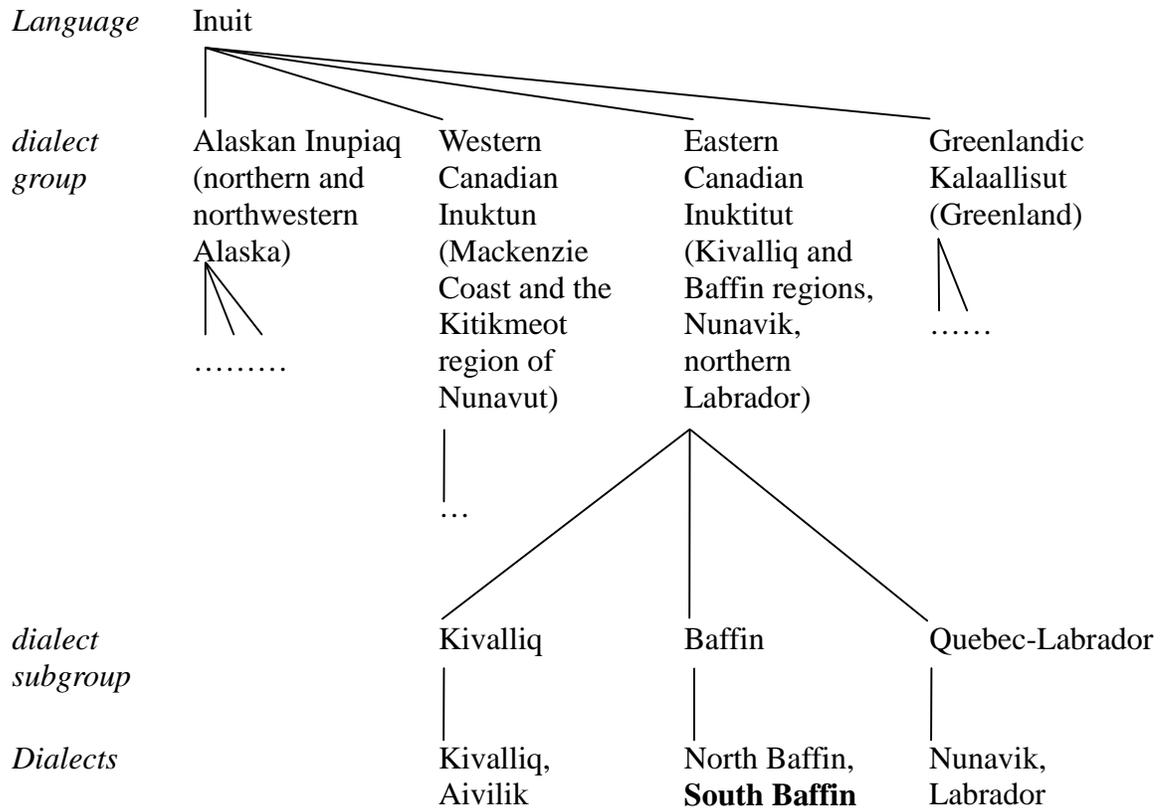


Figure 3: Dialects of the Inuit language (adapted from Dorais, 2003:15)

Dialects of the Inuit language are said to be to largely mutually intelligible, so that a speaker of one dialect can communicate with a speaker of another with little effort (Dorais, 2003:29), although scientific investigation is yet to be conducted to verify this point.

Inuktitut<sup>3</sup> is recognized as an official language of the territory of Nunavut. According to the 2006 census by Statistics Canada, as of 2006 it is spoken as the (unique) mother tongue by approximately 32,380 people.<sup>4</sup> Although Inuktitut has a fairly large speaking population compared to other dialects in the family, younger generations in some Inuktitut-speaking communities tend to have limited proficiency in the language.

<sup>3</sup> I will be using the term Inuktitut to describe the dialects of the Inuit language spoken in Canada, i.e., the dialects that belong to Western Canadian Inuktun and Eastern Canadian Inuktitut.

<sup>4</sup> <http://www.statcan.gc.ca/>

## 1.4 Basic structure of Inuktitut

A clause in the Inuit language minimally consists of a verb only, which in turn minimally consists of a root and a mood marker (3a), where the latter agrees with core arguments in person and number (see below). The sentences in (3) have the participial mood (glossed as Part), which characterizes an independent declarative clause. Morphemes called postbases optionally occur between the root and the mood marker and vary in functions and meanings (3b-d):

- (3) a. **qai-juq**  
come-Part.3s  
'(S)he came.'
- b. **qai-guma-juq**  
come-want-Part.3s  
'(S)he wants to come.'
- c. **qai-guma-lauq-tuq**  
come-want-Past-Part.3s  
'(S)he wanted to come.'
- d. **qai-guma-lau-nngit-tuq**  
come-want-Past-Neg-Part.3s  
'(S)he didn't want to come.'

(3a) consists of a root *qai*<sup>5</sup> 'to come' and a mood marker, *-juq* (*-juq* becomes *-tuq* after a stem ending in a consonant, as shown in (3c,d)), and means '(s)he came'. (3b) additionally has a postbase *-guma* 'to want', intervening between the same root and mood marker, and means '(s)he wants to come'. In (3c), another postbase, *-lauq*, which will be argued to be a general past tense marker in Chapter 3, occurs following *-guma*, changing the meaning of the sentence to '(s)he wanted to come'. In (3d), another postbase *-nngit*, a negation morpheme, is added after *-lauq*, changing the meaning of the sentence into '(s)he didn't want to come'.

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<sup>5</sup> I use a dash with a morpheme in the following way. If it is a verb root, I use X- (e.g., *qai*- 'to come'). If it is a postbase, or element which obligatorily follows a stem (i.e., either a root or a root + postbase(s)) I use -X rather than -X-. If it is an inflection, or an element which occurs at the end of the clause, I also use -X (e.g., *-tuq*, the third person singular participial mood inflection).

The mood marker in an intransitive clause agrees with the subject in person (1st, 2nd, 3rd<sup>6</sup>, or 3rd person reflexive) and number (singular or plural) (4a,b). The mood marker in a transitive clause agrees with both the subject and object in person and number (4c,d). In both cases, the mood and agreement information are coded within a single morpheme, i.e., the mood marker.

- (4) a. **tikit-tunga**  
arrive-Part.1s  
'I arrived.'
- b. **tikit-tutit**  
arrive-Part.2s  
'You arrived.'
- c. **taku-jara**  
see-Part.1s/3s  
'I saw him/her.'
- d. **taku-jaa**  
see-Part.3s/3s  
'(S)he saw him/her.'

SB has eight kinds of mood: participial, indicative, interrogative, imperative, conjunctive<sup>7</sup>, causative, conditional, and dubitative.

The indicative mood, like the participial mood, characterizes an independent declarative clause.

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<sup>6</sup> The third person inflection in a dependent clause indicates that the (subordinate) subject is not coreferential with the matrix subject, as shown in (i). The third person reflexive inflection, on the other hand, appears only in dependent clauses. It indicates that the (subordinate) subject is coreferential with the matrix subject, as shown in (ii):

- (i) **timmisuuq** **aulla-jaanngit-tuq** **kalli-langa-ngmat**  
plane leave-Fut.Neg-Part.3s thunder-Pros-**Caus.3s**  
'The plane will not leave tonight because of the thunderstorm.'
- (ii) **qanni-runi** **sila-mi(t)** **maanna niglasuk-tuq**  
snow-**Cond.3Rs** outside-Loc now be.cold-Part.3s  
'If it is snowing, it is cold outside.'

<sup>7</sup> Dorais (1988) classifies the conjunctive mood, which he refers to as 'the appositional modality', into three types: (i) the perfective appositional modality, (ii) the imperfective appositional modality, and (iii) the non-reflexive appositional modality. Distinctions between them will be discussed in Chapter 5.

Although the participial mood is much more common than the indicative mood, in certain contexts the indicative mood is preferred (Anderson and Johns, 2005). For example, in a reply to a question, the indicative clause is favored in SB.

(5) A: naukkut aanni-lauq-paa?  
 which.way be.in.pain-Past-Int.2s  
 ‘Where did he get hurt?’

B: sura-lauq-**puq** niu-nga  
 get.hurt-Past-Ind.3s leg-Poss.3s/s  
 ‘He hurt his leg.’

The interrogative and imperative moods, as suggested by the terms, characterize interrogative and imperative clauses, respectively.

(6) qai-**vat**?  
 arrive-Int.3p  
 ‘Did they come?’

(7) qai-**git**!  
 come-Imp.2s  
 ‘Come!’

The other four moods characterize different types of dependent clauses. (Dependent clauses in the conjunctive, causative and conditional moods will be discussed in Chapter 5 in more detail.) A clause marked by the conjunctive mood serves either as a logical conjunct of the main clause (8a), or as a temporal adjunct clause with a function overlapping with those of English *when-*, *before-* and *after-* clauses (8b) (Harper, 1979; Hayashi, 2005).

(8) a. ippatsaq miali ani-lauq-tuq jaan ani-**lauq-tillugu**  
 yesterday Mary go.out-Part.3s John go.out-Past-Conj.3s  
 ‘Yesterday Mary went out and John went out (too).’

b. qai-**tillugu** niri-lauq-tunga  
 come-Conj.3s eat-Past-Part.1s  
 ‘I ate when he came.’

A clause marked by the causative mood serves as an adjunct clause of reason (9a), an adjunct clause of purpose (9b), or the complement clause of a verb of speech or attitude, such as *uqaq-* ‘to say’ (9c).

- (9) a. qai-ngmat quviasuk-tunga  
 come-Caus.3s happy-Part.1s  
 ‘Because he came, I am happy.’
- b. tuqsulaa-vigi-qattaq-tara tusar-nia-ngmaanga  
 yell-to-Freq-Part.1s/3s hear-H.Fut-Caus.3s/1s  
 ‘I yell so that he can hear me.’
- c. jaan uqa-lauq-tuq iqalu-nnit silalu-ngmat  
 John say-Past-Part.3s Iqaluit-Loc rain-Caus.3s  
 ‘John said that it was raining in Iqaluit.’

A clause marked by the conditional mood (10) serves as the antecedent of a conditional construction.

- (10) qai-guni quviasu-laaq-tunga  
 come-Cond.3s happy-Fut-Part.1s  
 ‘If he comes, I will be happy.’

A clause marked by the dubitative mood (11) serves as the complement clause of a verb that has to do with uncertainty or ignorance, such as *puiguq-* ‘to forget’ and *tukisi-nngit-* ‘not to understand’.

- (11) puiguq-tara ati-nga kina-u-ngmangat  
 forget-Part.1s/3s name-Poss.3s/s what-be-Dub.3s  
 ‘I forgot what her name is.’

Arguments and modifiers of a verb may occur in any order within the clause, either preceding or following the verb, although information structure-based constraints may be imposed on the constituent order. (12) illustrates all six possible translations of *John likes Mary*.

- (12) a. jaan piuksaq-tuq miali-mit  
John like-Part.3s Mary-Acc  
'John likes Mary.'
- b. miali-mit jaan piuksaq-tuq  
Mary-Acc John like-Part.3s  
'John likes Mary.'
- c. piuksaq-tuq miali-mit jaan  
like-Part.3s Mary-Acc John  
'John likes Mary.'
- d. miali-mit piuksaq-tuq jaan  
Mary-Acc like-Part.3s John  
'John likes Mary.'
- e. jaan miali-mit piuksaq-tuq  
John Mary-Acc like-Part.3s  
'John likes Mary.'
- f. piuksaq-tuq jaan miali-mit  
like-Part.3s John Mary-Acc  
'John likes Mary.'

Regarding case-marking, SB uses both the ergative-absolutive pattern, where the object of a transitive clause has the same form as the sole argument of an intransitive clause, and the nominative-accusative pattern, where the subject of a transitive clause has the same form as the sole argument of an intransitive clause. Many SB predicates are specified for one pattern or the other, while some appear to be compatible with both. (13) exemplifies a clause in the first pattern, where the object, like the argument of an intransitive clause, lacks overt case marking, and the subject is accompanied by the ergative case marker *-up*.<sup>8</sup>

- (13) anguti-**up** nanuq- $\emptyset$  kapi-**jaa**  
man-Erg polar.bear-Abs spear-Part.3s/3s  
'The man stabbed the polar-bear.'

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<sup>8</sup> The ergative case is also referred to as the relative case (Lowe, 1985a,b,c; Dorais, 1988; Johns, 2006; Nagai, 2006).

- (14) jaan-∅ tiki-qqau-juq  
 John-Abs arrive-H.Past-Part.3s  
 ‘John arrived.’

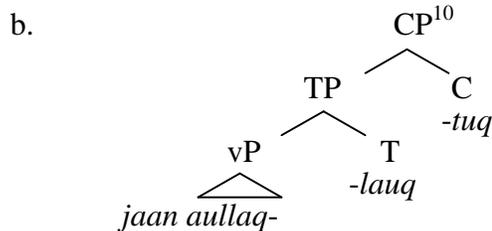
(15) exemplifies a clause in the second pattern, where the subject lacks an overt case marker, and the object is accompanied by the accusative case marker *-mit*.<sup>9</sup>

- (15) jaan-∅ piuksaq-tuq miali-**mit**  
 John-Abs like-Part.3s Mary-Acc  
 ‘John likes Mary.’

## 1.5 Syntactic assumptions

I assume a basic minimalist syntax (Chomsky 2007, 2008). Tenses occur in T head of TP, which in turn dominates vP, which denotes eventualities. I assume that SB clauses are right-headed so that morphemes are aligned in the correct right to left ordering. A sentence (16a) thus has a syntactic structure shown in (16a) (I show *-lauq* is in T, because I will claim that *-lauq* is a general past tense in Chapter 3).

- (16) a. jaan aulla-lauq-tuq  
 John leave-Past-Part.3s  
 ‘John left.’



<sup>9</sup> The accusative case is also referred to as the modalis case (Lowe, 1985a,b,c; Swift, 2000, 2004; Nagai, 2006). Besides an object, an instrumental NP too is marked by this case. The case marker *-mit* is homophonous with the ablative case marker, although comparative considerations suggest that it used to have the form *-mik*, which is maintained in all other dialects (Harper, 1974; Lowe, 1985a,b,c; Dorais, 1978, 1988; Swift, 2000, 2004; Johns, 2006), and was phonologically distinct from the ablative case marker (Alana Johns, p.c.).

<sup>10</sup> Following Compton and Pittman (2010), I assume that all the verbal constructions in SB are clauses headed by CP.

## 1.6 Previous studies of systems of temporal reference in varieties of Inuit

In the literature, there has been extensive debate as to the questions of (i) whether ‘tenseless’ languages exist at all, and if so, (ii) which languages count as such (de Caen, 1995; Mithun, 1998; Shaer, 2003; Bohmeyer, 2002, 2009; Smith, et al, 2003; Wiltschko, 2003; Matthewson, 2003, 2006; Baker and Travis, 2004; Ritter and Wiltschko, 2004; Bittner, 2005; Hayashi and Spreng, 2005; Smith and Erbaugh, 2005; Lin, 2006; Jóhannsdóttir and Matthewson, 2006; Tonhauser, 2006, Reis Silva and Matthewson, 2007, Smith, 2008 among others). Dialects of the Inuit language, most notably the West Greenlandic (Kalaallisut), have also recently attracted scholars’ attention in relation to the question of whether they have tense or not (Swift, 2000, 2004; Shaer, 2003; Bittner, 2005).

In the following, I will present a summary of previous discussion of temporal reference systems in varieties of the Inuit language. One must not assume, of course, that discussion regarding one dialect would always carry over to others. At the same time, it is natural and sensible to expect major commonalities across dialects of a language. Previous works on the temporal systems in other dialects of the Inuit language would thus shed light on the discussion of the one in SB, and conversely, the discussion of the temporal system in SB in the current thesis would have significant implications on the understanding of those in other dialects.

Fortescue (1984) suggests that West Greenlandic has the opposition of future and non-future tenses, observing that the use of a temporal expression is obligatory in sentences referring to a situation in the future, while the same does not hold for sentences referring to a situation in the past. He considers *-ssa* (17a), *-niar* (17b) and *-jumaar* (17c) to be future tense markers with slightly different meanings: *-ssa*, like English *should*, has a certain modal value, *-niar* is used to describe an intended or inevitable future situation, and *-jumaar* is used to describe a vaguely specified, indefinite future situation.

- (17) a. tuqu-**ssa**-atit  
die-Fut-Ind.2s  
‘You will die (e.g. if you drink the poison).’

- b. sial-lir-**niaq**-puq  
rain-Inc-Fut-Ind.3s  
'It's going to rain.'
- c. taku-qqi-**kkumaar**-pugut  
see-again-Fut-Ind.2p  
'We'll see each other again.'

(Fortescue, 1984:274-275, glosses added)

About the so-called past markers in the dialect, *-sima* and *-nikuu*, Fortescue (1984) states that they correspond to the perfect form rather than to the past form, because they are not used when the sentence refers to a specific time in the past (18).

- (18) a. nuum-miis{-sima/-nikuu}-vunga  
Nuuk-be.in-{-sima/-nikuu}-Ind.1s  
'I have been to Nuuk.'
- b. juuli-up aappa-a-ni nuum-miip-punga  
July-Erg second-its-Loc Nuuk-be.in-Ind.1s  
'I was in Nuuk on the second of July.'

(Fortescue, 1984:272-3, glosses added)

In contrast, Shaer (2003) claims that West Greenlandic has neither future or past tense, based on the following reasoning. Firstly, the fact that a sentence can be interpreted as describing a past eventuality without a past marker indicates that the language does not have a past tense. (19a) exemplifies a sentence without an explicit tense marker that is ambiguous between present and past interpretations, and (19b) shows that a sentence without an explicit tense marker is compatible with a past-oriented adverbial:

- (19) a. aggir-puq  
come-Ind.3s  
'He is/was coming.'
- b. juuli-up aappa-a-ni nuum-miip-punga  
July-Erg second-its-Loc Nuuk-be.in-Ind.1s  
'I was in Nuuk on the second of July.'

(Shaer, 2003:146-147, cited from Fortescue, 1984:273-4, glosses added)

Secondly, the putative tense markers *-ssa* and *-sima* should rather be treated as a mood marker and an aspect marker, respectively. As remarked by Fortescue (1984), *-ssa* is comparable to a modal like English *should* or *shall*, and *-sima* can be regarded a present perfect marker. Thirdly, *-ssa* and *-sima* can co-occur within a single sentence, either one preceding the other (*-sima-ssa* or *-ssa-sima*) (20a,b). This is unexpected if both morphemes are tense markers, given the common assumption that at most one tense is realized within a single clause (Tonhauser, 2006:24; see also Section 3.2.4 below).

- (20) a. atur-sima-ssa-vaa  
 use-Perf-Fut-Ind.3s/3s  
 ‘He must have used it.’
- b. atu-ssa-sima-vaa  
 use-Fut-Perf-Ind.3s/3s  
 ‘He presumably will have used it.’

(Fortescue, 1984:267-268, glosses added)

Lastly, the number of temporal morphemes appears too large for a closed grammatical category. In addition to aforementioned *-ssa*, *-niar*, *-jumaar*, *-sima*, and *-niquu*, West Greenlandic has other temporal morphemes such as *-qqami* (a recent past morpheme) and *-riikatag* (a distant past morpheme) (Fortescue, 1984:272-273). Based on these points, Shaer (2003) concludes that temporal morphemes in West Greenlandic are not tense markers, but rather morphologically bound temporal adverbs.

Bittner (2005) agrees with Shaer (2003) that West Greenlandic<sup>11</sup> does not have a future tense. She examines, using texts translated from English into West Greenlandic, how temporal information conveyed by English *will* is expressed in West Greenlandic. She observes that nearly thirty different morphemes are used in the translations, which can be classified into three groups: (i) those which describe a current attitude state of the speaker, (ii) those which describe the beginning of an expected process, and (iii) those which indicate an illocutionary force like a request or wish. In other words, future reference in West Greenlandic is expressed by diverse morphosyntactic elements whose semantic natures are either aspectual, modal, or speech

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<sup>11</sup> Bittner (2005) refers to West Greenlandic by its official name, Kalaallisut.

act-oriented. Based on this finding, Bittner (2005) concludes that West Greenlandic does not have a future tense.

Swift (2000, 2004) examines temporal expressions in Tarramiut, which is spoken in Northern Quebec and, like SB, belongs to the Eastern Canadian Inuktitut group (see Figure 3 above). She suggests the taxonomy of eventualities schematized in Figure 4 for Tarramiut:

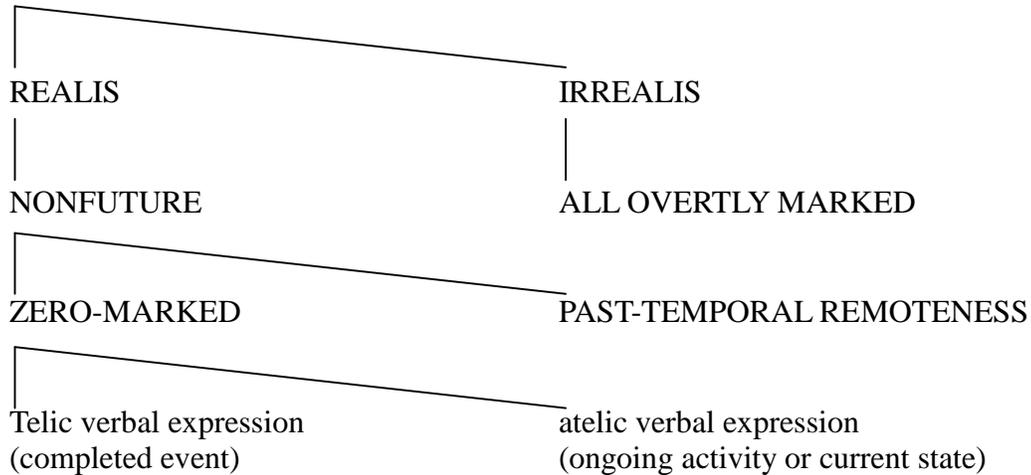


Figure 4: A taxonomy of eventualities in Tarramiut (Swift, 2000:25)

She argues that the most basic opposition concerning temporal reference in Tarramiut is the one between realis vs. irrealis. Future eventualities, which are unrealized and non-factual, must be described by a predicate with an overt marker of irrealis mood. On the other hand, present and past eventualities, which are realized and factual, may be described by zero-marked verb forms. (21) illustrates that the zero-marked form of a punctual predicate can be used to refer to an eventuality either in the present or past.

- (21) a. pisut-tuq  
 walk-Part.3s  
 ‘She is walking.’
- b. ani-juq  
 go.out-Part.3s  
 ‘She went out.’

(Swift, 2000:38, glosses slightly modified)

The realis branch is further split into zero-marked and past-temporal remoteness. This reflects the fact that reference to a remote past time must be indicated by an overt temporal marker in Tarramiut, unlike in West Greenlandic. (22) illustrates that a zero-marked form cannot be used to describe an eventuality in a remote past time (roughly, a past time prior to the day of the utterance), and is incompatible with a temporal adverb like *ippasaq* ‘yesterday’.

- (22) a. \*ippasaq ani-junga  
yesterday go.out-Part.1s  
(I went out yesterday.)
- b. ippasaq ani-laur-tunga  
yesterday go.out-Past-Part.1s  
‘I went out yesterday.’

(Swift, 2000:105, glosses slightly modified)

Regarding the question of whether Tarramiut has a grammaticalized tense system, Swift does not make any conclusive statement and merely remarks that further research is needed to determine the precise nature of temporal reference in the dialect.

In sum, Shaer (2003) and Bittner (2005) claim that West Greenlandic is tenseless, observing that the temporal morphemes in the language are not obligatory and/or can be better understood as aspectual markers, modal markers, etc. Tarramiut, a variety more closely related to SB, differs from West Greenlandic in that the interpretation of a zero-marked verb form is more restricted.

## 1.7 Outline of the thesis

The current thesis is organized as follows. Chapter 2 addresses reference to the present time, which is indicated by the absence of an overt tense marker. In SB, like in many other Eskaleut languages (Harper, 1979; Fortescue, 1984; Lowe, 1985a,b,c; Dorais, 1988; Mithun, 1998; Swift, 2000, 2004; Hayashi and Spreng, 2005; Hayashi, 2005; Bittner, 2005, 2007; Nagai, 2006; Clarke, 2009), a predicate without an overt tense marker (i.e., a zero-marked predicate) can be used to describe either an eventuality at the present time or in the past. I will demonstrate that the opposition between the ‘present’ and ‘past’ interpretations of zero-marked predicate depends on

its aspectual property (in particular, durativity). I will further argue that a SB zero-marked predicate is invariably present-tensed, rather than ambiguous or underspecified between the present and past interpretations, and that a punctual predicate without an overt tense marker receives a (present) perfect interpretation.

Chapter 3 addresses reference to the past time. SB has several past markers, which include *-qqau*, *-lauq*, *-kainnaq*, *-rataaq*, *-juu* and *-lauqsima*. I will first demonstrate that *-qqau* and *-lauq* are markers of a grammatical tense, rather than temporal adverbs (which similar morphemes in West Greenlandic have been alleged to be (Shaer, 2003)), using diagnostics for tensehood drawn from Tonhauser (2006). I will then examine the exact distributions of *-qqau* and *-lauq*, and conclude (i) that *-lauq* actually indicates a general past (i.e., a past tense without a domain restriction), and its association with the past time prior to the day of utterance results from a conversational implicature, an inference that can be deduced from the form of utterance (Crystal, 2003), and (ii) that *-qqau* indicates a hodiernal past tense, which refers to a past time within the day of utterance. Regarding the four other past markers, i.e., *-kainnaq*, *-rataaq*, *-juu* and *-lauqsima*, I will argue that they are tense markers too, but their status is different from that of *-qqau* and *-lauq*. I will group *-qqau* and *-lauq* as markers of ‘primary’ past tenses, and the others as markers of ‘secondary’ past tenses.

Chapter 4 addresses reference to the future. SB has four morphemes that are commonly used to describe an eventuality in the future: *-niaq*, *-langa*, *-laaq*, and *-gumaaq*. It has been observed that the semantic differences between them have to do with temporal remoteness, as is the case for the past morphemes (Dorais, 1988; Harper, 1979). I will make the following claims. First, *-langa* indicates a prospective aspect, rather than a near future tense, with a meaning comparable to that of English *be going to*. Second, *-niaq* is polysemous between two uses, one being a marker of the hodiernal future marker, and the other being a future-oriented modal. Third, *-laaq* is a marker of a general future tense. Fourth, *-gumaaq* is a marker of a far future tense. Like *-qqau* and *-lauq*, *-niaq* and *-laaq* indicate ‘primary’ future tenses; *-gumaaq*, on the other hand, indicates a secondary tense.

Chapter 5 addresses temporal interpretations of tenses occurring in three types of dependent

clauses: (i) the conjunctive clause, which may be interpreted either as a logical conjunct of the main clause, or as a functional equivalent of a temporal adjunct clause like the *when*-clause, (ii) the causative clause, which can be used as an adjunct clause of reason, an adjunct of purpose, or as a complement clause under a speech/attitude predicate, and (iii) the conditional clause, which serves as the antecedent of a conditional construction. The main points of discussions are (i) whether an embedded tense form is interpreted relative to the utterance time (i.e., receives an absolute interpretation) or to the time of the eventuality described in the matrix clause (i.e., receives a relative interpretation), and (ii) how the domain of each tense is determined in embedded environments.

Chapter 6 concludes the thesis, examining implications of the discussion presented in the previous chapters on other varieties of the Inuit language and beyond.

## 1.8 Methods of data collection

Except where noted otherwise, data presented in the current thesis are all drawn from my own fieldwork conducted through September 2004 to September 2010. The primary method of data collection was face-to-face interviews with one native speaker of SB, who will be referred to as the consultant<sup>12</sup>. E-mail correspondences with the same consultant, were also used as supplementary methods. In the interviews and e-mail correspondences, I elicited linguistic data by asking the consultant (i) to provide translations of English sentences, which may be accompanied by contextual information, into SB, (ii) to provide translations of SB sentences, which may be accompanied by contextual information, into English, (iii) to provide grammatical judgments on SB sentences constructed by myself, or (iv) to provide acceptability judgments in contexts on SB sentences constructed by myself. Contextual information was given to the consultant orally or through written texts in English. I also noted down some comments made by the consultant, which will occasionally be presented along with relevant data.

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<sup>12</sup> She spent some formative years in Coral Harbour (on Southernmpton Island, a Kivalliq region), where SB is not spoken. The dialect spoken in this region and SB are closely related, both belonging to Eastern Canadian Inuktitut. Whether and how this affects her competence of SB is unknown, except that there are sometimes remnants of the dialect of Inuktitut spoken in this region in her speech.

## Chapter 2 The Present Tense

### 2.1 Introduction

This chapter addresses the present tense, which is indicated by the absence of an explicit tense morpheme.

I will first demonstrate that a verb without an explicit tense morpheme (i.e., a zero-marked verb) can be interpreted as referring either (i) to a state that holds or an event that is on-going at the utterance time, or (ii) to an event that has occurred in a recent past, and that the choice between these two interpretations hinges on the aspectual class of the verb. The former interpretation is available only with a durative verb, and the second only with a punctual verb.

Then, I will argue that the zero-marked form is invariably interpreted as present-tensed, and the opposition between the two interpretations is aspectual. Durative verbs receive the imperfective interpretation, while punctual verbs, which in general cannot be used to refer to an eventuality that holds at the utterance time, are coerced to receive the present perfect interpretation, referring to a punctual eventuality that has occurred in the recent past. The latter point is empirically supported by such evidence as the incompatibility of a zero-marked punctual verb with a temporal adverbial referring to a specific past time (e.g. ‘yesterday’, ‘at 4 pm’). The interpretative rule of the present tense in SB thus can be summarized as: (i) when the verb is compatible with the imperfective interpretation, it receives the imperfective interpretation where the described eventuality is understood to be occurring at the utterance time, and (ii) otherwise, the verb receives the present perfect interpretation, referring to a punctual eventuality that has occurred in the recent past.

### 2.2 Basic Data

In SB, zero-marked verbs are used to describe either a past or present eventuality, depending on

the durativity of the verb.<sup>13</sup> That is, when durative verbs, which denote an eventuality lasting for an extended period of time, are not accompanied by an explicit tense morpheme, they are interpreted as describing an eventuality that holds or is ongoing at the utterance time (23) (Harper, 1979; Dorais, 1988).

- (23) a. jaan taki-juq  
 John tall-Part.3s  
 ‘John is tall.’  
 (\*’John {was/will be} tall.’)
- b. jaan ilinniaqti-u-juq  
 John student-be-Part.3s  
 ‘John is a student.’  
 (\*’John {was/will be} a student.’)
- c. jaan mumiq-tuq  
 John dance-Part.3s  
 ‘John is dancing.’  
 (\*’John {was/will be} dancing.’)
- d. jaan iglu-liuq-tuq  
 John house-make-Part.3s  
 ‘John is building a house.’  
 (\*’John {was/will be} building a house.’)
- e. miali qisi-liri-juq                    tuktu-up                    aminga-nit  
 Mary skin-work.on-Part.3s caribou-Gen.s skin-Acc.pl  
 ‘Mary is skinning the caribou.’  
 (\*’Mary {was/will be} skinning the caribou.’)

On the other hand, punctual verbs, which refer to an instantaneous event, can only be interpreted as describing an eventuality that has occurred in the recent past (Harper, 1979; Dorais, 1988; Hayashi, 2005; Hayashi and Spreng, 2005). Clauses with a zero-marked punctual verb are often translated into English with *just* (24).

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<sup>13</sup> The same phenomenon is attested in many other dialects of the Inuit language, including West Greenlandic (Fortescue, 1984), Tarramiut (Swift, 2000, 2004), Labrador Inuttut (Clarke, 2009), North Alaskan Iñupiaq (Nagai, 2006), and Harvaqturmiut (my fieldnotes).

- (24) a. jaan tikit-tuq  
 John arrive-Part.3s  
 ‘John (just) arrived.’  
 (\*’John {is arriving/will arrive}.’)
- b. jaan imaaq-tuq  
 John fell.in.water-Part.3s  
 ‘John (just) fell into the water.’  
 (\*’John {is falling/will fall} into the water.’)
- c. jaan kapi-janga tuktu  
 John spear-Part.3s/3s caribou  
 ‘John (just) speared the caribou.’  
 (\*’John {is spearing/will spear} the caribou.’)
- d. jaan iglu-liu-raanik<sup>14</sup>-tuq  
 John house-make-finish-Part.3s  
 ‘John (just) finished building the house.’  
 (\*’John {is finishing/will finish} building the house.’)
- e. miali mumi-liq-tuq  
 Mary dance-Inc-Part.3s  
 ‘Mary (just) started dancing.’  
 (\*’Mary {is starting/will start} dancing.’)

Note that some aspectual markers change the aspect of the base verb. In (24f), for example, the inceptive marker, *-liq*, changes the aspect of the base verb from durative to punctual, so that the resulting verb receives the recent past interpretation.

The temporal interpretations of zero-marked verbs can thus be summarized as follow:

- (25) (i) Zero-marked durative verbs describe a state that holds or an event that is ongoing at the utterance time.
- (ii) Zero-marked punctual verbs describe an event that has recently occurred, just before the utterance time.

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<sup>14</sup> *-anik* becomes *-raanik* when the stem ends in two vowels (<http://www.inuktitutcomputing.ca/>).

## 2.3 Proposal

### 2.3.1 The imperfective and perfect interpretations

One could hypothesize that SB has neither present nor past tense based on the fact that a zero-marked verb can be interpreted either as referring to a present or past event. This line of reasoning, however, has difficulty explaining why a zero-marked durative verb cannot refer to an eventuality in the past, or why a zero-marked punctual verb cannot refer to an eventuality holding or occurring in a remote past.

I propose that a clause containing no overt tense marking is present-tensed, regardless of the durativity of the verb. Zero-marked durative verbs receive a (present) imperfective interpretation, and are amenable to a similar semantic treatment as English progressive forms, or imperfective forms in Romance, etc. (Dowty, 1979; Giorgi and Pianesi, 1997; Portner, 1998). As for zero-marked punctual verbs, I argue that their meaning is analogous to that of the present perfect in English.

Zero-marked punctual verbs cannot occur with temporal adverbs that refer to a past time, like ‘yesterday’ and ‘at 4 pm’ (26):

- (26) a. \*jaan tikit-tuq            {ippatsaq/4-mit }  
John arrive-Part.3s yesterday/4-Loc  
(John arrived {yesterday/at 4}.)
- b. \*jaan imaaq-tuq            {ippatsaq/4-mit }  
John fell.in.water-Part.3s yesterday/4-Loc  
(John fell into the water {yesterday/at 4}.)
- c. \*jaan kapi-janga        tuktu    {ippatsaq/4-mit }  
John spear-Part.3s/3s caribou yesterday/4-Loc  
(John speared the caribou {yesterday/at 4}.)
- d. \*jaan iglu-liu-raanik-tuq        {ippatsaq/4-mit }  
John house-make-finish-Part.3s yesterday/4-Loc  
(John finished the house {yesterday/at 4}.)

- e. \*miali mumi-liq-tuq {ippatsaq/4-mit}  
 Mary dance-Inc-Part.3s yesterday/4-Loc  
 (Mary started dancing {yesterday/at 4}.)

On the other hand, zero-marked punctual verbs are compatible with an adverb for the present time (i.e., *maanna*, ‘now’).

- (27) a. jaan tikit-tuq maanna  
 John arrive-Part.3s now  
 ‘John (just) arrived now.’
- b. jaan imaaq-tuq maanna  
 John fell.in.water-Part.3s now  
 ‘John (just) fell into the water now.’
- c. jaan kapi-janga tuktu maanna  
 John spear-Part.3s/3s caribou now  
 ‘John (just) speared the caribou now.’
- d. jaan iglu-liu-raanik-tuq maanna  
 John house-make-finish-Part.3s now  
 ‘John (just) finished the house now.’
- e. miali mumi-liq-tuq maanna  
 Mary dance-begin-Part.3s now  
 ‘Mary (just) started dancing now.’

The fact that zero-marked punctual verbs are incompatible with an adverb which refers to a past time but are compatible with an adverb which refers to a present moment indicates that the clause containing a zero-marked punctual verb cannot refer to the past time but to the present time. A clause containing a zero-marked activity verb shows the same contrast with respect to its compatibility with temporal adverbials, as illustrated in (28):

- (28) a. jaan mumiq-tuq  
 John dance-Part.3s  
 ‘John is dancing.’
- b. \*jaan mumiq-tuq {ippatsaq/4-mit}  
 John dance-Part.3s yesterday/4-Loc  
 (John danced {yesterday/at 4}.)

- c. jaan mumiq-tuq maanna  
John dance-Part.3s now  
'John is dancing now.'

Therefore, it is reasonable to assume that a clause containing a zero-marked punctual verb in fact describes the resulting state of the eventuality described in the clause that holds at the present moment.

In this respect, zero-marked punctual verbs in SB are similar to present perfect verbs in some Germanic languages including English and Mainland Scandinavian, which cannot be used with temporal modifiers that refer to a specific moment or interval in the past and which are compatible with present-oriented adverbials like 'now' and 'today'.

- (29) a. \*John has arrived yesterday.  
b. John has arrived now.

In many other Germanic languages, as well as in all Romance languages, however, the verb form corresponding to the present perfect lacks this property and is compatible with adverbs which refer to a specific past time (Giorgi and Pianesi, 1997). Below are examples from German and European Spanish.

(30) Wir haben uns gestern kennen gelernt. (We have met yesterday.)

(31) Juan ha salido a las cinco. (John has left at five.)

In the latter group of languages, the form that has been referred to as the (present) perfect in traditional grammars may well be regarded as a variety of the past tense. It is worth noting that the corresponding forms in certain Romance languages like French, Italian, and Romanian are in fact broadly recognized as a perfective past form, and are labeled so in reference grammars too (Comrie, 1976:53).<sup>15</sup>

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<sup>15</sup> It is an interesting question why such a contrast exists among the present perfect forms across languages with respect to their compatibility with temporal adverbials which refer to a past time. I will leave this question

It seems relatively unproblematic, on the other hand, to consider the present perfect in English, which exhibits the aforementioned co-occurrence restriction with past-oriented adverbs, to be genuinely present-tensed, and to assume that its ‘semantic pastness comes from something in addition to the tense’ (Parsons, 1990:230). By the same reasoning, I conclude that the temporal interpretation of a zero-marked punctual verb in SB is present perfect, rather than past.

An important question in this connection is how ‘recent’ the event described by a zero-marked punctual verb must be. The cut-off point appears to be determined by both subjective and objective criteria. One can report, for example, a child’s birth that took place one or two days before the utterance time with a zero-marked punctual verb, *taaqa-*, ‘to get’.

- (32) *piaraq-taaqa-tuq*  
 baby-get-Part.3s  
 ‘She (just) had a baby.’

A zero-marked punctual verb can even be used to describe an event that occurred as remote as a week before the utterance time. For example, an utterance like ‘I (just) moved in (to this city)’ can be translated with a zero-marked form, when the time of moving is a week before the utterance time.

- (33) Situation: Sam moved to Toronto a week ago. He doesn’t know anything about the city. He says ‘I don’t know anything about this city. I just moved in’.

*tamaunga nuut-tunga*  
 here move-Part.1s  
 ‘I (just) moved in.’

However, utterances like (34) and (35) cannot be translated with a zero-marked form in the provided contexts:

- (34) Situation: You bought a house a few weeks ago. You are so happy and can’t wait to move in. One day, you bump into your friend, Mary, who you have not seen for a year. Mary says ‘So, what’s new?’, and you say ‘I have big news. I bought a house!’

- a. igulu-mit niuvi-lauq-tunga  
house-Acc buy-Past-Part.1s  
'I bought a house.'
- b. #igulu-mit niuvik-tunga  
house-Acc buy-Part.1s  
(I (just) bought a house.)

(35) Situation: Suppose Nunavut became a country a few months ago, declaring independence from Canada. Midori comes back from Japan and sees you. She doesn't seem to know the news. You say, 'Midori, Nunavut became a country!'

- a. nunavut atiq-taa-lauq-tuq Nunavut-mit  
Nunavut name-get-Past-Part.3s Nunavut-Acc  
'Nunavut became a country.'
- b. #nunavut atiq-taaq-tuq Nunavut-mit  
Nunavut name-get-Part.3s Nunavut-Acc  
(Nunavut (just) became a country.)

Thus, one may make the following generalization regarding the temporal interpretation of a zero-marked punctual verb:

(36) A zero-marked punctual verb can only refer to an event that has occurred within approximately a week at most and that is subjectively considered 'recent' by the speaker.

### 2.3.2 Incompatibility between the punctual verbs and the imperfective interpretation

It is not rare, across languages, for durative verbs in the simple present tense to describe an eventuality that holds or ongoing at the utterance time. In English and Japanese, for example, stative verbs in the simple present tense refer to a state that holds at the utterance time (37):

- (37) a. John likes Mary.
- b. Taro-wa nikai-ni iru.  
Taro-Top second.floor-Dat be.Pres  
'Taro is on the second floor.' (Japanese)

In these two languages, however, dynamic durative verbs (non-stative durative verbs), receive a

habitual or generic interpretation when they are in the simple present tense (38). They need to be accompanied by an explicit aspectual morpheme to describe an eventuality ongoing at the present moment (39):

- (38) a. John sings.  
b. Taro-wa (mainichi) aruk-u  
Taro-Top every.day walk-Pres  
'Taro walks (every day).'
- (39) a. John is singing.  
b. Taro-ga aruite-i-ru  
Taro-Nom walk-Prog-Pres  
'Taro is walking.'

In languages like French, on the other hand, both stative and dynamic durative verbs in the present tense can refer to an ongoing eventuality at the present moment without an explicit aspectual marker (40), as is the case in SB (41):

- (40) a. Jean aime Marie.  
'John likes Mary.'  
b. Jean marche.  
'John is walking. / John walks.'
- (41) a. jaan piuksaq-tuq miali-mit  
John like-Part.3s Mary-Acc  
'John likes Mary.'  
b. jaan pisuk-tuq  
John walk-Part.3s  
'John is walking.'

In contrast, across languages punctual verbs in the present tense cannot refer to an ongoing eventuality at the present moment (Dowty, 1979; Krifka, 1998; Cowper, 1998; Copley, 2002; Reis Silva and Matthewson, 2007). In French, a punctual verb in the present tense form can only receive the habitual or near future interpretation, the latter of which is not available for the same

form of a durative verb (42):

- (42) Le train arrive.  
'The train arrives. / The train is arriving.'

Sometimes punctual verbs in general may be in the present tense and be accompanied by an imperfective aspect marker, but such forms are not interpreted to describe an ongoing event but coerced to receive some other interpretation. In English, for example, progressive punctual verbs in the present tense can only receive the near future (prospective) interpretation, as illustrated in (43):

- (43) a. The train is arriving at the station.  
b. The Yankees are winning the game.

The recent past interpretation of the zero-marked punctual verb in the present tense in SB as in the examples in (24) (the first two of which are repeated below in (44)) can be understood as a coerced interpretation in the opposite direction; it receives a past-oriented, rather than a future-oriented, interpretation:

- (44) a. jaan tikit-tuq  
John arrive-Part.3s  
'John (just) arrived.'  
b. jaan imaaq-tuq  
John fell.in.water-Part.3s  
'John (just) fell into the water.'

### 2.3.3 Comparison to the English present perfect

The present perfect interpretation in SB is more restricted than the explicitly indicated present perfect in English in some respects. First of all, as discussed in the previous section, it is only available as a coerced interpretation. A punctual verb is incompatible with an imperfective aspect, and is coerced to have a past-oriented interpretation. A durative verb, on the other hand, is

compatible with an imperfective aspect, and cannot receive the perfect interpretation. Second, as mentioned above, a zero-marked punctual verb in SB must describe an eventuality that holds or occurs in a past time that is considered ‘recent’ by both subjective and objective criteria. The English present perfect is often used to emphasize the temporal immediacy of the described eventuality, but it can also describe an eventuality that is temporally remote from the present. Comrie (1976:60) notes to illustrate this point that the sentence *The Second World War has ended* would be acceptable to someone who had been a desert island with no access to the rest of the world since 1944, and heard this news in 1976. Third, the English perfect has the so-called experiential use, where temporal recency is not implicated (45).

(45) In reply to: ‘Have you seen the movie *Atanarjuat*?’

Yes, I have seen it.

A zero-marked verb SB cannot be used in the same way; sentence (46) can only mean that the speaker saw the movie recently.<sup>16</sup>

(46) In reply to: ‘Have you seen the movie *Atanarjuat*?’

#tautuk-tara  
see-Part.1s/3s  
(I (just) saw it.)

### 2.3.4 Summary

I have argued that a clause containing no tense morpheme invariably refers to the present moment. The recent past interpretation of zero-marked punctual verbs is thus not temporal but aspectual, which is evidenced by the fact that the zero-marked punctual verbs are incompatible with adverbs referring to a past time, but compatible with *maanna* ‘now’. This interpretation is comparable to the English present perfect, but different in (i) that the interpretation is obtained as a result of coercion, (ii) that the zero-marked punctual verbs cannot refer to a remote-past time,

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<sup>16</sup> To describe an experience, a past marker *-lauqsima* is often used, as in *tautu-lauqsima-jara*, ‘I have seen it before’. *-lauqsima* will be discussed in Chapter 3.

and (iii) that the experiential interpretation is unavailable for zero-marked punctual verbs.

## 2.4 Notes on Swift (2000, 2004) and Bohnemeyer and Swift (2004)

In the previous section, I proposed that the difference between the interpretations of a zero-marked punctual verb and a zero-marked durative verb is aspectual, rather than temporal, and argued that a zero-marked punctual verb is coerced to have a perfect interpretation, due to the incompatibility between its punctuality and the imperfective aspect.

Swift (2000, 2004) and Bohnemeyer and Swift (2004) claim that, in Tarramiut, where the same pattern is obtained with respect to the temporal interpretations of zero-marked verbs, the telicity of verbs determines the default viewpoint aspect. That is, zero-marked telic verbs are interpreted by default as being perfective, and zero-marked atelic verbs are interpreted by default as being imperfective. Although it is not explicitly discussed, it is apparent from their examples (47) that the two default viewpoint aspects induce different temporal interpretations; the clause containing a perfective verb is interpreted as referring to a past time, whereas the clause containing an imperfective verb is interpreted as referring to an on-going event or a situation that holds at the utterance time.

- (47) a. ani-juq  
go.out-Part.3s  
'(S)he went out.'
- b. pisut-tuq  
walk-Part.3s  
'(S)he is walking.'

(Bohnemeyer and Swift, 2004:267)

It can be shown, contra Bohnemeyer and Swift (2002), that it is durativity, rather than telicity, that determines the aspectual interpretation of a zero-marked (i.e., present-tensed) verb (Clarke, 2009). Telicity is concerned with whether the described eventuality has an inherent culmination point or not; a telic verb describes an eventuality that has an inherent culmination point and an atelic verb describes an eventuality that has no culmination point. On the other hand, durativity is

concerned with whether the described eventuality lasts for an extended duration or not. Telicity and durativity are thus orthogonal properties, as shown in Table 1 (repeated from Chapter 1):

<b>Class</b>	<b>Examples</b>	<b>dynamic</b>	<b>durative</b>	<b>telic</b>
State	<i>know, believe, love, have,</i>	–	+	–
Activity	<i>run, swim, drive a car, push a cart</i>	+	+	–
accomplishment	<i>paint a picture, build a house, deliver a sermon, recover from illness</i>	+	+	+
Achievement	<i>find, lose, arrive at the station, reach the summit</i>	+	–	+
Semelfactive	<i>cough, knock on the door, hiccup, blink</i>	+	–	–

Table 1: Aspectual classes and their semantic specifications

With respect to telicity, accomplishment and achievement verbs are grouped together as ‘telic’, and activity and semelfactive verbs are grouped together as ‘atelic’. With respect to durativity, on the other hand, state, activity and accomplishment verbs are grouped together as ‘durative’, and achievement and semelfactive verbs are grouped together as ‘punctual (non-durative)’. Swift (2000, 2004) and Bohnemeyer and Swift’s (2004) claim thus implies that zero-marked accomplishment verbs would receive the perfective interpretation, and semelfactive verbs would receive the imperfective interpretation. This, however, does not hold of SB, as demonstrated by data like the following.<sup>17</sup>

- (48) a. jaan iglu-liuq-tuq  
 John house-make-Part.3s  
 ‘John is building a house.’
- b. miali qisi-liri-juq tuktu-up aminga-nit  
 Mary skin-work.on-Part.3s caribou-Gen.s skin-Acc.pl  
 ‘Mary is skinning the caribou.’
- (49) tagiuq-tunga  
 sneeze-Part.1s  
 ‘I (just) sneezed.’

<sup>17</sup> Bohnemeyer and Swift (2004) do not present data showing that telicity rather than durativity determines the temporal interpretation of a Tarramiut zero-marked verb. Considering that SB and Tarramiut are close dialects, it seems likely that the analysis of zero-marked verbs in SB proposed in this chapter directly carries over to Tarramiut.

(48a,b) indicate that a zero-marked accomplishment verb invariably receives an imperfective interpretation, on a par with a zero-marked state verb and an zero-marked activity verb, and (49) indicates that a zero-marked semelfactive verb receives a similar interpretation as a zero-marked achievement verb, which I argued to be a perfect (rather than perfective) interpretation. From such observations, it can be concluded that it is durativity, rather than telicity, that determines the temporal interpretation of a zero-marked verb, as far as SB is concerned (see also Clarke, 2009 for discussion).

## Chapter 3 The Past Tense

### 3.1 Introduction

This chapter addresses reference to the past time. In previous studies, varieties of the Inuit language, such as North Baffin (Harper, 1979), Tarramiut (Swift, 2000, 2004), Arctic Quebec (Dorais, 1988), and West Greenlandic (Fortescue, 1984), have been reported to have multiple past markers. Swift (2000, 2004), for example, remarks that Tarramiut has five past markers, which specify different degrees of temporal distance (from the utterance time), or in other words, cover different temporal domains in the past (Figure 5).

- (50) (i) *-kainnaq*: recent past  
(ii) *-qqau*: same day past  
(iii) *-lauq*: yesterday past  
(iv) *-lauju*: distant past  
(v) *-lauqsima*: long ago past

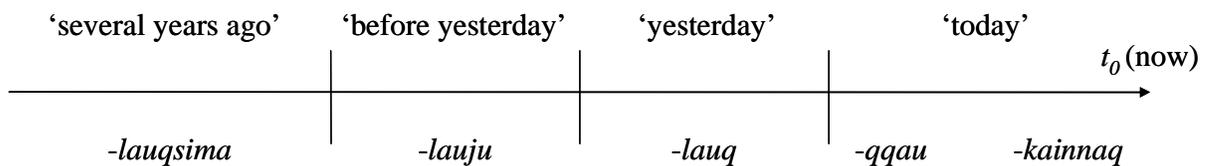


Figure 5: Temporal domains of the past markers in Tarramiut (Swift, 2000:96)

SB also has multiple past markers. In this chapter I will examine the six past markers, which are presented in (51) with informal and approximate semantic descriptions.

- (51) (i) *-kainnaq*: recent past  
(ii) *-rataaq*: recent past  
(iii) *-qqau*: same day past

- (iv) *-lauq*: yesterday past
- (v) *-juu*: distant past
- (vi) *-lauqsima*: long ago past

My consultant confirms that they use all the six forms to make reference to a state of affairs in the past. Most of the six past markers have cognates with apparently very similar (if not identical) meanings in North Baffin, Tarramiut, etc. It will be demonstrated, however, that their meanings are more complicated than the provided informal descriptions suggest, and that the relation between them is also more complicated than can be accounted for by a ‘linear scheme’ like Figure 5.

The six forms contrast with each other in the frequency of occurrence. Namely, *-qqau* and *-lauq* are much more often used than the others. In the following, I will first discuss the properties of *-qqau* and *-lauq*, and then extend the discussion to the other past markers.

In Section 3.2, I will demonstrate that *-qqau* and *-lauq* are markers of a grammatical tense, rather than aspects or temporal adverbs, etc., using diagnostics for tense-hood drawn from Tonhauser (2006). In Section 3.3, I will examine the exact distribution and meaning of *-qqau* and *-lauq*. It has been reported that *-qqau* is used to describe a past eventuality within the day of utterance, and *-lauq* is used to describe a past eventuality prior to the day of utterance in SB (Hayashi, 2005; Hayashi and Spreng, 2005), in North Baffin (Harper, 1979), and in some other varieties of Inuktitut spoken in Arctic Quebec, including Tarramiut (Dorais, 1988; Swift, 2000, 2004). In SB, there are at least two types of data that do not conform to this generalization. First, *-lauq* can be used even when the speaker is not certain if the described eventuality occurred prior to the day of utterance. Second, *-lauq* can be used in a negative statement with the nuance of ‘not yet’, even if the sentence describes an eventuality within the day of utterance. Based on such observations, I conclude that *-lauq* actually indicates a general past, rather than the ‘yesterday’ past, and that its association with the past time prior to the day of utterance can be better explained as a conversational implicature; the use of *-lauq* implicates that the time that it refers to does not fall within the domain of *-qqau*, the day of utterance.

In Section 3.4, I will argue that four other past markers, i.e., *-kainnaq*, *-rataaq*, *-juu* and *-lauqsima* are also tense markers, but their status differs from that of *-qqau* and *-lauq*. The use of *-kainnaq*, *-rataaq*, *-juu* or *-lauqsima* in place of *-qqau* or *-lauq* allows more fine-grained temporal specifications; *-kainnaq*, for example, indicates that the described eventuality occurs in a *recent* time within the day of the utterance (where what counts as recent is determined based on a subjective criterion). Unlike *-qqau*, however, these markers do not block the use of another tense in their domain. For example, *-kainnaq* can be used to refer to a time of a few minutes ago, so can *-qqau*. A SB speaker, thus, can ‘get by’ without *-kainnaq*, *-rataaq*, *-juu* and *-lauqsima*. *-qqau* and *-lauq*, on the other hand, are indispensable, in the sense that the lack of either would significantly compromise the expressive capacity of the language, making some situations impossible to describe. One can thus say SB has two ‘layers’ of past tenses. The first layer consists of the primary past tenses: the hodiernal past tense (‘today’ past tense) indicated by *-qqau* and the general past tense indicated by *-lauq*. The second layer consists of secondary tenses, which include the ‘recent past tenses’ indicated by *-kainnaq*/*-rataaq*, the ‘pre-hodiernal past tense’ indicated by *-juu*, and the ‘distant past tense’ indicated by *-lauqsima* (shaded areas represent segments within which the cut-off point may vary depending on the speaker’s subjective perception of the temporal distance of the described eventuality).

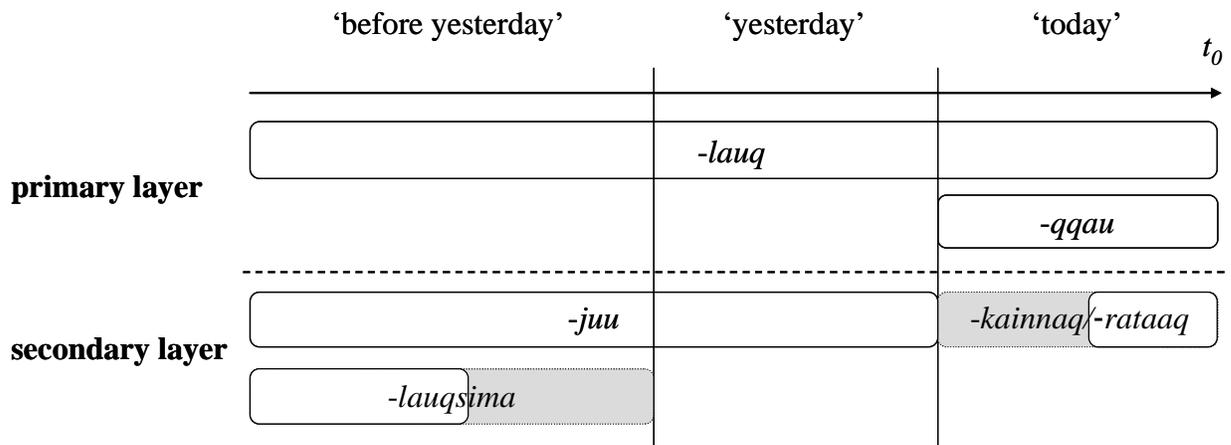


Figure 6: The system of the past tenses in SB

### 3.2 *-qqau* and *-lauq*: primary tense markers

Cognates of *-qqau* have been traditionally referred to as a marker of ‘past within today’, and

cognates of *-lauq* have been traditionally referred to as a marker of ‘past earlier than today’ (Harper, 1979; Dorais, 1988; Swift, 2000, 2004). *-qqau* and *-lauq* in SB appear to conform to these descriptions. Verbs with *-qqau* can co-occur with a temporal adverbial referring to a time within the day of utterance, such as *ullaaq*, ‘this morning’ (52), but not with a temporal adverbial referring to a time earlier than the day of utterance, such as *ippatsaq* ‘yesterday’ (53).

- (52) a. jaan tiki-**qqau**-juq ullaaq  
 John arrive-qqau-Part.3s this.morning  
 ‘John arrived this morning.’
- b. jaan mumi-**qqau**-juq ullaaq  
 John dance-qqau-Part.3s this.morning  
 ‘John danced / was dancing this morning’
- c. jaan qamuti-liu-**qqau**-juq ullaaq  
 John sled-make-qqau-Part.3s this.morning  
 ‘John made / was making a sled this morning.’
- d. jaan quviasu-**qqau**-juq ullaaq  
 John be.happy-qqau-Part.3s this.morning  
 ‘John was happy this morning.’
- (53) a. \*jaan tiki-**qqau**-juq ippatsaq  
 John arrive-qqau-Part.3s yesterday  
 (John arrived yesterday.)
- b. \*jaan mumi-**qqau**-juq ippatsaq  
 John dance-qqau-Part.3s yesterday  
 (John danced / was dancing yesterday.)
- c. \*jaan qamuti-liu-**qqau**-juq ippatsaq  
 John sled-make-qqau-Part.3s yesterday  
 ‘John made / was making a sled yesterday.’
- d. \*jaan quviqasu-**qqau**-juq ippatsaq  
 John be.happy-qqau-Part.3s yesterday  
 (John was happy yesterday.)

On the other hand, verbs with *-lauq* can co-occur with a temporal adverbial referring to a past time earlier than the day of utterance, such as *ippatsaq* ‘yesterday’ (54), but cannot co-occur with a temporal adverbial referring to a past time within the day of the utterance, such as *ullaaq*, ‘this

morning' (55):

- (54) a. jaan tiki-**lauq**-tuq ippatsaq  
John arrive-lauq-Part.3s yesterday  
'John arrived yesterday.'
- b. jaan mumi-**lauq**-tuq ippatsaq  
John dance-lauq-Part.3s yesterday  
'John danced / was dancing yesterday.'
- c. jaan qamuti-liu-**lauq**-tuq ippatsaq  
John sled-make-lauq-Part.3s yesterday  
'John made / was making a sled yesterday.'
- d. jaan quviasu-**lauq**-tuq ippatsaq  
John be.happy-lauq-Part.3s yesterday  
'John was happy yesterday.'
- (55) a. \*jaan tiki-**lauq**-tuq ullaag  
John arrive-lauq-Part.3s this.morning  
(John arrived this morning.)
- b. \*jaan mumi-**lauq**-tuq ullaag  
John dance-lauq-Part.3s this.morning  
(John danced / was dancing this morning.)
- c. \*jaan qamuti-liu-**lauq**-tuq ullaag  
John sled-make-lauq-Part.3s this.morning  
'John made / was making a sled this morning.'
- d. \*jaan quviasu-**lauq**-tuq ullaag  
John be.happy-lauq-Part.3s this.morning  
(John was happy this morning.)

One important research question regarding *-qqau* and *-lauq* is whether they are markers of grammatical tense or not. Given that it has been claimed that West Greenlandic, a variety of the Inuit language, is tenseless (Shaer, 2003; Bittner, 2005, 2007), it seems sensible to consider the possibility that SB is tenseless, too. In the following, I will demonstrate that *-qqau* and *-lauq* indeed indicate a tense, using several diagnostics.

### 3.2.1 Diagnostic criteria for tense markers

As mentioned in section 1.2, one criterion for a tense marker is its obligatoriness. That is, a tense marker, unlike a temporal adverbial, cannot be omitted even when the temporal location of the described eventuality is specified by other means (a temporal adverbial, contextual information, etc.) so that its semantic contribution is redundant. This diagnostic enables us to distinguish between tense and temporal adverbials such as *yesterday* or *in the past*. Thus, the first diagnostic is this:

(56) A tense cannot be omitted.

In addition, Tonhauser (2006) proposes several cross-linguistically applicable criteria that distinguish tenses from (grammatical) aspects, which include the following:<sup>18</sup>

- (57) (i) Aspects may not be able to co-occur with members of particular aspectual classes, while tenses are not subject to such constraints.
- (ii) Tenses cannot co-occur with other tenses, while aspects may co-occur with other aspects.
- (iii) Tenses do not encode a state change, while aspects may.

In the following, I will demonstrate that *-qqau* and *-lauq* satisfy these four criteria, (56) and (57), and thus can be safely regarded as tense markers.<sup>19</sup>

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<sup>18</sup> Tonhauser (2006) additionally discusses the following two criteria.

- (i) Tenses restrict the time of an eventuality, while aspects do not.
- (ii) Tenses are anaphoric, while aspects are not.

I agree with these statements, but do not take them up here because it is unclear to me how to determine in practice whether a given expression meets these two criteria.

<sup>19</sup> These criteria are effective in distinguishing tense markers from temporal markers and aspect markers, but not suitable for distinguishing tense markers from modal markers. Additional considerations are required to differentiate future tense markers from future-oriented modals (Chapter 4).

### 3.2.2 Obligatoriness

A tense cannot be omitted.

As mentioned in Section 1.2, a tense marker cannot be omitted even if the same or more detailed information regarding the temporal location of the described eventuality is provided by other sources, such as temporal adverbials or contextual information.

*-lauq* and *-qqau* exhibit this property; they cannot be omitted even if the sentence contains a temporal adverbial like *ullaaq* ‘this morning’ or *ippatsaq* ‘yesterday’, which provide more specific temporal information than *-qqau* and *-lauq*.

- (58) a. \*jaan tikit-tuq ullaaq  
John arrive-Part.3s this.morning  
(John arrived this morning.)
- b. jaan tiki-**qqau**-juq ullaaq  
John arrive-qqau-Part.3s this.morning  
‘John arrived this morning.’
- (59) a. \*jaan mumiq-tuq ippatsaq  
John dance-Part.3s yesterday  
(John danced/was dancing yesterday.)
- b. jaan mumi-**lauq**-tuq ippatsaq  
John dance-lauq-Part.3s yesterday  
‘John danced/was dancing yesterday.’

Conversely, any independent clause in SB that describes a past situation must contain exactly one past tense marker, i.e., *-qqau*, *-lauq*, or one of the other four morphemes to be discussed in Section 3.4.

### 3.2.3 No restrictions on co-occurrence with members of particular aspectual classes

Aspects may not be able to co-occur with members of particular aspectual classes, while tenses are not subject to such constraints.

Grammatical aspects, but not tenses, across languages exhibit restrictions with respect to the

lexical aspect of the input event description. The imperfective aspect, for example, is incompatible with a state, an achievement, or an inchoative (e.g., *\*I am knowing him*), except on a coerced, derived interpretation (e.g., *I was coughing* on an iterative or habitual interpretation).

In view of this criterion, if *-lauq* and *-qqau* are markers of tenses, they must not exhibit any co-occurrence restriction with members of particular aspectual classes. This is indeed the case; *-lauq* and *-qqau* are compatible with all of Vendler's four aspectual types (60)-(63) and the semelfactive aspect (64):

(60) *Achievement*

- a. jaan tiki-**qqau**-juq      ullaag  
John arrive-qqau-Part.3s this.morning  
'John arrived this morning.'
- b. jaan tiki-**lauq**-tuq      ippatsaq  
John arrive-lauq-Part.3s yesterday  
'John arrived yesterday.'

(61) *Accomplishment*

- a. jaan niri-**qqau**-jaa      aapu  
John eat-qqau-Part.3s/3s apple  
'John ate/was eating the apple.'
- b. miali qisi-liri-**lauq**-tuq      tuktu-up      aminga-nit  
Mary skin-work.on-lauq-Part.3s caribou-Gen.s skin-Acc.pl  
'Mary skinned/was skinning the caribou.'

(62) *Activity*

- a. jaan mumi-**qqau**-juq      ullaag  
John dance-qqau-Part.3s this.morning  
'John danced/was dancing this morning.'
- b. jaan mumi-**lauq**-tuq      ippatsaq  
John dance-lauq-Part.3s yesterday  
'John danced/was dancing yesterday.'

(63) *State*

- a. jaan quviasu-**qqau**-juq ullaag  
John happy-qqau-Part.3s this.morning  
'John was happy this morning.'
- b. jaan ilinniaqti-u-**lauq**-tuq 1990-mit  
John student-be-lauq-Part.3s 1990-Loc  
'John was a student in 1990.'

(64) *Semelfactive*

- a. jaan tagiu-**qqau**-juq ullaag  
John sneeze-qqau-Part.3s this.morning  
'John sneezed this morning.'
- b. jaan kasuktu-**lauq**-tuq ippatsaq  
John knock-lauq-Part.3s yesterday  
'John knocked on the door yesterday.'

In contrast, some aspectual markers in SB, such as *-liq* (65) (inceptive) and *-sima* (66) (perfect) (Harper, 1979) show co-occurrence restrictions with certain aspectual classes. The data below show that the inceptive aspect marker *-liq* and the present perfect morpheme *-sima* are compatible with achievements (65b) (66b) and activities (65c) (66c), but not with states (65a) (66a).

- (65) a. \*jaan isumatu-**liq**-tuq  
John be.smart-Inc-Part.3s  
(John started being smart.)
- b. jaan imaa-**liq**-tuq  
John fall.in.water-Inc -Part.3s  
'John is about to fall in the water.'
- c. jaan mumi-**liq**-tuq  
John dance-Inc -Part.3s  
'John just started dancing. / John is now dancing.'
- (66) a. \*jaan taki-**sima**-juq  
John tall-Perf-Part.3s  
(John had been tall.)

- b. jaan tiki-**sima**-juq  
John arrive-Perf-Part.3s  
'John has arrived.'
- c. jaan pisu-**sima**-juq  
John walk-Perf-Part.3s  
'John had walked.'

### 3.2.4 Co-occurrence with members of the same category

Tenses cannot co-occur with other tenses, while aspects may co-occur with other aspects.

Two tenses cannot co-occur within a single clause, whereas two aspects can (Comrie, 1985; Shaer, 2003; Tonhauser, 2006). This generalization conforms to the hypothesis that *-qqau* and *-lauq* are tense markers, which cannot co-occur with each other in a clause, as illustrated in (67):

- (67) a. \*jaan mumi-**qqau-lauq**-tuq  
John dance-qqau-lauq-Part.3s
- b. \*jaan mumi-**lauq-qqau**-juq  
John dance-lauq-qqau-Part.3s

In contrast, some aspect markers may co-occur with other aspect markers; (68) illustrates, for example, *-sima* (perfect) may be combined with *-anik* (terminative; 'action already done', 'already', Harper, 1979) or *-qattaq* (frequentative).

- (68) a. jaan mumi-**anik-sima**-juq  
John dance-Term-Perf-Part.3s  
'John has finished dancing.'
- b. jaan mumi-**qattaq-sima**-juq  
John dance-Freq-Perf-Part.3s  
'John used to dance.'

The combinations of *-anik* and *-sima* (68a) and *-qattaq* and *-sima* (68b) receive complex aspectual interpretations, which are translated here with 'has finished' and 'used to', respectively.

### 3.2.5 Entailment of a state change

Tenses do not encode a state change, while aspects may.

A tense cannot encode a state change, as its function is to relate two times. An aspect, on the other hand, may encode a state change.

Although a past tense often conveys that the described eventuality ceased to hold prior to the utterance time, it is not a semantic entailment. For example, the sentence *Yesterday, Bill was sick* may evoke the impression that Bill is no longer sick (i.e., has recovered), but this is only a conversational implicature, as proven by the fact the sentence can be followed by ... *and he still is today* without resulting in a contradiction (Comrie, 1985; Tonhauser, 2006). The same point applies to *-lauq* and *-qqau*:

- (69) a. jaan aannia-**qqau**-juq ullaag  
John be.sick-qqau-Part.3s this.morning  
'John was sick this morning.'
- b. jaan aannia-**qqau**-juq ullaag sulis maanna aannia-∅-juq  
John be.sick-qqau-Part.3s this.morning still now be.sick-Pres-Part.3s  
'John was sick this morning and still now he is sick.'
- (70) a. jaan aannia-**lauq**-tuq ippatsaq  
John be.sick-lauq-Part.3s yesterday  
'John was sick yesterday.'
- b. jaan aannia-**lauq**-tuq ippatsaq sulis maanna aannia-∅-juq  
John be.sick-lauq-Part.3s yesterday still now be.sick-Pres-Part.3s  
'John was sick yesterday and still now he is sick.'

My consultant reports that, upon listening to (69a) and (70a), she would infer that John is not sick anymore. She, however, agrees that a sentence like (69b) and (70b) is not contradictory, which implies that the change of state is a cancellable implicature.

In contrast, certain aspects, such as the terminative aspect indicated by *-anik*, semantically entail a state change (71).

- (71) #jaan aannia-**raanik**-Ø-tuq      ippatsaq    suli    maanna    aannia-Ø-juq  
 John be.sick-Term-Pres-Part.3s yesterday still now      be.sick-Pres-Part.3s  
 ‘John ceased being sick and still now he is sick.’

### 3.3 Specifications of remoteness

Having seen that *-qqau* and *-lauq* satisfy all the six major criteria for tense markers, we can now conclude that they indicate past tenses. The next question to be addressed is, what is the exact semantic difference between them? Cross-linguistically, it is not rare for a language to have multiple past (or future) tenses that cover different temporal domains (Dahl, 1983, 1985, 2008; Comrie, 1985; Mithun, 1999; Dahl and Velupillai, 2005:269).

Such languages are especially common in the Bantu family, the Australian Aboriginal languages, and the Native American languages (Comrie, 1985). When a language has two past tenses covering different temporal domains, the cut-off point (boundary) is most commonly placed between ‘today’ and ‘before today’, in which case the tenses can be labeled with Latinate terms as hodiernal past and pre-hodiernal past (Dahl, 1983, 1985, 2008; Comrie, 1985; Dahl and Velupillai, 2005). Another common cut-off point is that between ‘recently’ and ‘longer ago’. When a language has more than two past tenses, additional cut-off points may be placed between ‘yesterday’ and ‘before yesterday’, between ‘a few days ago’ and ‘more than a few days ago’, between ‘this year’ and ‘before this year’, etc.

Comrie (1985) also points out that tense systems across languages may contrast with one another not only with respect to how they segment the time-line, but also with respect to how rigid the boundaries between the segments are. Haya, for example, has three past tenses covering ‘today’ (the hodiernal past), ‘yesterday’ (the hesternal past), and ‘before yesterday’ (the pre-hesternal past). Their boundaries are rigid, in the sense that the hodiernal past can never be used to describe a situation in a time prior to the day of utterance. Sotho, in contrast, has the opposition of ‘recently’ vs. ‘not recently’, where the boundary is fluid in the sense that what counts as recent is left to the speaker’s subjective impression; it is possible, thus, to describe an event that took place several years or decades ago with a recent past form, as long as the speaker intends to emphasize the subjective recency.

### 3.3.1 -*qqau* and -*lauq*: hodiernal vs. pre-hodiernal?

The data on -*qqau* and -*lauq* presented above ((52)-(55)) suggest that the SB tense system has a rigid boundary between ‘today’ (-*qqau*) and ‘before today’ (-*lauq*). In other words, the SB tense system has a hodiernal (-*qqau*) and pre-hodiernal past (-*lauq*). Additional data are provided below to illustrate the same point.

- (72) a. \*jaan tiki-**qqau**-juq ippatsaq  
John arrive-qqau-Part.3s yesterday  
(John arrived yesterday.)
- b. \*jaan mumi-**qqau**-juq pingasuarusiulauqtumit  
John dance-qqau-Part.3s last.week  
(John danced last week.)
- (73) a. \*jaan tiki-**lauq**-tuq ullaag  
John arrive-lauq-Part.3s this.morning  
(John arrived this morning.)
- d. \*jaan aannia-**lauq**-tuq ullaag  
John be.sick-lauq-Part.3s this.morning  
(John was sick this morning.)

(72) illustrates that -*qqau* is incompatible with an adverbial phrase referring to a time prior to the day of utterance, such as *ippatsaq* ‘yesterday’ and *pingasuarusiulauqtumit* ‘last week’. Likewise, (73) illustrates that -*lauq* is incompatible with an adverbial phrase referring to a time within the day of utterance, such as *ullaag* ‘this morning’.

There are data, however, that do not conform to the hypothesis that -*lauq* indicates a pre-hodiernal past. Namely, when the speaker is not able to specify whether the eventuality in question occurred within the day of utterance or earlier, she can (and must) use -*lauq*. In the situation described in (74), for example, the speaker knows that Tom’s making a phone call took place some time in the past, but does not know whether it took place within the day of utterance or earlier.

- (74) Situation: You have been away from home since yesterday morning. You just come home, and notice that a message from Tom is left on your answering machine. You wonder when

he phoned, but unfortunately, your answering machine does not tell you. In this situation, how would you say ‘Tom phoned’?

- a. Tom uqaala-**lauq**-tuq  
Tom call-lauq-Part.3s  
‘Tom phoned.’
- b. #Tom uqaala-**qqau**-juq  
Tom call-qqau-Part.3s  
(Tom phoned.)

The speaker can thus use *-lauq* (but not *-qqau*) to describe a situation that may have occurred within the day of utterance.

It must be noted that, even if the speaker does not know when exactly the eventuality in question occurred, as long as she assumes that it occurred sometime within the day of utterance, she would use *-qqau*, as shown in (75):

(75) Situation: You were away from home today. You just come home, and notice that a message from Tom is left on your answering machine. You wonder what time he phoned, but unfortunately, your answering machine does not tell you. In this situation, how would you say ‘Tom phoned’?

- a. #Tom uqaala-**lauq**-tuq  
Tom call-lauq-Part.3s  
(Tom phoned.)

Comment: ‘I would say this only if Tom phoned yesterday or before.’

- b. Tom uqaala-**qqau**-juq  
Tom call-qqau-Part.3s  
‘Tom phoned.’

The data in (76) and (77) also illustrate the point that the speaker can (and must) use *-lauq* even if the speaker is not able to specify whether the eventuality in question occurred within the day of utterance or earlier.

(76) Situation: You are talking with your friend about John. You thought John was out of town, but she says that he is back. You have no idea when he came back, today or some time before. So you ask her when he came back.

- a. qanga tiki-**lauq**-paa?  
when arrive-lauq-Int.3s  
'When did he arrive?'
- b. #qanga tiki-**qqau**-vaa?  
when arrive-qqau-Int.3s  
(When did he arrive?)

Comment: 'I would say this only if I know John came back today but don't know exactly what time he did.'

(77) Situation: Amy is your friend. She left for Iqaluit a week ago. Your sister asks you whether you heard from her since.

- a. tusaq-vigi-**lauq**-piu-lii  
hear-from-lauq-Int.2s/3s-Emp  
'Did you hear from her?'
- b. #tusaq-vigi-**qqau**-viu-lii  
hear-from-qqau-Int.2s/3s-Emp  
(Did you hear from her? )

In (76), where the speaker inquires about the time of an eventuality, the use of *-lauq* does not imply that the speaker assumes that the eventuality in question occurred prior to the day of utterance, because the speaker has no idea whether he came back today or some time before. Likewise, in a yes-no question containing *-lauq* (77) the use of *-lauq* does not imply that the speaker asks whether the eventuality occurred prior to the day of utterance.

There are other types of data that do not conform to the hypothesis that *-lauq* indicates a pre-hodiernal past. Firstly, a question containing *-lauq* can be felicitously answered using *-qqau*, such as 'Yes, I heard (*-qqau*) from her (today)' (78):

(78) Situation: Amy is your friend. She left for Iqaluit a week ago. Your sister asks you whether you heard from her since.

your sister: tusaq-vigi-**lauq**-piu-lii  
hear-from-lauq-Int.2s/3s-Emphasis  
'Did you hear from her?'

you: ii, tusaq-vigi-**qqau**-jara ullumi  
yes hear-from-lauq-Part.1s/3s today  
'Yes, I heard from her today.'

Secondly, utterances like (79) and (80), which have the form 'it is not the case that S(-*lauq*), but it is the case that S(-*qqau*)', are infelicitous.

- (79) a. #jaan tuqu-**lau-nngit**-tuq tuqu-**qqau**-juq  
John die-lauq-Neg-Part.3s die-qqau-Part.3s  
(John didn't die sometime before today. He died today.)  
Comment: 'It doesn't make sense. *tuqu-lau-nngit-tuq* means that he didn't die, but *tuqu-qqau-juq* means he died.'
- b. #tusaq-vigi-**lau-nngit**-tunga tusaq-vigi-**qqau**-junga  
hear-from-lauq-Neg-Part.1s hear-from-qqau-Part.1s  
(I didn't hear from her sometime before today. I heard from her today.)

Thirdly, if *-lauq* indicates a pre-hodiernal tense, one must be able to felicitously utter 'either S(-*lauq*) or S(-*qqau*) is the case'. This is not the case either (80):

- (80) #Tom uqaala-**lauq**-tuq, uvvalunniit uqaala-**qqau**-juq  
Tom call-lauq-Part.3s or call-qqau-Part.3s  
(Tom phoned sometime before today or he phoned today.)

Lastly, *-lauq* can be used to collectively describe two or more eventualities which occurred within the day of utterance and at some other time(s) prior to it.

- (81) Situation: Your friend, Mary, phoned you last week, yesterday and today.

a. miali uqaala-**lauq**-tuq pingasuiq&uni<sup>20</sup>  
Mary call-lauq-Part.3s three.times  
'Mary phoned three times.'

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<sup>20</sup> '&' represents the sound of voiceless lateral fricative (Spalding, 1992).

- b. #miali uqaala-**qqau**-juq pingasuiq&uni  
 Mary call-qqau-Part.3s three.times  
 (Mary phoned three times.)

In sum, while *-lauq* cannot be used to describe an eventuality that the speaker knows occurred within the day of utterance, it can be used to describe an eventuality that the speaker believes may or may not have occurred within the day of utterance. I thus propose that, at the semantic level, *-lauq* in fact indicates a general past, while *-qqau* indicates a hodiernal past (82):

- (82) (i) *-qqau*: a hodiernal past marker, which situates an eventuality in a past time within the day of the utterance.
- (ii) *-lauq*: a general past marker, which situates an eventuality in some past time.

The reason that the use of *-lauq* is blocked where *-qqau* is available (an exception to this will be discussed later in this section) can be attributed to the Q(uality)-principle<sup>21</sup>, which partly corresponds to Grice's maxims of conversation<sup>22</sup>. The Q-principle states: (i) Make your contribution sufficient, and (ii) Say as much as you can (Huang, 2007), and it is one of the basic principles in the neo-Gricean theory of conversational implicature (Levinson, 2000; Horn, 2004; Huang, 2007, among others). Implicatures based on this principle (i.e., the Q-implicatures) are typically derived from the opposition between S '(semantically) strong expression' and W '(semantically) weak expression'; The use of the semantically less informative expression (W) implicates that the meaning associated with the semantically more informative expression (S) is not intended.

The conditions of S and W are defined in Q-scales (Horn-scales) (83):

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<sup>21</sup> The Q-principle, in its structure, is reminiscent of what Kiparsky (1973) calls the Elsewhere Condition ('One rule's structural description is contained in the other's, the rule with the more specific structural description applies first') accrediting Pānini for its original idea. The former may be regarded as a pragmatic version of the latter, which has mainly been utilized in the fields of phonology and morphology (see Blutner 2004 for relevant discussion).

<sup>22</sup> Grice (1975) suggests that there is an underlying principle that determines the way in which a language is used with maximum efficiency. He calls this dictum the co-operative principle, and it is subdivided into four maxims of Quality, Quantity, Relevance and Manner (Huang, 2007).

(83) Q-scales (Horn-scales)

For <S, W> to form a Q-scale,

- (i) A(S) entails A(W) for an arbitrary sentence frame A (i.e., A(S) and A(W) are the sentences which contain S and W, respectively);
- (ii) S and W are equally lexicalized, of the same word class, and from the same register, and;
- (iii) S and W are of the same semantic field (i.e., S and W share a common semantic property).

Examples of pairs of S and W which form Q-scales are shown below (84).

- (84) a. <all, some>  
b. <always, sometimes>  
c. <know, believe>  
d. <identical, similar>  
e. <hot, warm>

Q-implicatures have the form shown below (85) (the connective +> stands for ‘conversationally implicates’). According to this form, the Q-implicatures from the Q-scale <all, some> (84a) and those from the Q-scale <identical, similar> in (84d) are exemplified below in (86a) and (86b), respectively:

(85) A(W) +> To the speaker’s knowledge, it may not be the case (or it is not the case) that A(S).

(86) a. John sometimes takes a bus to go to school.

+> (To the speaker’s knowledge,) John may not (or does not) always take a bus to go to school.

b. The two pictures are similar.

+> (To the speaker’s knowledge,) the two pictures may not be (or are not) identical.

If the meanings of *-qqau* and *-lauq* are as stated in (82), they would form a Q-scale  $\langle -qqau, -lauq \rangle$  and thus the use of *-lauq* would implicate that the eventuality in question may not have occurred within the day of utterance.

- (87) jaan tiki-**lauq**-tuq  
 John arrive-lauq-Part.3s  
 ‘John arrived.’

+> (To the speaker’s knowledge,) John may not have arrived today.

Also, it seems likely that sentences like (73a,b) (repeated below in (88a,b)), which involve an ‘improper’ collocation of *-lauq* and a temporal adverbial, are judged as unacceptable because the implicature induced by the use of *-lauq* is inconsistent with the meaning of the temporal adverbial occurring in the same clause.

- (88) a. \*jaan tiki-**lauq**-tuq      ullaaq  
 John arrive-lauq-Part.3s this.morning  
 (John arrived this morning.)
- d. \*jaan aannia-**lauq**-tuq      ullaaq  
 John be.sick-lauq-Part.3s this.morning  
 (John was sick this morning.)

Potentially problematic for this line of analysis is the observation that the speaker’s intuition is quite clear that the use of *-lauq* in describing a hodiernal situation is utterly unacceptable, rather than merely misleading or awkward. One may thus find it more reasonable to assume that the implicature has been grammaticalized, postulating a principle along the lines of (89).

- (89) A speaker must not utter  $S_1$ : [ ... *V-lauq* ...] if the speaker believes that in the relevant context she can use  $S_2$ : [ ... *V-qqau* ...], which is equivalent to  $S_1$  except for tense-marking, to describe the same situation.

In this work, I adopt the first, ‘purely pragmatic’ account, mainly because it appears to be simpler and more parsimonious, and leave the debate open for future research whether an alternative account based on grammatical constraints like (89) is more appropriate. It is worth noting that a

similar research question has been discussed, and still remains open, in the literature on anaphora, where the key issue is whether the effects of Binding Conditions A, B, and C can be attributed to neo-Gricean pragmatic principles (see Huang, 2007:257ff. and references therein).<sup>23</sup>

### 3.3.2 Non-occurrence vs. incompleteness

There is one interesting phenomenon that appears not to conform to the proposed account of *-qqau* and *-lauq*. It is observed in a particular kind of negative statement, which accompanies the nuance of ‘not yet’. Namely, a negated sentence containing *-lauq*, as well as *-qqau*, can be used to describe an eventuality which has not yet happened within the day of utterance.

- (90) Situation: You are at the airport waiting for your nephew to arrive. You just hear the announcement that says the arrival of his plane is delayed. Your sister phones you on your cell phone.

your sister: tiki-qqau-vaa  
arrive-qqau-Int.3s  
‘Has he arrived?’

you: a. akkaa sulii tiki-lau-nngit-tuq  
no still arrive-lauq-Neg-Part.3s  
‘No, he hasn’t arrived yet.’

b. akkaa sulii tiki-qqau-nngit-tuq  
no still arrive-qqau-Neg-Part.3s  
‘No, he hasn’t arrived yet.’

- (91) Situation: Your husband is about to throw away today’s newspaper. You want to tell him not to throw it away, because you have not read it.

a. sulii uqalimaa-lau-nngit-tara  
still read-lauq-Neg-Part.1s/3s  
‘I haven’t read it.’

b. sulii uqalimaa-qqau-nngit-tara  
still read-qqau-Neg-Part.1s/3s  
‘I haven’t read it.’

<sup>23</sup> Huang (2000:221) argues, for example, that the reason that *Mozart admires him* does not allow the reading where *him* is bound to *Mozart* can be attributed to the Q-implicature based on the scale <reflexive, pronoun>: if the speaker knows that the person Mozart admires is Mozart himself, the speaker would say *Mozart admires himself*.

(92) Situation: You ask Alana if she wants to go for lunch with you. Alana says ‘Ask Midori. She hasn’t had lunch yet’.

- a. suli niri-**lau-nngit**-tuq  
still eat-lauq-Neg-Part.3s  
‘She hasn’t eaten yet.’
- b. suli niri-**qqau-nngit**-tuq  
still eat-qqau-Neg-Part.3s  
‘She hasn’t eaten yet.’

In the context provided in (90), (91), and (92), the interlocutors clearly refer to a state of affairs on the day of the utterance, and thus *-qqau* would be predicted to be the only option. According to my consultant’s judgments, however, the use of *-lauq* is acceptable, and is in fact even preferred to *-qqau*.

It is important to note that this anomaly is not attested in negative statements in general. Roughly speaking, when a negative statement can be naturally translated in English using a simple past tense (‘... did not ...’), the selection of the past tense form conforms to the pattern in affirmative contexts, as shown in (93)-(95). However, when a negative statement can be naturally translated using a present perfect plus *yet* (‘... has not yet ...’), the choice of *-lauq* is preferred even if the speaker refers to the state of affairs within the day of the utterance, as shown in (90)-(92) above.

- (93) a. \*jaan tiki-**lau-nngit**-tuq ullaq  
John arrive-lauq-Neg-Part.3s this.morning  
(John didn’t arrive this morning.)
- b. jaan tiki-**qqau-nngit**-tuq ullaq  
John arrive-qqau-Neg-Part.3s this.morning  
‘John didn’t arrive this morning.’
- (94) a. \*maki-**lau-nngit**-tuq ullaq  
get.up-lauq-Neg-Part.3s this.morning  
((S)he didn’t get up this morning.)
- b. maki-**qqau-nngit**-tuq ullaq  
get.up-qqau-Neg-Part.3s this.morning  
‘(S)he didn’t get up this morning.’

- (95) a. \*alana uvani-**lau-nngit**-tuq ullaag  
 Alana be.here-lauq-Neg-Part.3s this.morning  
 (Alana was not here this morning.)
- b. alana uvani-**qqau-nngit**-tuq ullaag  
 Alana be.here-qqau-Neg-Part.3s this.morning  
 ‘Alana was not here this morning.’

Some languages code differently ‘non-occurrence of an event in the past’ and ‘incompletion of an event’. In English, for example, a simple past form is usually used to describe non-occurrence, while a present perfect is used to describe incompletion.

- (96) a. I didn’t eat my lunch. +> I skipped a meal.
- b. I haven’t (yet) eaten my lunch. +> I will have a meal.

I propose that, in SB, the form: [verb + *-lauq* + negation] can be used to describe either of the above, non-occurrence of an event in the past, or incompletion of an event. The first interpretation comes from the literal meanings of *-lauq* and negation, and the second comes from the idiomatic combination of the two.<sup>24</sup>

### 3.4 Secondary tenses

Varieties of the Inuit language, such as North Baffin (Harper, 1979), Tarramiut (Swift, 2000, 2004), Arctic Quebec (Dorais, 1988), and West Greenlandic (Fortescue, 1984), have been reported to have more than two past markers. SB too has past markers other than *-qqau* and *-lauq*, which include those listed in (97) with informal and approximate characterizations:

- (97) (i) *-kainnaq*: recent past  
 (ii) *-rataaq*: recent past  
 (iii) *-juu*: distant past  
 (iv) *-lauqsima*: long ago past

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<sup>24</sup> The remaining question is: what is the exact semantic difference between (non-)occurrence and (in)completion? Here, I will not attempt to provide an answer to this question, and leave it for future research.

These past markers have cognates with apparently similar (if not identical) meanings in close relatives of SB, such as North Baffin and Tarramiut.

Harper (1979) on North Baffin states that the dialect has more than ten past markers. Besides *-qqau* and *-lauq*, he discusses the following two in some detail.<sup>25</sup>

(98) (i) *-rataaq*

‘*-rataaq* describes action occurring within the previous few minutes.’

taku-**rataaq**-para  
see-Imm.Past-Part.1s/3s  
‘I just saw it.’

(Harper, 1979:88, glosses added)

(ii) *-juu*

‘(*-juu* is) used to describe action in the far past.’

taku-**juu**-jara  
see-Dist.Past-Part.1s/3s  
‘I saw it long ago.’

(Harper, 1979:90, glosses added)

Swift (2000:95-102) mentions that Tarramiut has three past markers in addition to *-qqau* and *-lauq*, which are illustrated in (99) (Swift, 2000:95-102):

(99) (i) *-kainnaq*

‘*-kainnaq* ‘a moment ago’ specifies a tense locus ranging between a few minutes up to a few hours prior to the temporal reference point.’

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<sup>25</sup> Harper (1979:92) also discusses *-viniq*, which he claims is used to describe a ‘past unperceived action’ (i.e., a past eventuality that was not perceived by the speaker). The same form is used in SB too, but I will not take it up here because it has fundamentally different morpho-syntactic properties than other tense markers (it attaches only to a nominal or a verb in its gerundive form), and thus does not appear to belong to the same grammatical category as *-lauq*, etc. The exact function of *-viniq* in SB is not clear to me, but it is worth noting that, contrary to Harper (1979), *-viniq* can be used to describe an eventuality perceived by the speaker; for example, the sentence *Jaan imaa-gasuaq-tu-viniq* ‘John was trying to dive into the water’ can be felicitously uttered in a context where the speaker directly witnessed John’s trying to dive. My consultant comments that one may utter this sentence to surprise someone who knows that John does not like water at all.

sanirtauti-aluk ma-ani-i-**kainna**-rmat  
 garbage.truck-Emp be.here-Loc-be-R.Past-Caus.3s  
 ‘The garbage truck was just here a moment ago.’

(Swift, 2000:96)

(ii) *-lauju*

‘*-lauju* is used for past time reference one day [...] up to several years prior to the temporal reference point.’

taitsumani-galaa kati-**lauju**-jara  
 previously-Emp meet-Dist.Past-Part.1s/3s  
 ‘I met him several years ago.’

(Swift, 2000:101)

(iii) *-lauqsima*

‘It [*-lauqsima*] has a temporal remoteness sense of ‘long ago.’

kati-**lauqsima**-jara  
 meet-Dist.Past-Part.1s/3s  
 ‘I met him a long time ago.’

(Swift, 2000:101)

She proposes that, together with *-qqau* and *-lauq*, the five past markers cover different temporal domains in the past, as schematized in Figure 1 (Swift, 2000:96):

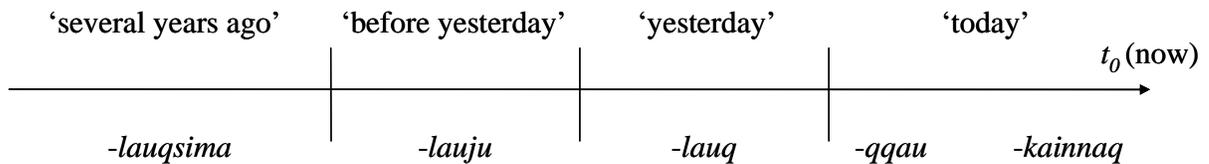


Figure 5 (repeated)

Temporal domains of the past markers in Tarramiut (Swift, 2000:96)

We have seen above that the temporal domains for *-lauq* and *-qqau* (in SB) are not disjoint at the semantic level, the one for *-lauq* properly subsuming the one for *-qqau*. It will be demonstrated below that the temporal domains for the other four tense markers listed in (97) partially overlap with each other and with those of *-lauq* and *-qqau*. Thus the structure of the SB tense system is far more complex than can be expressed by a simple linear scheme like Figure 5.

In the following, I will investigate the semantics of the four past markers listed in (97), *-kainnaq*, *-rataaq*, *-juu* and *-lauqsima* in SB. They can be regarded as past tense markers associated with specific temporal domains, but their status is different from that of *-qqau* and *-lauq* in at least two respects. First, their frequencies of occurrence are much lower than those of *-qqau* and *-lauq*. Second, they can be freely replaced with a tense marker with a more general meaning. *-kainnaq* and *-rataaq* have more specific meanings than *-qqau* (i.e., *-kainnaq* and *-rataaq* cover a temporal domain properly subsumed by the one covered by *-qqau*), and yet the availability of *-kainnaq* or *-rataaq* does not block the use of *-qqau*. Likewise, *-lauqsima* and *-juu* have more specific meanings than *-lauq*, but *-lauq* can be used in the contexts where *-lauqsima* or *-juu* would be appropriate. The four tense markers thus contrast with *-qqau* and *-lauq*, which are as a rule in complementary distribution.

To capture the difference between *-kainnaq*, *-rataaq*, *-lauqsima* and *-juu* on the one hand and *-lauq* and *-qqau* on the other, I propose that SB has two ‘layers’ of past tenses. The first layer consists of two ‘primary’ tenses: the general past indicated by *-lauq* and the hodiernal past indicated by *-qqau*. The second layer consists of three ‘secondary’ tenses: the recent past indicated by *-kainnaq/-rataaq*, the pre-hodiernal past indicated by *-juu*, and the distant past indicated by *-lauqsima*.<sup>26</sup>

(100) *primary tenses*

- (i) *-lauq*: general past

jaan tiki-lauq-tuq  
 John arrive-Past-Part.3s  
 ‘John arrived.’

- (ii) *-qqau*: hodiernal past

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<sup>26</sup> It is not clear to me if SB has secondary tenses other than these three. Harper (1979) mentions that in addition to *-rataaq*, *-qqau*, *-lauq*, *-juu* and *-lauqsima* (he did not mention *-kainnaq*), North Baffin has five more past tense markers: *-niq*, *-viniq*, *-sima*, *-nga*, *-kasaq*, and *-ma* (though not all of them were discussed in detail). All of them have cognates in SB. In SB, *-sima*, *-nga*, *-kasaq* and *-ma* are apparently not tense markers, while *-niq* and *-viniq* could be (though their use is infrequent). I will leave semantic analysis of these markers for future research.

jaan tiki-qqau-juq  
 John arrive-H.Past-Part.3s  
 ‘John arrived (today).’

(101) *secondary tenses*

- (i) *-kainnaq/-rataaq*: recent past

jaan tiki-kainnaq/-rataaq-tuq  
 John arrive-R.Past-Part.3s  
 ‘John just arrived.’

- (ii) *-juu*: pre-hodiernal past

jaan tiki-juu-juq  
 John arrive-PH.Past-Part.3s  
 ‘John arrived (yesterday or before).’

- (iii) *-lauqsima*: distant past

jaan tiki-juu-juq  
 John arrive-Dist.Past-Part.3s  
 ‘John arrived (a long time ago).’

The opposition in the first layer represents the minimum degree of temporal granularity that must be expressed in a SB sentence referring to a past situation; a SB sentence describing a past eventuality as a rule must specify whether the described eventuality occurs within or beyond the day of the utterance. Tenses in the second layer, on the other hand, allow a speaker to make more fine-grained temporal specifications; *-kainnaq*, for example, indicates that the described eventuality occurs in a *recent* time within the day of the utterance. The properties of and relations between the primary and secondary tenses can be stated as follows:

- (102) (i) Any situation can be described by a primary tense. (Primary tenses are collectively exhaustive.)
- (ii) The availability of a primary tense blocks the use of another primary tense, if the tense has a more specific meaning (Primary tenses are mutually exclusive.)
- (iii) Any situation that can be described with a secondary tense can be described with a primary tense too, while the converse does not necessarily hold.

I will address the four secondary tense markers in turn, and demonstrate that their behavior, as well as the behavior of the primary tense markers *-lauq* and *-qqau*, conforms to the generalizations in (102).

### 3.4.1 *-kainnaq*

*-kainnaq* is used to describe a situation in an immediate past. My consultant would often add a phrase like *a minute ago* and *just* to translations of sentences containing *-kainnaq*.

- (103) a. jaan mumi-**kainnaq**-tuq  
 John dance-kainnaq-Part.3s  
 ‘John danced a minute ago.’
- b. jaan ani-**kainnaq**-tuq 4-mit  
 John go.out-kainnaq-Part.3s 4-Loc  
 ‘John just went out at 4.’

One may hypothesize that *-kainnaq* may not be a past tense marker, but an adverb meaning ‘just’, and that sentences like (103a,b) have a present perfect interpretation and describe a resultant state of the eventuality referred to by the verb. This line of analysis, however, is not consistent with the fact discussed above that a present-tensed durative verb cannot be used to describe a situation in the past (compare (103a) and (104a)) and a present-tensed punctual verb cannot co-occur with an adverbial referring to a specific time in the past (compare (103b) and (104b)):

- (104) a. jaan mumiq-∅-tuq  
 John dance-Pres-Part.3s  
 ‘John is dancing.’
- b. \*jaan ani-∅-juq 4-mit  
 John go.out-Pres-Part.3s 4-Loc  
 (John just left at 4.)

The temporal domain covered by *-kainnaq* is somewhat fluid. It can be used to describe an eventuality in a time as distant as several hours prior to the utterance time, as long as the speaker intends to present it as a recent one.

(105) Situation: It is at 4 pm now. John left at noon.

jaan ani-**kainnaq**-tuq  
John go.out-kainnaq-Part.3s  
'John (just) went out.'

The speaker's intuition is clear, however, that *-kainnaq* cannot be used to describe an eventuality in a time prior to the day of utterance. Thus, *-kainnaq* cannot co-occur with *ippatsaq* 'yesterday'.

(106) \*jaan tiki-**kainnaq**-tuq      ippatsaq  
John arrive-kainnaq-Part.3s yesterday  
(John arrived yesterday.)

The temporal domain for *-kainnaq* can thus be characterized as a 'temporal segment that extends from the utterance time to at most several hours before the utterance time and is perceived as "recent"'. I label the tense indicated by *-kainnaq* as 'recent past'.

The meaning of *-kainnaq* is thus more specific than *-qqau*, and in this sense the relation between them is analogous to the one between *-qqau* (more specific) and *-lauq* (more general). The two pairs contrast with each other, in that the relation of complementary distribution as a rule holds between *-qqau* and *-lauq*, while the same is not true for *-kainnaq* and *-qqau*. *-lauq* is not available where *-qqau* is available (as we saw above), but the use of *-qqau* is not blocked where *-kainnaq* is available, as illustrated in (107), (108) and (109).

(107) Situation: John left {a minute ago / an hour ago}.

- a. jaan ani-**kainnaq**-tuq  
John go.out-kainnaq-Part.3s  
'John just went out.'
- b. jaan ani-**qqau**-juq  
John go.out-H.Past-Part.3s  
'John went out.'

(108) Situation: It is at 4:00 now. John left at noon.

- a. jaan ani-**kainnaq**-tuq  
John go.out-kainnaq-Part.3s  
'John just went out.'
- b. jaan ani-**qqau**-juq  
John go.out-H.Past-Part.3s  
'John went out.'

(109) Situation: Mary is looking for John. You want to tell her that he just left.

- a. jaan ani-**kainnaq**-tuq  
John go.out-kainnaq-part.3s  
'John just went out.'
- b. jaan ani-**qqau**-juq  
John go.out-H.Past-Part.3s  
'John went out.'

This distribution pattern is difficult to explain unless we distinguish primary and secondary tenses, with *-qqau* and *-kainnaq* respectively indicating a primary tense and a secondary tense.

It is worth noting, finally, that *-kainnaq* has a use as a durative aspect marker, apart from its use as a tense marker (roughly the same remark is made about *-kainnaq* in Tarramiut in Swift (2000:71)). *-kainnaq* in its aspectual use is exemplified in (110). In other words, *-kainnaq* is ambiguous between a recent past tense and a durative aspect marker, 'for a while' (Compare (109a) and (110a)).

- (110) a. jaan ani-**kainnaq**-∅-tuq  
John go.out-kainnaq-Pres-Part.3s  
'John was out for a while.'
- b. jaan quviasu-**kainnaq**-∅-tuq  
John happy-kainnaq-Pres-Part.3s  
'John was happy for a while.'

This explains why *-kainnaq* may co-occur with *-qqau* and *-lauq* within the same sentence:

- (111) jaan tiki-**kainna**{-**qqau**/**-lauq**}-tuq  
 John arrive-kainnaq{-H.Past/-Past}-Part.3s  
 ‘John arrived (and stayed) for a very short while.’

### 3.4.2 -*rataaq*

-*rataaq* is typically used to describe an eventuality in the immediate past. As illustrated in (112)-(114), it may be used to refer to a situation in a time preceding the utterance time by several hours, but cannot be used to describe an eventuality in the day prior to the utterance time or earlier.

- (112) a. jaan mumi-**rataaq**-tuq  
 John dance-rataaq-tuq  
 ‘John was dancing a minute ago.’
- b. jaan ani-**rataaq**-tuq 4mit  
 John go.out-rataaq-Part.3s 4-at  
 ‘John just left at 4.’

(113) Situation: It is 4 pm now. John left at noon.

jaan ani-**rataaq**-tuq  
 John go.out-rataaq-Part.3s  
 ‘John just left.’

- (114) \*jaan tiki-**rataaq**-tuq ippatsaq  
 John arrive-rataaq-Part.3s yesterday  
 (John arrived yesterday.)

As is the case for -*kainnaq*, -*rataaq* generally can be replaced with -*qqau*.

(115) Situation: John went out {a minute ago / an hour ago / at noon}.

- a. jaan ani-**rataaq**-tuq  
 John go.out-kainnaq-Part.3s  
 ‘John just went out.’
- b. jaan ani-**qqau**-juq  
 John go.out-H.Past-Part.3s  
 ‘John went out.’

(116) Situation: It is at 4 pm now. John left at noon.

- a. jaan ani-**rataaq**-tuq  
John go.out-rataaq-Part.3s  
'John just went out.'
- b. jaan ani-**qqau**-juq  
John go.out-H.Past-Part.3s  
'John went out.'

(117) Situation: John left {a minute ago / an hour ago}.

- a. jaan ani-**rataaq**-tuq  
John go.out-rataaq-Part.3s  
'John just went out'
- b. jaan ani-**qqau**-juq  
John go.out-H.Past-Part.3s  
'John went out.'

(118) Situation: Mary is looking for John. You want to tell her that he just left.

- a. jaan ani-**rataaq**-tuq  
John go.out-kainnaq-part.3s  
'John just went out.'
- b. jaan ani-**qqau**-juq  
John go.out-H.Past-Part.3s  
'John just went out.'

Based on these observations, I conclude that *-rataaq* indicates the same tense as *-kainnaq*. It is not clear to me, however, what the semantic difference is between *-rataaq* and *-kainnaq* as tense markers. I will leave this question for future research.

Apart from its use as a tense marker, the form *-rataaq* appears to have a use as an adverb that emphasizes the recency of an eventuality and roughly translates as 'just'. This explains why the form may co-occur with *-qqau* and *-lauq*, but not with a future tense marker like *-niaq* and *-laaq* (see Chapter 4).

- (119) a. jaan ani-**rataa**{-**qqau**/**lauq**}-tuq  
 John go.out-rataaq{-H.Past/-Past}-Part.3s  
 ‘John just went out.’
- b. \*jaan ani-**rataar**{-**niaq**/**laaq**}-tuq  
 John go.out-rataaq{-H.Fut/Fut}-Part.3s  
 ‘John will have just gone out.’

### 3.4.3 -*juu*

-*juu* is used to describe a situation in a time prior to the day of utterance, as illustrated in (120) and (121).

- (120) a. jaan ani-**juu**-juq          ippatsaq  
 John go.out-juu-Part.3s yesterday  
 ‘John went out yesterday.’
- b. jaan mumi-**juu**-juq          pingasuarusiulauqtumit  
 John dance-juu-Part.3s last.week  
 ‘John danced last week.’
- (121) a. \*jaan ani-**juu**-juq          ullaag  
 John go.out-juu-Part.3s this morning  
 (John went out this morning.)
- b. \*jaan mumi-**juu**-juq          ullaag  
 John dance-juu-Part.3s this.morning  
 (John danced this morning.)

Occurrences of -*juu* in sentences like (120a,b) can be replaced with -*lauq* without changing the temporal interpretation of the sentence, as illustrated in (122a, b)<sup>27</sup>

- (122) a. jaan ani-**lauq**-tuq          ippatsaq  
 John go.out-Past-Part.3s yesterday  
 ‘John went out yesterday.’

<sup>27</sup> There may be a subtle (non-temporal) meaning difference between a sentence using -*lauq* and one using -*juu*, which I have not yet fully understood. I will not attempt to identify or determine the difference in this work.

- b. jaan mumi-**lauq**-tuq pingasuarusiulauqtumit  
 John dance-Past-Part.3s last.week  
 ‘John danced last week.’

One may thus be tempted to consider *-juu* as a synonym, or a stylistic variant, of *-lauq*. This cannot be the case, however, as there are cases where *-juu* and *-lauq* are not interchangeable. First, *-juu* cannot be used when the speaker does not know whether the described eventuality occurred within the day of utterance or not (see 3.3.1, (74a) and (77a) are repeated in (123a) and (124a)).

(123) Situation: You have been away from home since yesterday morning. You come home and notice that a message from Tom is left on your answering machine. You wonder when he phoned, but unfortunately, your answering machine does not tell you. In this situation, how would you say ‘Tom phoned’?

- a. tom uqaala-**lauq**-tuq  
 Tom call-Past-Part.3s  
 ‘Tom phoned.’
- b. #tom uqaala-**juu**-juq  
 Tom call-juu-Part.3s  
 (Tom phoned.)

(124) Situation: Amy is your friend. She left for Iqaluit a week ago. Your sister asks you whether you heard from her since.

- a. tusa-vigi-**lauq**-piu-llii  
 hear-from-Past-Int.2s/3s-Emp  
 ‘Did you hear from her?’
- b. #tusa-vigi-**juu**-piu-llii?  
 hear-from-juu-Int.2s/3s-Emp  
 (Did you hear from her?)

Second, *-juu* cannot be used to describe ‘incompletion’ of an eventuality within the day of utterance (see 3.3.2, (91a) and (92a) are repeated in (125a) and (126a)).

(125) Situation: Your husband is about to throw away today’s newspaper. You want to tell him not to throw it away, because you have not read it.

- a. suli uqalimaa-**lau**-nngit-tara  
still read-Past-Neg-Part.3s/1s  
'I haven't read it.'
- b. #suli uqalimaa-**juu**-nngit-tara  
still read-juu-Neg-Part.1s/3s  
(I haven't read it.)

(126) Situation: You ask Alana if she wants to go for lunch with you. She says 'Ask Midori. She hasn't had lunch yet'

- a. suli niri-**lau**-nngit-tuq  
still eat-Past-Neg-Part.3s  
'She hasn't eaten yet.'
- b. #suli niri-**juu**-nngit-tuq  
still eat-juu-Neg-Part.3s  
(She hasn't eaten yet.)

These observations imply that *-juu* indicates a pre-hodiernal past tense, rather than a general past tense. *-juu* thus has a more specific meaning than *-lauq*, analogous to *-qqau*'s having a more specific meaning than *-lauq*. *-juu* contrasts with *-lauq*, however, in that its availability does not block the use of *-lauq*. *-juu* generally can be replaced with *-lauq*. Furthermore, my consultant remarks that *-lauq* is always a choice preferred to *-juu* for her. The pre-hodiernal tense indicated by *-juu* is thus a secondary tense.

It is interesting to observe that *-juu* and *-qqau* have equally specific meanings that are complementary to each other, and yet they are of different status. One could easily imagine, for example, a tense system where the hodiernal and the pre-hodiernal both have a primary status. If the SB tense system were as such, *-juu* would not generally be replaceable with *-lauq* (see (120) and (122)), and *-lauq* would be used only in cases like (123) and (125). One can also think of a system where the pre-hodiernal and general past tenses are primary and the hodiernal past tense is secondary. Why is the SB system the way it is? Do tense systems in different patterns exist in other dialects or languages? I leave these issues open for future research.

### 3.4.4 *-lauqsima*

My consultant often remarks that *-lauqsima* is used to describe a situation in a far past time.<sup>28</sup>

- (127) a. jaan aulla-**lauqsima**-juq iqalu-nnit 20arraagulauqsimajunit  
John leave-lauqsima-Part.3s Iqaluit-Acc.pl 20.years.ago  
'John left Iqaluit 20 years ago.'
- b. taku-**lauqsima**-juq avani  
see-lauqsima-Part.3s over.there  
'(S)he saw it over there.'

Comment: 'She saw it a long time ago.'

The availability of *-lauqsima* does not block the use of *-lauq*; in other words, *-lauq* too can be used to describe an eventuality in a far past time.

- (128) jaan aulla-**lauq**-juq iqalu-nnit 20-arraagulauqsimajunnit  
John leave-Past-Part.3s Iqaluit-Acc 20-years.ago  
'John left Iqaluit 20 years ago.'

*-lauqsima* can be used to describe an eventuality that occurred as recently as two days before the day of utterance ('the day before yesterday'), as long as the speaker intends to emphasize the remoteness of the eventuality.<sup>29</sup>

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<sup>28</sup> Harper (1979) characterizes *-lauqsima* in North Baffin as a 'past indefinite morpheme', i.e. a past marker that is used to describe an eventuality whose temporal location is not specified. This characterization does not apply to *-lauqsima* in SB, as can be seen from data like the following.

- (i) Situation: Suppose you had a very good friend named Susan when you were back in Iqaluit. She left Iqaluit 20 years ago on Christmas day and you have never met her since. You still clearly remember the day Susan left Iqaluit.

Susan aulla-**lauqsima**-juq iqalun-nit quviasukvi-mit 20-arraagulauqsimajunit  
Susan leave-lauqsima-Part.3s Iqaluit-Acc Christmas-on 20-years.ago  
'Susan left Iqaluit 20 years ago on Christmas.'

<sup>29</sup> Judgments tend to be unstable on the use of *-lauqsima* in a sentence describing a situation in a relatively recent time, e.g. two days prior to the day of utterance, and the week before the day of utterance. My consultant judges sentences like (i)-(iii) as infelicitous for the reason that the described eventualities are not temporally remote enough.

(129) Situation: It is May 2nd. John arrived on April 30th.

jaan tiki-**lauqsima**-juq  
John arrive-lauqsima-Part.3s  
'John arrived.'

It cannot be used, on the other hand, to describe an eventuality within the day of utterance or the one immediately preceding it.

(130) a. \*jaan tiki-**lauqsima**-juq ippatsaq  
jaan arrive-lauqsima-Part.3s yesterday  
(John arrived yesterday.)

b. Situation: It is May 18th today. John arrived yesterday, on May 17th.

#jaan tiki-**lauqsima**-juq  
John arrive-lauqsima-Part.3s  
(John arrived (on May 17th).)

The temporal domain for *-lauqsima*, thus, can be characterized as 'a temporal segment that precedes the day immediately preceding the day of utterance and that is perceived as 'remote''. I

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(i) Situation: My father died *the day before yesterday*.  
#ataata-ga tuqu-**lauqsima**-juq  
Father-Gen.1s die-lauqsima-Part.3s  
'My father died.'

Comment: 'You can say this only if your father died months or years ago.'

(ii) Situation: John broke his leg *a week ago*.  
#jaan sura-**lauqsima**-juq niu-nga  
John hurt-lauqsima-Part.3s leg-Gen.3s  
'John hurt his leg.'

Comment: 'John hurt his leg a couple of months ago or even before.'

(iii) Situation: You visited your sister *last week*.

#pulaa-**lauqsima**-junga angaju-ga  
visit-lauqsima-Part.1s older.sister-Gen.1s  
'I visited my sister.'

Comment: 'I would use *-lauq* instead of *-lauqsima*.'

term the tense indicated by *-lauqsima* the distant past. It is a secondary tense, as can be seen from the fact that *-lauqsima* can always be replaced by *-lauq*.

It is worth mentioning, finally, that *-lauqsima* tends to be associated with certain aspectual meanings; namely, a habit or experience in the past.

(131) *Habit in the past*

miali mumi-**lauqsima**-juq  
 Mary dance-lauqsima-Part.3s  
 ‘Mary used to dance.’

(132) *Experience in the past*

- a. jaan japan-mii-**lauqsima**-juq  
 John Japan-be.in-lauqsima-Part.3s  
 ‘John has been to Japan before.’
- b. A: tar-rija-**lauqsima**-viu                      atanarjuat?  
 watch-already-lauqsima-Int.2s    Atanarjuaq  
 ‘Have you seen the movie *Atanarjuat*?’
- B: ii. tautu-ani-**lauqsima**-jara                      atanarjuat  
 yes watch-already-lauqsima-Part.3s/1s    Atanarjuat  
 ‘Yes, I have already seen *Atanarjuat*.’

Based on this observation, one may hypothesize that *-lauqsima* has a use as an aspectual marker, apart from the use as a tense marker. There is, however, no clear evidence that this is the case; unlike aspectual markers like *-liq*, the inceptive marker, *-lauqsima* may not co-occur with a tense marker like *-lauq*, *-qqau*, *-niaq* and *-laaq* (the future tense marker to be discussed in Chapter 4).

(133) jaan tiki-**lauqsima**{\*-**qqau**/\*-**lauq**/\*-**niaq**/\*-**laaq**}-tuq  
 John arrive-lauqsima-{H.Past/Past/H.Fut/Future}-Part.3s

### 3.5 Summary

This chapter has demonstrated that SB has two ‘primary’ past tenses, namely the general past indicated by *-lauq* and the hodiernal past indicated by *-qqau*, and four ‘secondary’ past tenses,

namely the recent past indicated by *-kainnaq/-rataaq*, the pre-hodiernal past indicated by *-juu*, and the distant past indicated by *-lauqsima*.

It was argued that the association between *-lauq* and the pre-hodiernal past time is pragmatic in nature, based on the observation that *-lauq* rather than *-qqau* is used when the speaker does not know if the described eventuality occurred within the day of utterance or not, and when the clause refers to a collection of eventualities that are distributed over the day of the utterance and the time prior to it.

The temporal domains associated with the six past tenses, as well as the multi-layered nature of the SB tense system, are schematized in Figure 6 (shaded areas represent segments within which the cut-off point may vary depending on the speaker’s subjective perception of the temporal distance of the described eventuality).

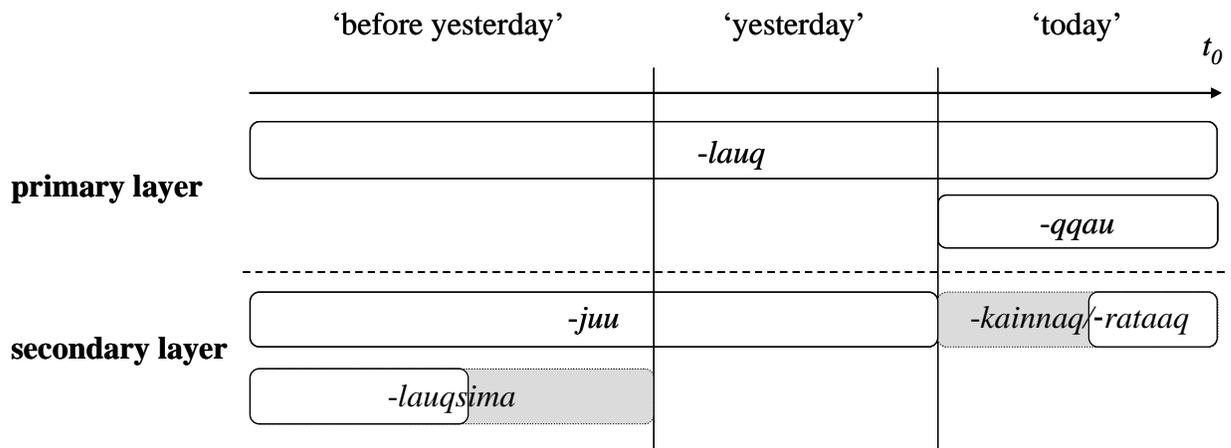


Figure 6 (repeated): The system of the past tenses in SB

In the existing literature on languages that have multiple past (or future) tenses with different domain specifications (Hymes, 1975; Comrie, 1985; Schwenter, 1995; Mithun, 1999; Dahl, 1983, 1985, 2008; Foley, 1991; Dixon, 2004, among others), there was little discussion on (i) what happens when the exact temporal location of the described eventuality is not known to the speaker, (ii) what happens when the clause refers to multiple eventualities that are distributed across domains of different tenses, or (iii) whether the domains of the tenses may overlap, and if

they do, how the choice is restricted (e.g., whether the use of a more ‘specific’ tense is preferred). Based on the findings discussed in the present chapter, the following two research questions may be put forth for cross-linguistic investigations: (i) whether other dialects or languages with multiple past (future) tenses have a ‘general’ past (future), which is used to describe an eventuality in an unspecified past (or future) time, and (ii) whether a ‘layered’ system of tenses like that of SB is found elsewhere.

## Chapter 4 The Future Tense

### 4.1 Introduction

Chapters 2 and 3 discussed reference to the present time and the past time in SB. It was argued that SB has a present tense, which is indicated by the absence of an explicit tense morpheme, and multiple past tenses, which are associated with different temporal domains and are divided into two tiers: primary and secondary. This chapter addresses reference to the future time, and demonstrates that SB also has multiple future tenses, which contrast with each other in a manner similar to the past tenses.

Some varieties of the Inuit language, including North Baffin (Harper, 1979; Spalding, 1992, 1993), Tarramiut (Swift, 2000, 2004), Arctic Quebec (Dorais, 1979), and West Greenlandic (Fortescue, 1984), have been reported to have not only multiple past markers but also multiple future markers. Swift (2000, 2004), for example, states that Tarramiut has four future markers, which are listed below with brief descriptions (134). She explains that the four future markers are associated with different temporal domains, parallel to the past markers (Figure 7).

- (134) (i) *-langa*: near future  
(ii) *-niaq*: same day future  
(iii) *-laaq*: distant future  
(iv) *-gumaaq*: far future

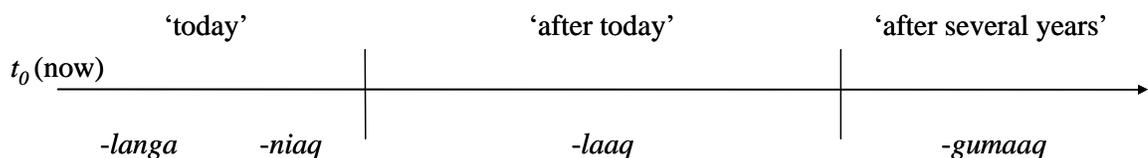


Figure 7: Temporal domains of the future markers in Tarramiut (Swift, 2000:82)

The same four forms, *-niaq*, *-langa*, *-laaq*, and *-gumaaq*, are also used in SB as future markers. Among the four markers, *-langa*, *-niaq* and *-laaq* are more commonly used to refer to future eventualities, whereas the use of *-gumaaq* is quite rare.<sup>30</sup> For this reason, I will first examine the first three, and then extend the discussion to *-gumaaq*.

Sections 4.2 and 4.3 discuss whether *-langa*, *-niaq* and *-laaq* indicate tenses or not, and demonstrate that while *-laaq* meets the criteria for a tense marker, *-niaq* and *-langa* lack some properties that typically hold of tense markers. In Section 4.2, the three expressions are tested against the four diagnostic criteria employed in the previous chapter to establish the status of *-qqau* and *-lauq* as a grammatical tense marker. Section 4.3 addresses the issue of whether and how future tenses can be distinguished from future-oriented modals, and examines whether the three future expressions can or should be treated as future-oriented modals.

Section 4.4 investigates the semantic properties of the three future markers in more detail. It will be argued that (i) *-langa* is a prospective aspect marker, rather than a tense marker, (ii) *-niaq* is ambiguous between a hodiernal future tense marker and a modal marker, (iii) *-laaq* is a general future tense marker, rather than a distant (far) future tense marker. Thus putting aside the use of *-niaq* as a modal marker, *-niaq* and *-laaq* form a mirror image of *-qqau* and *-lauq*.

Section 4.5 discusses the meaning of *-gumaaq*. It will be argued that it indicates a distant future tense and further that it is a secondary tense. The future tenses in SB are, thus, organized in two layers, as is the case for the past tenses; the general future tense indicated by *-laaq* and the hodiernal future tense indicated by *-niaq* constitutes the primary layer, while the distant future tense indicated by *-gumaaq* belongs to the secondary layer.

## 4.2 Do *-langa*, *-niaq* and *-laaq* indicate tenses?

Swift (2000, 2004) remarks that in Tarramiut (i) *-langa* is used to describe a situation after the temporal reference point and within several hours of it, (ii) *-niaq* is used to describe a situation

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<sup>30</sup> It has been reported that *-gumaaq* is also rarely used in North Baffin (Harper, 1979) and Tarramiut (Swift, 2000, 2004).

after the end of the segment covered by *-langa* and before the end of the day of utterance, (iii) *-laaq* is used to describe a situation after the day of utterance. Under her account, thus, these future markers contrast with each other solely with respect to temporal remoteness (See Figure 7 above).

In SB too, it appears that the forms *-langa* and *-niaq*, at least typically, are used to describe a future situation within the day of utterance, while *-laaq* is used to describe a situation in a time after the day of utterance. When asked to translate SB sentences containing *-langa* or *-niaq*, my consultant would often add the phrase ‘today’ (135a,b); likewise, when translating a sentence containing *-laaq*, she would often add ‘tomorrow or later’ (135c):

- (135) a. jaan mumi-**langa**-juq  
 John dance-langa-Part.3s  
 ‘John will dance (today).’
- b. jaan mumir-**niaq**-tuq  
 John dance-niaq-Part.3s  
 ‘John will dance (today).’
- c. jaan mumi-**laaq**-tuq  
 John dance-laaq-Part.3s  
 ‘John will dance (tomorrow or later).’

The difference between *-langa*, *-niaq*, and *-laaq* is, however, not concerned only with temporal remoteness. I will argue the following:<sup>31</sup>

- (136) (i) *-langa* indicates a prospective aspect, which refers to the preliminary state of an eventuality.
- (ii) *-niaq* is ambiguous, indicating either (a) a hodiernal future tense (a future tense that covers the temporal domain within the day of utterance) or (b) a strong modality with future-orientation.
- (iii) *-laaq* indicates a general future tense.

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<sup>31</sup> Spalding (1992: Unit 26), in his descriptions of future tense markers in North Baffin, states that *-niaq* is an infix of near future time and *-laaq* is an infix of general future time. He does not discuss, however, why *-laaq* should be regarded as referring to a general future time, rather than a far future time, a future time beyond the day of utterance, etc.

As a preliminary, I will examine whether *-langa*, *-niaq* and *-laaq* can be regarded as tense markers or not. In this section, the three expressions will be tested against the four criteria of tensehood employed in the previous chapter to establish that *-qqau* and *-lauq* are tense markers.

- (137) (i) Tenses cannot be omitted.
- (ii) Aspects may not be able to co-occur with members of particular aspectual classes, while tenses are not subject to such constraints.
- (iii) Tenses cannot co-occur with other tenses, while aspects may co-occur with other aspects.
- (iv) Tenses do not encode a state change, while aspects may.

It must be noted that these four criteria are not suitable for distinguishing future tense markers from future-oriented modals. (137i) is concerned with the distinction between tenses and temporal adverbials, and (137ii-vi) with the distinction between tenses and aspects). The distinction of future tenses and future-oriented modals will be addressed and discussed in detail in 4.3.

#### 4.2.1 Obligatoriness

Tenses cannot be omitted.

As mentioned earlier in 1.2.1, a tense marker cannot be omitted, even if the same or more detailed information regarding the temporal location of the described eventuality is provided by other sources, such as temporal adverbials or contextual information.

*-langa*, *-niaq*, and *-laaq* all exhibit this property. Sentences like (138a-c) would be ungrammatical without a future marker (139a-c), despite the fact that the time of the described eventuality is specified by a temporal adverbial ('at 6:00' and 'tomorrow').

- (138) a. (uttered at noon)

jaan tiki-**langa**-juq 6-mit  
John arrive-langa-Part.3s 6-Loc  
'John will arrive at 6.'

b. (uttered at noon)

jaan tiki-**niaq**-tuq 6-mit  
John arrive-niaq-Part.3s 6-Loc  
'John will arrive at 6.'

c. jaan tiki-**laaq**-tuq qauppat  
John arrive-laaq-Part.3s tomorrow  
'John will arrive tomorrow.'

(139) a. (uttered at noon)

\*jaan tikit-tuq 6-mit  
John arrive-Part.3s 6-Loc  
(John will arrive at 6.)

b. (uttered at noon)

\*jaan tikit-tuq 6-mit  
John arrive-Part.3s 6-Loc  
(John will arrive at 6.)

c. \*jaan tikit-tuq qauppat  
John arrive-Part.3s tomorrow  
(John will arrive tomorrow.)

Generally, a SB sentence describing a future situation is accompanied by one of these future markers. One exception to this generalization is clauses with a modal like *-lluaq* 'should' and *-giaqaq* 'have to' (140).

(140) a. jaan tiki-**lluaq**-tuq qauppat  
John arrive-should-Part.3s tomorrow  
'John should arrive tomorrow.'

b. jaan tiki-**giaqaq**-tuq qauppat  
John arrive-have.to-Part.3s tomorrow  
'John has to arrive tomorrow.'

However, in contrast to the future markers, these modals can be used to describe a situation in the present time.

- (141) a. jaan sini-**lluaq**-tuq maanna  
 John sleep-should-Part.3s now  
 ‘John should be sleeping now.’
- b. jaan sini-**giaqaq**-tuq maanna  
 John sleep-have.to-Part.3s now  
 ‘John has to be sleeping now.’

It is worth noting that in English too, modals like *may*, which are presumably present-tensed, can refer either to a present or future situation (Enç, 1996).

- (142) a. John may be sleeping now.
- b. John may come tomorrow.

#### 4.2.2 No restrictions on co-occurrence with members of particular aspectual classes

Aspects may not be able to co-occur with members of particular aspectual classes, while tenses are not subject to such constraints.

If *-langa*, *-niaq* and *-laaq* are markers of future tenses, it is expected that they are compatible with any aspectual class. In fact, none of the three fully meets this criterion; while they can occur with verbs denoting any kind of dynamic eventuality or a transitory (stage-level) state (143), they cannot occur with a stative verb denoting an essential (individual-level) property (Kratzer, 1995; Jäger, 2001), such as *taki*- ‘be tall’ and *ammalu*- ‘be round’ (144).

- (143) a. quviasu{**-langa/-niaq/-laaq**}-tuq  
 happy{-langa/-niaq/-laaq}-Part.3s  
 ‘(S)he will be happy.’ (Transitory state)
- b. sini{**-langa/-niaq/-laaq**}-tuq  
 sleep{-langa/-niaq/-laaq}-Part.3s  
 ‘(S)he will sleep.’ (Activity)



Aspectual morphemes like the inceptive marker *-liq* ‘to begin, to become’, on the other hand, pattern the same with the three future markers, in that they cannot be combined with a verb denoting an essential property without intervention of *-tuq* (*-juq*) and *-u*.

- (147) a. \*taki-**liq**-∅-tuq  
 tall-Inc-Pres-Part.3s  
 ((S)he has become tall (and is tall now).)
- b. taki-**ju-u-liq**-∅-tuq  
 tall-Nom-Cop-Inc-Pres-Part.3s  
 ‘(S)he has become tall now.’

The same observation, furthermore, holds for modals like *-gunnaq* ‘can’, *-lluaq* ‘should’, and *-giaqaq* ‘have to’.

- (148) a. \*taki{-**gunnaq**/**-lluaq**/**-giaqaq**}-tuq  
 tall{-can/-should/-have.to}-Part.3s  
 ((S)he {can/should/has to} be tall.)
- b. taki-ju-u{-**gunnaq**/**-lluaq**/**-giaqaq**}-tuq  
 tall-Nom-Cop{-can/-should/have.to}-Part.3s  
 ‘(S)he {can/should/has to} be tall.’

It thus seems possible for *-langa*, *-niaq* and *-laaq* to belong to the same morphological category as aspects or modals.

#### 4.2.3 Co-occurrence restrictions with members of the same category

Tenses cannot co-occur with other tenses, while aspects may co-occur with other aspects.

If *-langa*, *-niaq*, and *-laaq* indicate a tense, they are expected not to co-occur with another tense marker within the same clause. *-langa* and *-niaq*, however, may be followed by a past tense marker like *-qqau* and *-lauq*. A sequence of a future marker and a past tense marker (e.g., *-langa-lauq*) may be translated as ‘was going to’, ‘was supposed to’, etc.

- (149) a. jaan mumi-langa{-**lauq**/**-qqau**}-juq  
 John dance-langa{-Past/-H.Past}-Part.3s  
 ‘John was going to dance.’
- b. jaan mumir-nia{-**lauq**/**-qqau**}-juq  
 John dance-niaq{-Past/-H.Past}-Part.3s  
 ‘John was going to dance.’

The linear order between a future marker and a past tense marker cannot be reversed.

- (150) a. \*jaan mumi{-**lauq**/**-qqau**}-langa-juq  
 John dance{-Past/-H.Past}-langa-Part.3s  
 (John will have danced.)
- b. \*jaan mumi{-**lauq**/**-qqau**}-niaq-tuq  
 John dance{-Past/-H.Past}-niaq-Part.3s  
 (John will have danced.)

*-laaq*, on the other hand, can neither be followed nor preceded by a past tense marker.

- (151) a. \*jaan mumi-laa{-**lauq**/**-qqau**}-juq  
 John dance-laaq{-Past/-H.Past}-Part.3s  
 (John was going to dance.)
- b. \*jaan mumi{-**lauq**/**-qqau**}-laaq-tuq  
 John dance{-Past/-H.Past}-laaq-Part.3s  
 (John will have danced.)

These observations suggest that *-niaq* and *-langa* do not, or do not always, indicate a tense.<sup>32</sup>

#### 4.2.4 Entailment of a state change

Tenses do not encode a state change, while aspects may.

If *-langa*, *-niaq*, and *-laaq* indicate a tense, they are expected not to entail a state change. As discussed in the previous chapter (Section 3.2.5), although a past tense often indicates that the

<sup>32</sup> *-niaq*, *-langa*, and *-laaq* as a rule cannot co-occur with each other; this point will be addressed in Section 4.4 below.

described eventuality ceased to hold prior to the utterance time, this indication is not a semantic entailment (e.g. *Bill was sick (yesterday)* implicates but does not entail *Bill is not sick (today)*).

The same logic applies to future tenses too. If *-langa*, *-niaq*, and *-laaq* indicate a future tense, they are expected not to entail that the described situation does *not* hold at the utterance time. This is indeed the case, as evidenced by data like (152)-(154).<sup>33</sup>

(152) Situation: You want to talk to John, but his mother says you can't because he is sleeping at the moment. You say 'Then I will come back at 11:00'. She says 'He will still be sleeping at 11:00. Can you come back at 1:00?'

- a. sulì sini-**langa**-juq 11-mit  
still sleep-langa-Part.3s 11-Loc  
'He will be still sleeping at 11.'
- b. sulì sining-**niaq**-tuq 11mit  
still sleep-niaq-Part.3s 11-Loc  
'He will be still sleeping at 11.'

(153) Situation: John is dancing now. It's 5. He will continue dancing for a while. He will still be dancing at 6.

- a. sulì 6-mit jaan mumi-**langa**-juq.  
still 6-Loc John dance-langa-Part.3s  
'John will still be dancing at 6.'
- b. sulì 6-mit jaan mumir-**niaq**-tuq  
still 6-Loc John dance-niaq-Part.3s  
'John will still be dancing at 6.'

(154) Situation: You are reading a very interesting book at night. Your sister phones you, and asks what you plan to do tomorrow morning. You say 'I am reading a book. I will still be reading this book tomorrow morning'.

- a. sulì uqalimaa-**langa**-jara uqalimagaq qauppat ullakut  
still read-langa-Part.1s/3s book tomorrow morning  
'I will be still reading this book tomorrow morning.'

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<sup>33</sup> *-laaq* may not occur in the place of *-langa/-niaq* in (152) and (153), as generally it cannot be used to describe a future situation within the day of utterance (see below 4.4.2).

- b. suli uqalimaar-**niaq**-tara uqalimagaag qauppat ullakkut  
 still read-**niaq**-Part.1s/3s book tomorrow morning  
 ‘I will be still reading this book tomorrow morning.’
- c. suli uqalimaa-**laaq**-tara uqalimagaag qauppat ullakkut  
 still read-**laaq**-Part.1s/3s book tomorrow morning  
 ‘I will be still reading this book tomorrow morning.’

The use of *-langa*, *-niaq*, or *-laaq* may thus implicate but will never entail that the described eventuality starts to hold after the utterance time, or in other words does not entail a state change.

#### 4.2.5 Summary

The results of the four tests on *-langa*, *-niaq*, and *-laaq* are summarized in Table 2; T indicates a positive result, and F a negative result.

(155)

	(i) Obligatoriness	(ii) No co-occurrence restrictions with members of particular aspectual class	(iii) Co-occurrence restrictions with other tenses	(iv) No entailment of state change
<i>-langa</i>	T	F	F	T
<i>-niaq</i>	T	F	F	T
<i>-laaq</i>	T	F	T	T

Table 2: The future markers tested against the four criteria for tense

*-langa*, *-niaq*, and *-laaq* are all incompatible with a verb denoting an essential property. Putting aside this point, *-laaq* meets all the criteria for tensehood. *-langa* and *-niaq*, on the other hand, may co-occur with a past tense marker within the same clause and therefore do not meet the criterion (iii). This suggests that *-langa* and *-niaq* do not, or do not always, indicate a tense.

### 4.3 Future tense or future-oriented modality?

In recent studies, there has been extensive debate as to whether so-called future tenses (particular instances or the whole genus thereof) can be treated as a purely temporal feature on a par with present and past tenses, or whether they are better considered as a kind of modal (say, a modal of

prediction) (see Comrie, 1985; Hornstein, 1990; Enç, 1996; Copley, 2002; Cowper, 2003, 2005; Matthewson, 2006; Matthewson et al, 2006; Kissine, 2008).

Regarding *will* in English, in particular, a number of authors have argued that, although it has been traditionally referred to as a future tense marker, it is indeed a modal belonging to the same syntactic and semantic class as *must*, *may*, etc., and that accordingly English has only the past/non-past distinction in its tense system and lacks a future tense (Enç, 1996; Condoravdi, 2002; Copley, 2002; Cowper, 2003, 2005; see also Portner, 2009 for a survey).

A similar claim has been made on putative future tense markers in other languages such as Indonesian and Turkish (Copley, 2002), Spanish (Cowper, 2005), and St'át'imcets (Matthewson, 2006; Matthewson et al., 2006), and some scholars doubt that any language has a true future tense that is a mere mirror image of a past tense (as the future operator is to the past operator in the classical tense logic).

Scholars' views on future tenses are, very roughly, divided into the following two positions:<sup>34</sup>

- (156) (i) There is no such thing as a future tense. So-called future tenses are all better treated as modals with varying degrees of future-orientedness (association with futurity), and referring to them as tenses is essentially a misnomer. (Iatridou, 2000; Cowper, 2003, 2005; Matthewson, 2006)
- (ii) Some putative future tense markers (say *will* in English) are better regarded as a modal expression than as a temporal expression. This does not mean, however, that no languages have a true future tense. (Comrie, 1985; Hornstein, 1990; Tonhauser, 2006, 2009; Dixon, 2009)

My own view is closer to (ii). But how can one distinguish future tense markers from modals? There are no established, reliable criteria for this purpose, but I believe that the following may serve as reasonable guidelines (Criterion ((157ii) is adopted from Tonhauser, 2006:30).

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<sup>34</sup> One may add, as a third option, the 'conservative' view that what have been labeled as 'future tenses' in traditional grammars (of English, Spanish, etc.) generally have purely temporal meanings. To my knowledge, however, this position has not been explicitly argued for in the recent theoretical literature.

- (157) (i) A future tense cannot co-occur with another tense in the same clause, while a modal may co-occur with a tense.
- (ii) A future tense expresses (relative or absolute) future time reference in all contexts in which it is realized. A modal may lack such strict future orientation.<sup>35</sup>
- (iii) A future tense tends to be realized by a means (morpheme, construction, etc.) similar to ones by which other tenses are realized. A modality tends to be realized by a means similar to ones by which other kinds of modalities.

These criteria are in accord with the analysis of English *will* as a modal. In connection with (157i), *will* has a past counterpart *would*, and itself may be analyzed as present-tensed; that is, *will* and *would* can be analyzed as tensed forms of an underlying modal (named *woll* by Abusch, 1985). In connection with (157ii), *will* (and *would*) can be used to describe an inferred situation that holds at the time of the utterance time, as in *Pat will be sleeping now* (Enç, 1996). In connection with (157iii), *will* behaves, morphologically and syntactically, more like modals such as *must* and *may* than as markers of tenses.

It is worth noting that treating a future marker like *will* as a modal does not simply mean to treat it as a synonym of a paradigmatic strong modal marker (e.g. English *must*) or a paradigmatic weak modal marker (e.g. *may*) with some degree of future-orientation. If *will* is to be treated as a modal, for example, it remains to be explained why it does not scopally interact with negation in the way that paradigmatic modal expressions like *must*, *may*, *probable*, etc. do. The following examples illustrate that for canonical modal statements verbal and sentential negation may lead to different truth conditions ((a)  $\neq$  (b) for (158)-(160)), while the same does not hold for statements with *will*; the latter patterns the same as simple non-modal statements in this respect ((a)  $\approx$  (b) for (161)-(163)).<sup>36</sup>

- (158) a. It must not be snowing now.
- b. It is not the case that it must be snowing now. (a)  $\neq$  (b)

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<sup>35</sup> This is not to say that a modal *cannot* have strict future-orientation; Matthewson et al. (2006) claim that the clitic *kelh* in St'át'imcets is an instance of strictly future-oriented modal.

<sup>36</sup> See Copley (2002) and Kissine (2008) for relevant discussions.

- (159) a. It may not be snowing now.  
       b. It is not the case that it may be snowing now. (a)  $\neq$  (b)
- (160) a. It is probably not snowing now.  
       b. It is not the case that it is probably snowing now. (a)  $\neq$  (b)
- (161) a. It will not snow tomorrow.  
       b. It is not the case that it will snow tomorrow. (a)  $\approx$  (b)
- (162) a. It did not snow yesterday.  
       b. It is not the case that it snowed yesterday. (a)  $\approx$  (b)
- (163) a. It is not snowing now.  
       b. It is not the case that it is snowing now. (a)  $\approx$  (b)

Statements with a strong modal like *must* or a ‘relatively strong’ modal like *probable* are exempt from the law of excluded middle (i.e., a statement of the form ‘P or not-P’ is not trivially true), when the modal takes scope over negation.

- (164) a. It must be snowing now, or it mustn’t be snowing now.  
       b. It is probable that it is snowing now, or it is probable that it is not snowing now.

Likewise, statements with a weak modal like *may* or a ‘relatively weak’ modal like *conceivable* are exempt from the law of contradiction (i.e., a statement of the form ‘P and not-P’ is not trivially false), when the modal takes scope over negation.

- (165) a. It may be snowing now, and it may not be snowing now.  
       b. It is conceivable that it is snowing now, and it is conceivable that it is not snowing now.

Statements with *will*, on the other hand, are always subject both to the law of excluded middle and the law of conjunction; this point has some bearing on the discussion in Section 4.4.2 below.

- (166) a. It will snow tomorrow, or it will not snow tomorrow. (trivially true)  
 b. It will snow tomorrow, and it will not snow tomorrow. (trivially false)

Let us consider, now, whether *-niaq*, *-langa* and *-laaq*, are better treated as markers of tenses or modalities, in view of the three criteria in (157).

#### 4.3.1 Impossibility of co-occurrence with another tense

A future tense cannot co-occur with another tense in the same clause, while a modal may co-occur with a tense.

This criterion is the same as the one discussed in 4.2.3, where it is used to distinguish between future tenses and future-oriented temporal adverbials. As discussed in 4.2.3 above, *-niaq* and *-langa* may co-occur with a past tense within the same clause, while *-laaq* cannot, and this suggests that *-niaq* and *-langa* do not (always) indicate a tense.

#### 4.3.2 Obligatory future-time reference

A future tense expresses (relative or absolute) future time reference in all contexts in which it is realized. A modal may lack such strict future-orientation.

*-langa*, *-niaq* and *-laaq* cannot be used to describe a non-future situation, and in this respect contrast with modals like *-lluaq* ‘should’ and *-giaqaq* ‘have to’, which may but need not necessarily refer to a future situation (see 4.2.1 above).

- (167) a. \*jaan sini{**-langa/-niaq/-laaq**}-tuq      maanna  
 John sleep{-langa/-niaq/-laaq}-Part.3s      now  
 (John will be sleeping now.)
- b. jaan sini{**-langa/-niaq/-laaq**}-tuq  
 John sleep{-langa/-niaq/-laaq}-Part.3s  
 ‘John will sleep / will be sleeping (at some point in the future).’

When *-langa* and *-niaq* occur in combination with a past tense, they may refer to a situation that holds prior to the utterance time. In such cases, however, the time of the described eventuality must be subsequent to the contextually understood reference time, and in this sense *-langa* and

*-niaq* can be regarded to invariably express future time reference.

- (168) jaan sini{-**langa/-niaq**}-**lauq**-tuq.  
John sleep{-langa/-niaq}-Past-Part.3s  
'John was going to sleep.'  
(\*'John was sleeping.')

### 4.3.3 Morphological/syntactic similarities with other tense markers

A future tense tends to be realized by a means (morpheme, construction, etc.) similar to ones by which other tenses are realized. A modality tends to be realized by a means similar to ones by which other kinds of modalities are realized.

The past tense markers and modal markers like *-gunnaq* 'can' and *-giaqaq* 'may' are all postbases, i.e., morphemes that occur between the root and the mood marker.

When a past tense marker and a modal marker co-occur, the tense marker must follow the modal marker. The order must be Modal-Tense (169), rather than Tense-Modal (170).

- (169) a. jaan sini-**gunna-lauq**-tuq  
John sleep-can-Past-Part.3s  
'John could sleep.'
- b. jaan sini-**giaqa-lauq**-tuq  
John sleep-have.to-Past-Part.3s  
'John had to sleep.'
- (170) a. \*jaan sini{-**lauq/-qqau**}-**gunnaq**-tuq  
John sleep{-Past/-H.Past}-can-Part.3s
- b. \*jaan sini{-**lauq/-qqau**}-**riaqaq**-tuq  
John sleep{-Past/-H.Past}-have.to-Part.3s

When *-niaq*, *-langa*, or *-laaq* co-occurs with a modal, it must follow the modal, as in (171) and (172). This suggests that they may indicate future tenses, rather than modals.

- (171) a. jaan sini-**gunna**{-**langa**/**-niaq**/**-laaq**}-tuq  
 John sleep-can{-langa/-niaq/-laaq}-Part.3s  
 ‘John can sleep.’
- b. jaan sini-**giaqa**{-**langa**/**-niaq**/**-laaq**}-tuq  
 John sleep-have.to{-langa/-niaq/-laaq}-Part.3s  
 ‘John has to sleep.’
- (172) a. \*jaan sini{-**langa**/**-niaq**/**-laaq**}-**gunnaq**-tuq  
 John sleep{-langa/-niaq/-laaq}-can-Part.3s
- b. \*jaan sini{-**langa**/**-niaq**/**-laaq**}-**riaqaq**-tuq  
 John sleep{-langa/-niaq/-laaq}-have.to-Part.3s

When *-niaq* or *-langa* co-occurs with a past tense marker, on the other hand, it must precede the past tense marker, as in (173) and (174a) (*-laaq* does not co-occur with the past tenses, as illustrated in (173) and (174b)). This rather conforms to the assumption that *-niaq* and *-langa* are not tenses.

- (173) \*jaan sini-**lau**{-**langa**/**-niaq**/**-laaq**}-tuq  
 John sleep-Past{-langa/-niaq/-laaq}-Part.3s  
 (John will have slept.)
- (174) a. jaan sini{-**langa**/**-niaq**}-**lauq**-tuq  
 John sleep{-langa/-niaq}-Past-Part.3s  
 ‘John was going to sleep.’
- b. \*jaan sini-**laa-lauq**-tuq  
 John sleep-laaq-Past-Part.3s  
 (John was going to sleep.)

#### 4.3.4 Summary

The results of the three tests on *-langa*, *-niaq*, and *-laaq* are summarized in Table 3. Again, T indicates a positive result, and F a negative result.

	(i) Impossibility of co-occurrence with another tense	(ii) Obligatory future-time reference	(iii) Morphological/syntactic similarities with other tense markers
<i>-langa</i>	F	T	?
<i>-niaq</i>	F	T	?
<i>-laaq</i>	T	T	T

Table 3: The future markers tested against the three criteria for tense

As was also discussed in the previous section, *-langa* and *-niaq*, but not *-laaq*, may co-occur with a past tense marker within the same clause; this suggests that *-langa* and *-niaq* do not, or do not always, indicate a tense. The three expressions all exhibit strict future-orientation; this observation leaves it possible that they indicate a future tense, but does not preclude the possibility that they are modals with strict future-orientation, etc. (we will see below Section 4.4.2 that *-niaq* has a use as a future-oriented strong modal). The morphological properties of the three markers do not provide a definitive clue as to whether *-langa* and *-niaq* indicate a tense or not.

I would like to note, before concluding this section, that the discussion to follow is not directly concerned with the issue of whether the meaning of (what has been referred to as) a future tense involves a modal component or not. I will claim that SB has future tenses, and treat their meanings as purely temporal. The analyses to be presented, however, are not incompatible with the view that a grammatical future marker generally involves a modal component in its semantics.

#### 4.4 How do *-langa*, *-niaq*, and *-laaq* differ?

In the following, I will investigate the semantics of *-langa*, *-niaq* and *-laaq* in more detail. I will first examine the semantic properties of *-langa* in comparison with *-niaq*, and conclude that *-langa* is a prospective aspect marker that semantically roughly corresponds to English *be going to*. Then, I will argue that *-niaq* is ambiguous between a near future marker and a modal marker, and that putting aside the use of *-niaq* as a modal marker, *-niaq* and *-laaq* form a mirror image of the past tense markers *-qqau* and *-lauq*.

#### 4.4.1 Comparison of *-langa* and *-niaq*

As mentioned earlier, *-langa* and *-niaq* are typically used to describe eventualities occurring within the day of utterance. It is not impossible, however, for these forms to refer to a future situation beyond the day of utterance.

- (175) a. sulī qai-sima-**langa**-juq qauppat  
still come-Perf-langa-Part.3s tomorrow  
'(S)he will be still here until tomorrow.'
- b. aulla-gunna-**langa**-juq qauppat  
leave-can-langa-Part.3s tomorrow  
'(S)he can go away tomorrow.'
- c. Tuesday-mit ilinniarving-mii-**langa**-junga  
Tuesday-Loc school-be.in-langa-Part.1s  
'On Tuesday I am going to be at school.'
- (176) a. qai-sima-**niaq**-tuq qauppat  
come-Perf-niaq-Part.3s tomorrow  
'(S)he will be here tomorrow.'
- b. mumir-**niaq**-pallai-juq qauppat  
dance-niaq-probably-Part.3s tomorrow  
'(S)he will be dancing tomorrow.'
- c. jaan aullar-**niaq**-tuq pingasuarusiulaaqtumit  
John leave-niaq-Part.3s next.week  
'John will leave next week.'

The following data illustrate that combinations of *-niaq/-langa* and a past tense marker like *-lauq* also may be used to refer to an eventuality posterior to the day of utterance.

- (177) a. jaan mumi-**langa-lauq**-tuq qauppat  
John dance-langa-Past-Part.3s tomorrow  
'John was going to dance tomorrow.'
- b. jaan mumir-**nia-lauq**-tuq qauppat  
John dance-niaq-Past-Part.3s tomorrow  
'John was going to dance tomorrow.'

- (178) a. jaan aulla-**langa-lauq**-tuq Toronto-mit pingasuarusiulaaqtumit  
 John dance-langa-Past-Part.3s Toronto-Acc next.week  
 ‘John was going to leave Toronto next week.’
- b. jaan aullar-**nia-lauq**-tuq Toronto-mit pingasuarusiulaaqtumit  
 John leave-niaq-Past-Part.3s Toronto-Acc next.week  
 ‘John was going to leave Toronto next week.’

The choice between *-langa* and *-niaq* brings about a subtle interpretative difference. Regarding sentences (179a,b), which are both grammatical, my consultant makes interesting comments:

(179) Situation: Last year, a baby boy, Hisahito, was born to the Japanese Imperial Family for the first time in more than 40 years. Hisahito will be an emperor.

- a. Hisahito isumata-u-**langa**-juq  
 Hisahito boss-be-langa-Part.3s  
 ‘Hisahito will be an emperor (literally, “a boss”).’

Comment: ‘He is preparing to become emperor.’

- b. Hisahito isumata-u-**niaq**-tuq  
 Hisahito boss-be-niaq-Part.3s  
 ‘Hisahito will be an emperor.’

Comment: ‘He hasn’t started preparing to become emperor yet.’

My consultant notes that (179a) (with *-langa*) indicates that Hisahito’s being an emperor is already in preparation, while (179b) (with *-niaq*) indicates that Hisahito’s being emperor is planned but the preparation for that has not yet started.

To account for this intuition, I hypothesize that *-langa* is a marker of prospective aspect, whereas *-niaq* is not. While many languages have been reported to have markers of a prospective aspect (e.g. *be going to*, *be about to*, etc. in English, *yào ... le*, *kuài ... le* etc., in Mandarin Chinese, *wî-* in Cree), there have been relatively few studies on the semantics of the prospective aspect (in comparison to the imperfective and perfect aspects) (Comrie, 1976:64-65,106; Klein, 1994:114; Brisard, 2001; Copley, 2002; Arin, 2003; Wolvengrey, 2006; Glougie, 2007; Reis Silva, 2007). Following Comrie (1976), I take the view that the meaning of the prospective aspect is

essentially symmetric to that of the perfect aspect, describing a state leading to the realization of (as opposed to a state realized as a result of) the eventuality denoted by the main predicate, or in other words, that a prospective aspect indicates that the preliminary state of the described eventuality holds at the time of evaluation.

Glougie (2007) suggests that if a future marker is compatible with an expression with the meaning of ‘already’ (e.g., *lan* in St’át’imcets), it may be regarded to have a meaning similar to that of English *be going to*. The data presented below illustrate that *-langa*, indeed, is compatible with *-giiq* ‘already’, while *-niaq* and *-laaq* are not:

(180) Situation: John and Mary are a couple. Mary is pregnant with twins. Their apartment is very small and you think that they will need a bigger place, ideally a house. You say to Mary ‘You will need a house’. Mary says ‘We are already going to buy a house’.

- a. niuvi-**langa**-giiq-tugut iglu-mit  
buy-langa-already-Part.2p house-Acc  
‘We are already going to buy a house.’
- b. #niuving-**nia**-riiq-tugut iglu-mit  
buy-niaq-already-Part.2p house-Acc  
(We are already going to buy a house.)
- c. #niuvi-**laa**-riiq-tugut iglu-mit  
buy-laaq-already-Part.2p house-Acc  
(We are already going to buy a house.)

Sentence (180a) implies that the process of buying a house has already begun (e.g., John and Mary already decided on a particular house). The occurrence of *-langa* in this utterance may not be replaced with *-niaq* or *-laaq*. (181) and (182) illustrate the same point.

(181) Situation: Alana cannot teach her Inuktitut class this week. A student suggests that she ask Saila to teach today. She says ‘Saila is already going to teach this week’.

- a. Saila ilisai-**langa**-giiq-tuq pingasuarusingmit  
Saila teach-langa-already-Part.3s this.week  
‘Saila is already going to teach this week.’

- b. #Saila ilisai-**nia**-riiq-tuq pingasuarusingmit  
Saila teach-niaq-already-Part.3s this.week  
(Saila is already going to teach this week.)
- c. #Saila ilisai-**laa**-riiq-tuq pingasuarusingmit  
Saila teach-laaq-already-Part.3s this.week  
(Saila is already going to teach this week.)

(182) Situation: Alana cannot teach her Inuktitut class today. A student suggests that she ask Saila to teach this week. Alana says ‘Saila is already going to teach today’.

- a. Saila ilisai-**langa**-giiq-tuq ullumi  
Saila teach-langa-already-Part.3s today  
‘Saila is already going to teach today.’
- b. #Saila ilisai-**nia**-riiq-tuq ullumi  
Saila teach-niaq-already-Part.3s today  
(Saila is already going to teach today.)

(181a) implies that Saila’s teaching this week is already scheduled and preparation for it has begun (e.g. she may have already set up her schedule of the week around it). Likewise (182a) implies that Saila’s teaching today is already planned and prepared. In these cases, *-langa* cannot be replaced with *-niaq* (or *-laaq*).

In purpose clauses, conversely, *-niaq* can occur while *-langa* cannot.

- (183) a. #tuqsulaa-vigi-qattaq-∅-tara tusaa-**langa-ngmaanga**  
yell-to-habitually-Pres-Part.1s/3s hear-langa-Caus.3s/1s  
(I speak loud so that he can hear me.)
- b. tuqsulaa-vigi-qattaq-∅-tara tusaar-**nia-ngmaanga**  
yell-to-habitually-Pres-Part.1s/3s hear-niaq-Caus.3s/1s  
‘I speak loud so that he can hear me.’

- (184) a. #avvuq-∅-tunga kiinaujar-nit nunasiuti-taa-**langa-gama**  
collect-Pres-Part.1s money-Acc.pl car-get-lang-a-Caus.1s  
(I have been saving a lot of money to buy a car.)  
Comment: ‘You don’t need to save money if you are already buying a car.’

- b. avvuq-Ø-tunga      kiinaujar-nit      nunasiuti-taar-**nia-rama**  
 collect-Pres-Part.1s    money-Acc.pl      car-get-niaq-Caus.1s  
 ‘I have been saving a lot of money to buy a car.’

The reason why *-langa* cannot occur in a purpose clause can also be accounted for by the proposed analysis of *-langa*. A purpose or goal enters into the preparatory stage only if the efforts that have been made to make it happen are successful. It is, therefore, contradictory to say that one is saving money to buy a car and is already in the process of buying a car. It is worth noting that this property, as well as the compatibility with ‘already’, are shared by the English *be going to* construction, which is commonly believed to express a prospective meaning (Comrie, 1985; Dik, 1997, discussed in Wolvengrey, 2006:399):

(185) a. We are already buying a house.

b. \*We will already buy a house.

(186) a. \*I will warn him about the harm of alcohol so that he is going to stop drinking.

b. I will warn him about the harm of alcohol so that he will stop drinking.

The fact that *-langa* is often used to describe a near future eventuality can also be given a natural account under the proposed analysis, as in many cases the beginning of a preliminary state of an eventuality and the event itself are not temporally distant. A sentence such as (187), where *-langa* is used to describe an eventuality which can have only an instantaneous preliminary state (namely an event of sneezing), is thus naturally understood to refer to an event occurring in a (very) proximate future:

(187) tagiu-**langa**-junga  
 sneeze-langa-Part.1s  
 ‘I am going to sneeze.’

Also, under the proposed analysis, it is only natural that *-langa* can be used in combination with a past tense, as in sentences (188a,b) (= (149a,b)), because aspects generally can be combined with any tense.

- (188) a. jaan mumi-langa{-lauq/-qqau}-juq  
 John dance-langa{-Past/-H.Past}-Part.3s  
 ‘John was going to dance.’
- b. jaan mumir-nia{-lauq/-qqau}-juq  
 John dance-niaq{-Past/-H.Past}-Part.3s  
 ‘John was going to dance.’

One intriguing issue in this connection is why *-langa* cannot be combined with *-niaq* or *-laaq*, which I will argue to be future tense markers:

- (189) \*jaan mumi-langa{-niaq/-laaq}-tuq  
 John dance-langa{-niaq/-laaq}-Part.3s  
 (John was going to dance.)

It is not clear to me why this is the case. I believe, however, this phenomenon is not in serious clash with the proposed analysis of *-langa*, because in other languages including English, the combination of a prospective aspect and a future tense (e.g. *will be going to V*, *will be about to V*) is often impossible or does not readily allow the intended interpretation (i.e. ‘it will be the case that it is going/about to be the case’). Compare, for example, (190a) with a simple future tense (perfective future) and (190b) with the combination of a future tense and prospective aspect.

- (190) a. The train will arrive (when John gets to the station).
- b. ??The train will be going to arrive (when John gets to the station).

Here, the addition of the prospective marker *be going to* results in an awkward sentence, and, if used, appears to have only a subtle semantic effect (in both (190a,b), the time of the train’s arrival is most naturally interpreted as simultaneous to John’s getting to the station). That is, (190a) and (190b) do not contrast with each other in a similar way as (191a) with a simple past tense (perfective past) and (191b) with the combination of a past tense and a prospective aspect.

- (191) a. The train arrived (when John got to the station).

- b. The train was going to arrive (when John got to the station).

#### 4.4.2 Comparison of *-niaq* and *-laaq*

Let us now turn to the semantics of the remaining two expressions: *-niaq* and *-laaq*. As discussed above in 4.4.1, *-niaq* is often, though not always, interpreted as referring to an eventuality occurring within the day of the utterance. *-laaq*, on the other hand, is typically interpreted as referring to an eventuality occurring after the day of the utterance, and it cannot co-occur with a temporal adverbial like *ullumi* ‘today’.

(192) a. aulla-**laaq**-tuq qauppat  
 leave-*laaq*-Part.3s tomorrow  
 ‘(S)he will leave tomorrow.’

- b. \*aulla-**laaq**-tuq ullumi  
 leave-*laaq*-Part.3s today  
 ((S)he will leave today.)

(193) a. mumi-**laaq**-tunga qauppat  
 leave-*laaq*-Part.1s tomorrow  
 ‘I will dance tomorrow.’

- b. \*mumi-**laaq**-tunga ullumi  
 leave-*laaq*-Part.1s today  
 (I will dance today.)

Comment: ‘No. *-laaq* is for tomorrow.’

This contrast between *-niaq* and *-laaq* is reminiscent of the one between *-qqau* (the hodiernal past) and *-lauq* (the general past), and it thus seems natural to hypothesize that *-niaq* and *-laaq* respectively are mirror images of *-qqau* and *-lauq* on the future side:

(194) (i) *-niaq*: hodiernal future

- (ii) *-laaq*: general future

Let us first consider *-laaq*. Analogous to *-lauq*, *-laaq* can be used when the speaker does not or cannot specify whether the described event occurs on the same day or after, as shown in the

following.

- (195) Situation: It is November, and you are hosting a visitor from Mexico. She has never seen snow before, and is anxious to see it. You say ‘It will snow soon’. She asks ‘When?’. You say ‘I don’t know. Maybe today, or tomorrow, or next week..... You just wait and see.’

qanni-**laa**-si-juq  
snow-laaq-Inc-Part.3s  
‘It will snow soon (either today, tomorrow, next week...).’

- (196) Situation: John hopes to go home as soon as possible. It would be best for him if he can go home today, but he might have to stay longer.

jaan angiqqa-ruma-**laaq**-tuq  
John go.home-want-laaq-Part.3s  
‘John hopes to go home soon.’

- (197) kanga tiki-**laa**-gavit, ullumi, uvalunniit qauppat?  
when arrive-laaq-Caus.2s today or tomorrow  
‘When will you arrive, today or tomorrow?’

Also, the use of *-laaq* is felicitous when the clause refers to multiple eventualities, some of which are located within the day of utterance and some of which are located thereafter.

- (198) Situation: Sam, John and Mary went on a road trip. They left Vancouver for Toronto a month ago. They took different routes. Mary will arrive in Toronto today. John will arrive in Toronto tomorrow. Unfortunately, Sam became sick on the way and he returned to Vancouver.

miali ammala jaan tiki-**laaq**-tuit Toronto-mut  
Mary and John arrive-laaq-Part.3s Toronto-All  
‘Mary and John will arrive in Toronto.’

- (199) Situation: Your friend, Mary, will phone you today, tomorrow and next week.

miali uqaala-kata-**laaq**-tuq pingasuiq&uni  
Mary phone-Iter-laaq-Part.3s three.times  
‘Mary will phone me three times.’

The distribution of *-niaq*, however, does not fully conform to the analysis presented in (194) (i.e., *-niaq* is the hodiernal future tense.). As mentioned in section 4.4.1, under certain conditions it

can be used to describe a situation that occurs after the day of the utterance. But under what conditions? A clause that contains *-niaq* and yet describes an eventuality after the day of the utterance appears to convey the information that the occurrence of the eventuality is inferable from the speaker's world knowledge or the knowledge shared by a larger group such as the local community.

(200) Situation: This Sunday is my birthday. It always rains on my birthday. So, it will rain this Sunday.

sanattaili-mit silalung-**niaq**-tuq  
 sunday-Loc rain-niaq-Part.3s  
 'This Sunday it will rain.'

(201) tariuq siku-giir-**niaq**-tuq utupiri-mit  
 ocean freeze-already-niaq-Part.3s October-Loc  
 'The ocean will be covered by ice in October'

(202) Situation: You are three months pregnant.

singai-gama nutaraq-taar-**niaq**-tunga  
 pregnant-Caus.1s baby-get-niaq-Part.1s  
 'Because I am pregnant, I will have a baby'

I propose that the form *-niaq* is ambiguous between two uses: (i) a hodiernal future tense marker and (ii) a strong epistemic modal, the latter belonging to the same semantic and morphological category as *-gunnaq* 'can', *-giaqaq* 'have to', *-lluaq* 'should', etc.(203).<sup>37</sup>

(203) a. jaan sini-**gunnaq**-tuq  
 John sleep-can-Part.3s  
 'John can sleep.'

b. jaan sini-**giaqaq**-tuq  
 John sleep-have.to-Part.3s  
 'John has to sleep.'/ 'John must be sleeping.'

---

<sup>37</sup> One may alternatively hypothesize that *-niaq* has only a use as a modal marker. This hypothesis, however, cannot account for the contrast between (206a) and (206a) to be discussed below. Also, it leaves unexplained why the use of *-laaq* is generally blocked when the clause refers to an eventuality occurring within the day of utterance.

- c. jaan sini-**lluaq**-tuq  
 John sleep-should-Part.3s  
 ‘John should sleep.’ / ‘John should be sleeping.’

As illustrated in (203b,c), modals in SB can refer to an eventuality on-going at the present moment. *-niaq* in its modal use is, however, strictly future-oriented in the sense that it *must* refer to a future eventuality and cannot refer to a present eventuality.

- (204) jaan mumir-**niaq**-tuq  
 John dance-niaq-Part.3s  
 ‘John will dance.’  
 (\*‘John is dancing.’)

- (205) jaan angiqqaq-sima-**niaq**-tuq  
 John come.home-Perf-niaq-Part.3s  
 ‘John will be home.’  
 (\*‘John will be home (now).’)

The proposed hypothesis amounts to saying that a sentence with *-niaq* referring to an eventuality occurring after the day of utterance expresses a (strictly future-oriented) strong modal statement, while one with *-niaq* referring to an eventuality within the day of utterance may or may not be. My consultant’s judgments on the data presented below support this point.

- (206) Situation: Every morning John has either coffee or tea, but not both.

- a. #jaan kaapi-tur-**niaq**-tuq                    **qauppat** uvvalunniit  
 John coffee-consume-niaq-Part.3s tomorrow or  
 tii-tur-**niaq**-tuq                    **qauppat**  
 tea-consume-niaq-Part.3s tomorrow

(John will have coffee tomorrow, or John will have tea tomorrow.)

- b. (uttered in the early morning, before John wakes up)

- jaan kaapi-tur-**niaq**-tuq                    **ullaq** uvvalunniit  
 John coffee-consume-niaq-Part.3s this.morning or  
 tii-tur-**niaq**-tuq                    **ullaq**  
 tea-consume-niaq-Part.3s this.morning

‘John will have coffee today, or John will have tea today.’

The statement (206a) refers to a situation after the day of utterance, ‘tomorrow’, and thus under the hypothesis, *-niaq* contained in (206a) is *-niaq* as a strong modal. (206a), therefore, would have a meaning along the lines of ‘It must be the case that John will have coffee tomorrow, or it must be the case that John will have tea tomorrow’, which is false in the provided context. When asked whether (206a) holds as true in the provided context, my informant indeed says no. The statement (206b), on the other hand, is expected to allow the interpretation roughly equivalent to ‘John will have coffee (today), or John will have tea (today)’, which is true in the provided context. When asked whether (206b) holds as true, my consultant says yes. Based on the fact that strong modals are exempted from the law of excluded middle (i.e., a statement of the form ‘P or not-P’ is trivially true) as illustrated in (164), this suggests that, when *-niaq* occurs in a sentence referring to an eventuality within the day of utterance, it can be interpreted as a tense marker rather than as a modal marker. Naturally, when *-niaq* in (206a) is replaced with *-laaq*, the resulting sentence is judged as true in the same context.

(207) jaan kaapi-tu-laaq-tuq **qauppat** uvvalunniit  
 John coffee-consume-laaq-Part.3s tomorrow or  
 tii-tu-**laaq**-tuq **qauppat**  
 tea-consume-laaq-Part.3s tomorrow  
 ‘John will have coffee tomorrow, or John will have tea tomorrow.’

The hypothesis that *-niaq* has a separate use as a modal leads to straightforward accounts of two intriguing phenomena. First, it explains why a clause with *-niaq* may be used to describe an eventuality after the day of the utterance, as in (175)-(179) and (200)-(202).

Second, it explains why *-niaq* can occur with a past tense (4.2.3), because modals in SB in general have this property.

(208) jaan mumi{-**gunnaq**/**giaqaq**/**lluqaq**}-tuq qauppat  
 John dance{can/have.to/should}-Part.3s tomorrow  
 ‘John can/have.to/should dance tomorrow.’

(209) jaan mumi{-**gunnaq**/**giaqaq**/**lluqaq**}-lauq-tuq ippatsaq  
 John dance- can/have.to/should-Past-Part.3s yesterday  
 ‘John {could have/had to/should have} danced yesterday.’

It is worth noting that, while (as briefly mentioned above at the beginning of 4.4.2) speaker's judgments tend to be unstable on sentences where *-niaq* co-occurs with an adverbial referring to a post-hodiernal time, such as *qauppat*, 'tomorrow', combinations of *-niaq* and a past tense marker invariably allow co-occurrence with such an adverbial. My consultant judged (210a) as unacceptable (on one occasion) and (210b) as acceptable (on another); she judged, on the other hand, both (211a,b) as acceptable where *-niaq* co-occurs with a past tense marker.

- (210) a. #mumir-**niaq**-tuq qauppat  
 dance-niaq-Part.3s tomorrow  
 ((S)he will sleep tomorrow.)

Comment: '*-niaq-tuq* is for later today.'

- b. jaan aullar-**niaq**-tuq qauppat  
 John leave-niaq-Part.3s tomorrow  
 'John will leave tomorrow.'

- (211) a. jaan mumir-**nia-lauq**-tuq qauppat  
 John dance-niaq-Past-Part.3s tomorrow  
 'John was going to dance tomorrow.'

- b. jaan aullar-**nia-lauq**-tuq pingasuarusiulaaqtumit  
 John leave-niaq-Past-Part.3s next.week  
 'John was going to leave next week.'

I presume that this is because the hodiernal future interpretation of *-niaq* is generally preferred to the strong modal interpretation (where it is available); when a verb accompanies both *-niaq* and a past tense marker, the hodiernal future interpretation would not be possible, and thus the strong modal interpretation becomes more readily available.

A potential problem for the proposed hypothesis is the fact that *-niaq* generally cannot co-occur with *-langa* or *-laaq*. If *-niaq* may be used as a modal, why can it not co-occur with a future tense marker?

- (212) a. \*jaan mumir-**nia-langa**-juq  
 John dance-niaq-langa-Part.3s  
 (John will be dancing.)

- b. \*jaan mumir-**nia-laaq**-tuq  
 John dance-niaq-laaq-Part.3s  
 (John will be dancing.)

It is not clear to me why this must be the case. It is worth pointing out, however, that the same pattern is shared by some other modals, such as *-lluaq* ‘should’, as shown in (213) (but not by other modals, as illustrated in (214) and (215)).

- (213) a. jaan aulla-llua{-**lauq/-qqau**}-tuq  
 John leave-should{-Past/-H.Past}-Part.3s  
 ‘John should have left.’

- b. \*jaan aulla-lluar{-**niaq/-laaq**}-tuq  
 John leave-should{-niaq/-laaq}-Part.3s  
 (John should leave at some point in the future.)

- (214) a. jaan aulla-riaqa{-**lauq/-qqau**}-tuq  
 Jaan leave-have.to{-Past/-H.Past}-Part.3s  
 ‘John had to leave.’

- b. jaan aulla-riaqar{-**niaq/-laaq**}-juq  
 John leave-have.to{-niaq/-laaq}-Part.3s  
 ‘John will have to leave.’

- (215) a. jaan aulla-gunna{-**lauq/-qqau**}-tuq  
 John leave-can{-Past/-H.Past}-Part.3s  
 ‘John could have left.’

- b. jaan aulla-gunnar{-**niaq/-laaq**}-juq  
 John dance-can{-niaq/-laaq}-Part.3s  
 ‘John can leave (at some point in the future).’

The proposed ambiguity of *-niaq* is also in accord with the widely recognized fact that many postbases (of which *-niaq* is an instance) in varieties of the Inuit language tend to be multiply ambiguous (Fortescue, 1980; Mahieu and Tersis, 2006; Trondhjem, 2007, 2009; Cook and Johns, 2009).

For example, Fortescue (1980) reports that *-niar*, the cognate of *-niaq* in West Greenlandic, has three distinct meanings/functions: (i) ‘to set out’, (ii) ‘to try’, and (iii) a futurity marker; the

following sentence, provided by Robert Peterson, contains three occurrences of *-niar*, each of which is associated with a different meaning.

- (216) piniar-**niar-niar-niar**-niarluni  
hunt-set.out-try.to-future-while  
'While he was about to setting out to hunt...'

(Fortsecue, 1980:269, glosses added)

Another example of an ambiguous postbase is *-galuar*, again from West Greenlandic (Fortescue, 1980); it can be translated either as 'regardless' (217a) or 'but' (218b), depending on its relative position to a modal.

- (217) a. urnik-**kalua**-rusup-para  
go.to-galuar-want-Ind.1s/3s  
'I want to go to him {regardless/even though it is in vain}.'
- b. urnik-kusuk-**kaluar**-para  
go.to-want-galuar-Ind.1s/3s  
'I want to go to him, but ... (it is {impossible/inconvenient}).'

(Fortescue, 1980:267, glosses added)

It is generally assumed that multiple meanings of postbases share the core concept; in connection with the aforementioned *-niar*, for example, Fortescue (1980:272) notes that its three meanings share the core meaning of 'to try', and that they are regarded by native speakers not to be completely distinct. In the case of *-niaq* in SB too, the two meanings share a concept of 'futurity'; in addition to that, *-niaq* as a tense marker encodes temporal proximity and *-niaq* as a modal encodes epistemic necessity.

#### 4.5 *-gumaaq*: a secondary future tense marker

SB has another future marker, *-gumaaq* (218). It has cognates in the same or a similar form in other dialects such as Tarramiut and North Baffin. Swift (2000, 2004) notes that the same form in Tarramiut is a far future marker and is used to describe a situation in several or more years after the utterance time (see Figure 7 in 4.1). Harper (1979) also labels the cognate of *-gumaaq* in

North Baffin, *-jumaaq*, as a distant future tense suffix, and states that it is used to describe a situation in the distant future.

*-gumaaq* in SB is also often used to describe an eventuality relatively far in the future.

- (218) a. jaan aulla-**gumaaq**-tuq arrani  
John leave-gumaaq-Part.3s next.year  
'John will leave next year.'
- b. jaan mumi-**gumaaq**-tuq pingasuarusiulaaqtumit  
John dance-gumaaq-Part.3s next.week  
'John will dance next week.'

*-gumaaq* (in SB) cannot co-occur with another tense marker (219), and thus appears to occur in the slot of the tense marker.

- (219) a. \*jaan tiki-**gumaa-laaq**-tuq pingasuarusiulaaqtumit  
John arrive-gumaaq-Fut-Part.3s next.week  
(John will arrive next week.)
- b. \*jaan tiki-**gumaa-lauq**-tuq pingasuarusiulaaqtumit  
John arrive-gumaaq-Past-Part.3s next.week  
(John was going to arrive next week.)

Also, like *-laaq* and *-niaq* (and unlike *-langa*), it cannot co-occur with *-giq* 'already', as shown in (220b).

(220) Situation: Alana cannot teach her Inuktitut class tomorrow. A student suggests Alana to ask Saila to teach the class tomorrow. She says, 'Saila is already going to teach tomorrow. I already asked her and she said she will'.

- a. #Saila ilisai-**gumaa**-riq-tuq qauppat  
Saila teach-gumaaq-already-Part.3s tomorrow  
(Saila is already going to teach tomorrow.)
- b. #Saila ilisai-**laa**-riq-tuq qauppat  
Saila teach-laaq-already-Part.3s tomorrow  
(Saila is already going to teach tomorrow.)

- c. Saila ilisai-**langa**-riiq-tuq qauppat  
 Saila teach-**langa**-already-Part.3s tomorrow  
 ‘Saila is already going to teach tomorrow.’

Based on these observations, it seems sensible to treat *-gumaaq* as a future tense marker.

The temporal domain associated with *-gumaaq* (in SB) is somewhat fluid. My consultant’s judgments tend to be unstable on sentences like (221a,b), where *-gumaaq* is used to refer to a situation within the day of utterance.

- (221) a. jaan ani-**gumaaq**-tuq ullumi  
 John go.out-**gumaaq**-Part.3s today  
 ‘John will be going out today.’
- b. #jaan tiki-**gumaaq**-tuq ullumi  
 John arrive-**gumaaq**-Part.3s today  
 (John will be arriving today.)

Utterances with *-gumaaq* are generally judged unacceptable when they are intended to refer to an eventuality occurring within several hours from the utterance time, as in (222)-(224), but tend to be judged acceptable when they are intended to refer to an eventuality occurring several hours or more after the utterance, as in (225) and (226). One may use, thus, *-gumaaq* in the morning or early in the afternoon to describe a situation in the evening.

(222) Situation: Mary is just about to go out.

#miali ani-**gumaaq**-tuq  
 Mary go.out-**gumaaq**-Part.3s  
 (Mary is about to go out.)

(223) Situation: John will come in a few hours.

#jaan qai-**gumaaq**-tuq  
 John come-**gumaaq**-Part.3s  
 (John will come.)

(224) Situation: It is 4 pm. The plane will leave at 8 pm.

#timmisuuq aulla-**gumaaq**-tuq 8-mit  
plane leave-gumaaq-Part.3s 8-Loc  
(The plane will leave at 8.)

(225) Situation: It is 5 am. You turn on the radio. It says that it will rain at night.

silalu-**gumaaq**-tuq  
rain-gumaaq-Part.3s  
'It will rain.'

(226) Situation: It is early afternoon. Mary will go out tonight.

Miali ani-**gumaaq**-tuq unnuk  
Mary go.out-gumaaq-Part.3s tonight  
'Mary will go out tonight.'

The use of *-gumaaq* is generally possible in cases where the described eventuality occurs after the day of utterance.

(227) a. jaan tiki-**gumaaq**-tuq qauppat  
jaan arrive-gumaaq-part.3s tomorrow  
'John will arrive tomorrow.'

b. jaan tiki-**gumaaq**-tuq arrani  
jaan arrive-gumaaq-part.3s next.year  
'John will arrive next year.'

(228) Situation: You are going to Vancouver tomorrow. The plane will leave at 5 pm.

timmisuuq aulla-**gumaaq**-tuq 5-mit qauppat  
plane leave-gumaaq-Part.3s 5-Loc tomorrow  
'The plane will leave at 5 tomorrow.'

(229) Situation: Kim is 6 years old. In 10 years, she will go to high-school.

kim ukiu-nit quli-nit ilinniavijjua-lia-**gumaaq**-tuq  
Kim year-Loc 10-Loc high.school-go-gumaaq-Part.3s  
'Kim will go to high-school in 10 years.'

(230) Situation: Sylvia and Sam are 4 years old. A fortune teller says that they will get married in 20 years, and so everyone believes that they will.

sylvia ammalu sam katititau-**gumaaq**-tuit 20-nit ukiungulaaqtunit  
 Sylvia and Sam get.married-gumaaq-Part.3p 20-Loc years.later  
 ‘Sylvia and Sam will get married in 20 years.’

Considering these points, I conclude that *-gumaaq* is used to describe an eventuality that occurs at least several hours after the temporal reference point and is subjectively perceived to be temporally distant. The future tense indicated by *-gumaaq*, which I term the distant future, has a more specific meaning than the general future indicated by *-laaq*, and yet the availability of *-gumaaq* does not block *-laaq*.

(231) a. jaan tikit{-**gumaaq**/**-laaq**}-tuq qauppat  
 John arrive{-gumaaq/-Fut}-part.3s tomorrow  
 ‘John will arrive tomorrow.’

b. jaan tikit{-**gumaaq**/**-laaq**}-tuq arrani  
 John arrive{-gumaaq/-Fut}-part.3s next.year  
 ‘John will arrive next year.’

(232) Situation: You are going to Vancouver tomorrow. The plane will leave at 5 pm.

timmisuuq aulla{-**gumaaq**/**-laaq**}-tuq 5-mit qauppat  
 plane leave{-gumaaq/-Fut}-Part.3s 5-Loc tomorrow  
 ‘The plane will leave at 5 tomorrow.’

(233) Situation: Sylvia and Sam are 4 years old. A fortune teller says that they will get married in 20 years, and so everyone believes that they will.

sylvia ammalu sam katititau{-**gumaaq**/**-laaq**}-tuit 20-nit ukiungulaaqtunit  
 Sylvia and Sam marry{-gumaaq/-Fut}-Part.3p 20-Loc years.later  
 ‘Sylvia and Sam will get married in 20 years.’

(234) Situation: Kim is 6 years old. In 10 years, she will go to high-school.

kim ukiu-nit quli-nit ilinniavijjua-lia{-**gumaaq**/**-laaq**}-tuq  
 Kim year-Loc 10-Loc high.school-go{-gumaaq/-Fut}-Part.3s  
 ‘Kim will go to high-school in 10 years.’

The relation between *-gumaaq* and *-laaq*, thus, is analogous to the one between *-juu/-lauqsima* (Section 3.4) and *-lauq*. In other words, the distant future indicated by *-gumaaq* is a secondary tense, while the general future indicated by *-laaq* and the hodiernal future indicated by *-niaq* are

primary tenses.

## 4.6 Summary

This chapter discussed the four putative future markers: *-langa*, *-niaq*, *-laaq* and *-gumaaq*, and argued the following:

- (235) (i) *-langa* is a prospective aspect marker.
- (ii) *-niaq* is ambiguous between two uses; it may indicate a hodiernal future tense or a strong epistemic modal with strict future-orientation.
- (iii) *-laaq* indicates a general future tense.
- (iv) *-gumaaq* is a distant future marker, which is used to describe an eventuality occurring at least several hours after the temporal reference point and is subjectively perceived to be temporally distant.
- (v) The hodiernal and general future tenses are primary tenses, and the distant future tense is a secondary tense.

The system of SB future tenses is similar, though not completely symmetric, to the one of past tenses, (i) including one general tense and one hodiernal tense and (ii) consisting of two layers. Figure 8 summarizes the temporal domains associated with, as well as the primary/secondary statuses of, the three future tenses (the shaded area represents a segment within which the cut-off point may vary depending on the speaker's subjective perception of the temporal distance of the described eventuality).

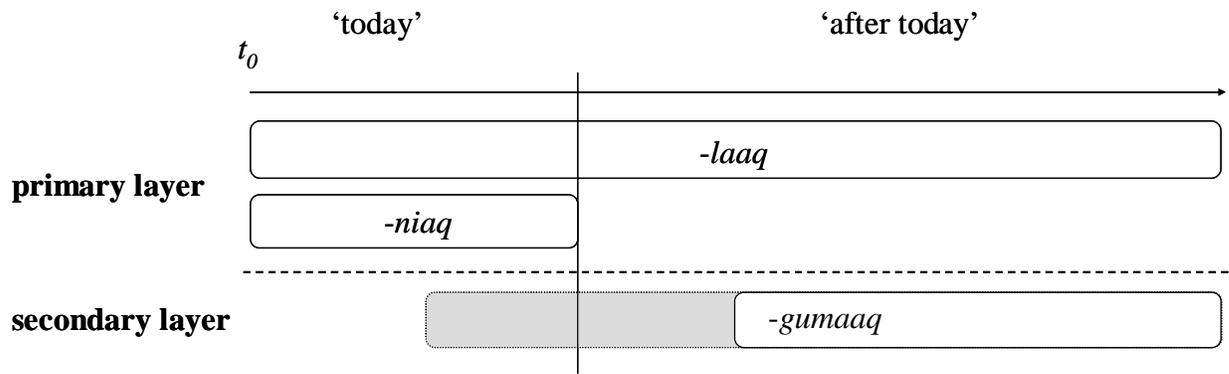


Figure 8: The system of the future tenses in SB

## Chapter 5

### Tense in Dependent Clauses

#### 5.1 Introduction

In this chapter, I will examine and describe the interpretations of tenses in three major types of dependent clauses, each of which is marked by a distinctive mood morpheme: (i) the conjunctive clause, (ii) the conditional clause, and (iii) the causative clause. The discussion will concentrate on the five primary tenses, which are indicated by *-qqau*, *-lauq*,  $\emptyset$ , *-niaq* and *-laaq*, in these three types of dependent clauses.

It is widely known that, across languages, tenses in dependent clauses are sometimes interpreted relative to a time other than the time of utterance. Embedded tenses interpreted relative to the time of utterance are said to receive the absolute interpretation, and ones interpreted relative to some other time (e.g., the time of the eventuality described in the superordinate clause) are said to receive a relative interpretation (Comrie, 1985:56). It will be demonstrated that in SB too, tenses in certain types of dependent clauses may or must receive a relative interpretation.

What may serve as a temporal anchoring point (i.e., the time relative to which the past, present, and future are determined) in different kinds of dependent clauses is an important research question, but it must not be confounded with another question: What are the ‘domains’ of embedded tenses? As discussed in the previous chapters, past and future tenses in SB are associated with different temporal domains. In matrix environments, the hodiernal tense markers, *-qqau* and *-niaq*, have the day of utterance as their domain. The general tense markers, *-lauq* and *-laaq*, are not inherently associated with a particular domain, but they can roughly be said to have ‘the time other than the day of utterance’ as their domain, because their occurrence is generally blocked in environments where *-qqau* or *-niaq* may occur.

Two findings will be presented regarding the domains of embedded tenses. First, as the temporal anchoring point may be shifted in dependent clauses, so may the domains of tenses. Second,

shifting of the two does not always coincide, although shifting of the former is a prerequisite to shifting of the latter. (It is possible, for instance, for an embedded hodiernal tense to be anchored to the time of the superordinate eventuality and to have the day of utterance as its domain.)

The organization of the chapter is as follows. Section 5.2 addresses the conjunctive clause, whose function overlaps with the English *when*-clause. It will be demonstrated (i) that the conjunctive clause can receive either the absolute interpretation or the relative interpretation, and (ii) that, despite the fact that the conjunctive clause is commonly used as a means to indicate a temporal relation between two eventualities (such as simultaneity), the semantic relation between a conjunctive clause and its superordinate clause is logical conjunction, rather than temporal ordering.

Section 5.3 addresses the causative clause, which has three distinct functions: an adjunct clause of reason, an adjunct clause of purpose, and a complement clause. The tense within a causative clause as an adjunct clause of reason is interpreted relative to the time of utterance. The tense within a causative clause as an adjunct clause of purpose is interpreted relative to the time of the superordinate eventuality. The tense within a causative clause as the complement clause of a speech or attitude predicate is interpreted relative to the time of the secondary context, i.e. the context associated with the reported speech/attitude.

Section 5.4 addresses the conditional clause, which serves as the antecedent of a conditional construction. It will be demonstrated that in a conditional clause (i) the present tense indicates that the described eventuality is located in the present or future, (ii) the hodiernal past indicates that the described eventuality is located in a past time within the day of utterance, and (iii) the general past tense either indicates that the described eventuality is located in the past or expresses counterfactuality. The future tenses do not occur within the conditional clause.

## 5.2 Conjunctive clauses

The conjunctive clause is a dependent clause characterized by a mood that has been called the appositional mood (Dorais, 1979, 1988), the contemporative mood (Campana, 1992; Nagai,

2006), or the conjunctive mood (Lowe, 1985a,b,c; Johns and Smallwood, 1999). I will adopt the term ‘conjunctive mood’, because it best suits the analysis to be presented below.

Some varieties of Inuktitut, including SB, have multiple forms for the conjunctive mood with different distributions. For example, Arctic Quebec Inuktitut, which belongs to the same dialect group (Eastern Canadian Inuktitut) as SB, has *-tsu*, *-lu*, and *-tillu*, which are subject to the following constraints: (i) *-tsu* and *-lu* are used only when the subject of the subordinate clause matches that of the superordinate clause, while *-tillu* is used only when the subject of the subordinate clause differs from that of the superordinate clause, and (ii) *-tsu* is used only when the superordinate clause is present- or past-tensed, and *-lu* is used only when the superordinate clause is future-tensed (Dorais, 1988).

- (236) a. niri-tsuni      pisu-laur-tuq  
 eat-Conj.3Rs    walk-Past-Part.3s  
 ‘While eating, (s)he walks.’
- b. niri-luni              pisu-laar-tuq  
 eat-Fut.Conj.3Rs    walk-Fut-Part.3s  
 ‘While eating, (s)he will walk.’
- c. niri-tillugu    pisu-langa-jutit  
 eat-Conj.3s    walk-Fut-Part.2s  
 ‘While (s)he eats, you’ll walk.’

(Dorais, 1988:65-66, glosses added)

SB also has three markers of the conjunctive mood: *-lu*, *-llu* and *-tillu*.<sup>38</sup> The first two can be used only when the subjects of the subordinate and superordinate clauses are co-referential; it is not clear to me, at the present time, how they contrast with each other. *-tillu* can be used whether or not the subordinate and superordinate subjects are co-referential, and irrespective of the tense of the superordinate clause; the following data illustrate these points.

- (237) a. (The superordinate and the subordinate subjects are co-referential; the superordinate tense is past)

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<sup>38</sup> The marker of the conjunctive mood, incidentally, is likely to be cognate with the affix *-lu*, which is used to coordinate two nominals, as in *uvanga-lu* ‘and me’, ‘me too’ (Johns and Smallwood, 1999:160).

niri-tillugu jaan pisu-lauq-tuq  
eat-Conj.3s John walk-Past-Part.3s  
'While eating, John was walking.'

- b. (The superordinate and the subordinate subjects are not co-referential; the superordinate tense is past)

miali niri-tillugu jaan pisu-lauq-tuq  
Mary eat-Conj.3s John walk-Past-Part.3s  
'While Mary was eating, John was walking.'

- c. (The superordinate and the subordinate subjects are co-referential; the superordinate tense is future)

niri-tillugu jaan pisu-laaq-tuq  
eat-Conj.3s John walk-Fut-Part.3s  
'While eating, John will be walking.'

The form *-tillu* is by far more frequently used than the other two forms by my consultant. In this work, I will only discuss conjunctive clauses with *-tillu*, leaving the issue open whether *-lu* and *-llu* semantically differ from *-tillu*, and if so, how.

The conjunctive clause is often used where in English a temporal adjunct clause like a *when-* or *while-* clause would be used, and on this ground has been regarded as the semantic equivalent of a temporal adjunct clause (Lowe, 1985a,b,c; Hayashi, 2005). I will demonstrate, on the contrary, that the semantic contribution of the conjunctive clause is to indicate mere logical conjunction (the 'and'-relation) rather than a particular temporal relation. Tenses occurring in conjunctive clauses may be interpreted either relative to the utterance time (absolute interpretation), or relative to the time of the superordinate eventuality (relative interpretation).<sup>39</sup> When the embedded tense receives the absolute interpretation, a conjunctive clause simply translates as 'and P' and the temporal order between the superordinate and subordinate eventualities is unspecified; this implies that the conjunctive mood itself does not convey any temporal

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<sup>39</sup> In some varieties of the Inuit language, such as West Greenlandic, a tense morpheme does not occur within a conjunctive clause. This, along with the observation that verbal agreement is often defective in the conjunctive clause, led many scholars to conclude that (at least in some varieties of Inuktitut) the conjunctive clause is non-finite or infinitive (Murasugi, 1992; Bobaljik, 1993; Bittner, 1994; Manning, 1996; see Johns and Smallwood, 1999 for an opposing view). In SB, in contrast, tense markers like *-lauq*, *-qqau*, *-niaq* and *-laaq* do occur in a conjunctive clause.

information. When the embedded tense receives the relative interpretation, a conjunctive clause still serves as a logical conjunct of the superordinate clause, but the embedded tense further has the effect of restricting the temporal relation (simultaneity, precedence, or subsequence) between the subordinate and superordinate eventualities (Harper, 1979; Hayashi, 2005). To put it differently, a conjunctive clause on the relative interpretation has a function similar to that of ‘when/while P’, ‘after P’, and ‘before P’ when the tense within it is present, past and future, respectively.

### 5.2.1 Present-tensed conjunctive clauses

A present-tensed conjunctive clause (i.e., a conjunctive clause without an overt tense marker) often describes an eventuality that co-occurs with an eventuality described in the superordinate clause, so that it can be naturally translated with a *when-* or *while-* clause.

- (238) a. jaan tiki-Ø-tillugu miali tiki-laaq-tuq  
 John arrive-Pres-Conj.3s Mary arrive-Fut-Part.3s  
 ‘When John arrives, Mary will arrive.’
- b. tautuk-Ø-tillunga tusa-lauq-tara  
 look.at-Pres-Conj.3s hear-Past-Part.1s/3s  
 ‘While looking at it, I heard it.’

Based on such data, one may hypothesize that the semantic function of a conjunctive clause is to indicate simultaneity of the subordinate eventuality ( $e_{sub}$ ) and the superordinate eventuality ( $e_{super}$ ) (Hayashi, 2005). This analysis, however, cannot account for data like (239) and (240) where a conjunctive clause without an overt tense marker describes an eventuality occurring not at the time of  $e_{super}$ , but at the utterance time.<sup>40</sup>

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<sup>40</sup> The order of the conjunctive clause and the superordinate clause is not a conditioning factor to these two different interpretations of the conjunctive clause, as shown below. (ia) and (iia) are repeated from (238a) and (239a).

- (i) a. jaan tiki-Ø-tillugu miali tiki-laaq-tuq  
 John arrive-Pres-Conj.3s Mary arrive-Fut-Part.3s  
 ‘When John arrives, Mary will arrive.’ (relative interpretation)

(239) Situation: A dance competition is being held. John danced this morning. Mary is dancing now.

jaan mumi-qqau-juq ullaag miali mumiq-Ø-tillugu maanna  
 Jaan dance-H.Past-Part.3s this.morning Mary dance-Conj.3s now  
 ‘John danced this morning and Mary is dancing now.’

(240) Situation: John was sick last week, and Mary is sick today.

jaan aannia-lauq-tuq pingasuarusiulauqtumit miali aannia-Ø-tillugu ullumi  
 John be.sick-Past-Part.3s last.week Mary be.sick-Pres-Conj.3s today  
 ‘John was sick last week, and Mary is sick today.’

Is a conjunctive clause (mood), then, ambiguous between the ‘when’ and ‘and’ interpretations? A more parsimonious solution would be to assume that a tense in a conjunctive clause may be interpreted either relative to the time of the superordinate eventuality (i.e., may receive the relative interpretation) or to the utterance time (i.e., may receive the absolute interpretation),<sup>41</sup> and that this temporal ambiguity is responsible for the semantic indeterminacy at issue.

I propose that in sentences like (238a,b), the conjunctive clause stands in the ‘and’-relation with

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b. miali tiki-laaq-tuq jaan tiki-Ø-tillugu  
 Mary arrive-Fut-Part.3s John arrive-Pres-Conj.3s  
 ‘When John arrives, Mary will arrive.’ (relative interpretation)

(ii) Situation: A dance competition is being held. John danced this morning. Mary is dancing now.

a. jaan mumi-qqau-juq ullaag miali mumiq-Ø-tillugu maanna  
 Jaan dance-H.Past-Part.3s this.morning Mary dance-Conj.3s now  
 ‘John danced this morning and Mary is dancing now.’ (absolute interpretation)

b. miali mumiq-Ø-tillugu maanna jaan mumi-qqau-juq ullaag  
 Mary dance-Conj.3s now Jaan dance-H.Past-Part.3s this.morning  
 ‘Mary is dancing now and John danced this morning.’ (absolute interpretation)

<sup>41</sup> The phenomenon whereby an embedded tense allows both the absolute and relative interpretations is also attested in Japanese (Ogihara, 1996; Oshima, 2009). In (i), for example, the present tense within a relative clause may be interpreted either relative to the utterance time or to the time of the superordinate eventuality.

(i) Watashi-wa [asokode naiteiru onnanoko]-o mita.  
 I-Top [over.there cry.Impf.Pres girl]-Acc see.Past  
 ‘I saw the girl who was crying over there then.’ (relative interpretation)  
 ‘I saw the girl who is crying over there now.’ (absolute interpretation)

the superordinate clause, just as in (239) and (240), but the embedded present tense receives the relative interpretation. An essential point here is that an embedded present tense on the relative interpretation indicates simultaneity of the superordinate and subordinate eventualities. (238a), for example, can be more literally translated as: ‘I heard it and saw it at the same time as my hearing it’, and thus it is not necessary to postulate that the conjunctive mood itself conveys such information (Table 4).

Interpretation	specified temporal relation	relevant examples
absolute (‘and’)	Time (e <sub>sub</sub> ) = Time (u)	(239), (240)
relative (‘when’)	Time (e <sub>sub</sub> ) = Time (e <sub>super</sub> )	(238a,b)

Table 4: Interpretations of present tense within a conjunctive clause

## 5.2.2 Past-tensed conjunctive clauses

A conjunctive clause can be past-tensed too, with the general past tense marker *-lauq* or the hodiernal past tense marker *-qqau*. A past-tensed conjunctive clause, like a present-tensed one, may receive either the absolute or relative interpretation.

### 5.2.2.1 Past-tensed conjunctive clauses on the relative interpretation

(241)-(243) exemplify sentences where a conjunctive clause with *-lauq* receives the relative interpretation. In such sentences, the embedded tense indicates that e<sub>sub</sub> temporally precedes e<sub>super</sub>, so that this clause can be naturally translated with an *after*-clause.

(241) Situation: Sam and John went on a road trip. They left Vancouver for Toronto a month ago. They took different routes. Sam arrived today at 2 pm. John arrived today at 7 pm.

ullumi sam tiki-lauq-tillugu jaan tiki-qqau-juq  
 today Sam arrive-Past-Conj.3s John arrive-H.Past-Part.3s  
 ‘Today after Sam arrived John arrived.’ / ‘Today when Sam had arrived, John arrived.’

(242) Situation: The weather forecast says that today it will rain early afternoon, but will be sunny in the evening. John will arrive around 7 pm.

ullumi silalu-lauq-tillugu jaan qai-niaq-tuq  
 today rain-Past-Conj.3s John come-H.Fut.Part.3s  
 ‘Today after it rains John will come.’ / ‘Today when it has rained, John will come.’

(243) Situation: Tomorrow Mary will eat at 1 pm. She will dance at 2 pm.

qauppat miali niri-lauq-tillugu mumi-laaq-tuq  
 tomorrow Mary eat-Past-Conj.3s dance-Fut-Part.3s  
 ‘Tomorrow after she eats Mary will dance.’ / ‘Tomorrow when she has eaten, Mary will come.’

Interestingly, as illustrated in (241)-(243), a conjunctive clause with *-lauq* on the relative interpretation does not entail or implicate that  $e_{\text{sub}}$  occurs in a time outside the day of  $e_{\text{super}}$  or the day of utterance. This indicates that *-lauq* is not subject to any domain restriction in the conjunctive clause. (Recall that a matrix clause containing *-lauq* generally implicates that the described eventuality occurs in a time preceding the day of utterance.)

(244) and (245) exemplify a sentence where a conjunctive clause with *-qqau* receives the relative interpretation. (Note that the absolute interpretations of *-qqau* in these sentences would not be compatible with the described situations, where the subordinate eventuality is specified to occur subsequent to the utterance time.) Conjunctive clauses in such sentences can also be translated with an *after*-clause.

(244) Situation: The weather forecast says that today it will rain early afternoon, but will be sunny in the evening. John will arrive around 7 pm.

ullumi jaan tiki-niaq-tuq silalu-qqau-tillugu  
 today John arrive-H.Fut-Part.3s rain-H.Past-Conj.3s  
 ‘Today John will arrive after it rains.’

(245) Situation: John will arrive today at 2 pm. Mary will arrive today at 5 pm.

ullumi miali tiki-niaq-tuq 5-mit jaan tiki-qqau-tillugu 2-mit  
 today Mary arrive-H.Fut-Part.3s 5-Loc John arrive-H.Past-Conj.3s 2-Loc  
 ‘Today Mary will arrive at 5 after John arrives at 2.’

A conjunctive clause containing *-qqau* on the relative interpretation entails (i) that  $e_{\text{sub}}$  occurs on the same day as  $e_{\text{super}}$  and, furthermore, (ii) that  $e_{\text{sub}}$  occurs on the day of utterance. (i) is illustrated in (246) and (247) and (ii) in (248)-(250).

(246) Situation: John will leave next week. Mary will leave today.

- a. #jaan aulla-laaq-tuq miali aulla-qqau-tillugu  
 John leave-Fut-Part.3s Mary leave-H.Past-Conj.3s  
 (John will leave after Mary leaves.)
- b. jaan aulla-laaq-tuq miali aulla-lauq-tillugu  
 John leave-Fut-Part.3s Mary leave-Past-Conj.3s  
 ‘John will leave after Mary leaves.’

(247) Situation: Mary will arrive tomorrow. John will arrive today.

- a. #miali tiki-laaq-tuq qauppat jaan tiki-qqau-tillugu ullumi  
 Mary arrive-Fut-Part.3s tomorrow John arrive-H.Past-Conj.3s today  
 (Mary will arrive tomorrow after John arrives today.)
- b. miali tiki-laaq-tuq qauppat jaan tiki-lauq-tillugu ullumi  
 Mary arrive-Fut-Part.3s tomorrow John arrive-Past-Conj.3s today  
 ‘Mary will arrive tomorrow after John arrives today.’

(248) Situation: Yesterday Mary ate at 11am and danced at noon.

- a. #ippatsaq miali niri-qqau-tillugu mumi-lauq-tuq  
 yesterday Mary eat-H.Past-Conj.3s dance-Past-Part.3s  
 (Yesterday after she ate Mary danced.)
- b. ippatsaq miali niri-lauq-tillugu mumi-lauq-tuq  
 yesterday Mary eat-Past-Conj.3s dance-Past-Part.3s  
 ‘Yesterday after she ate Mary danced.’

(249) Situation: A week ago a dance competition was held. John danced after Mary danced.

- a. #pingasuarusiulauqtumit miali mumi-qqau-tillugu jaan mumi-lauq-tuq  
 last.week Mary dance-H.Past-Conj.3s John dance-Past-Part.3s  
 (Last week after Mary danced John danced.)
- b. pingasuarusiulauqtumit miali mumi-lauq-tillugu jaan mumi-lauq-tuq  
 last.week Mary dance-Past-Conj.3s John dance-Past-Part.3s  
 ‘Last week after Mary danced John danced.’

(250) Situation: A dance competition will be held tomorrow. John will dance in the morning, and Mary will dance in the afternoon.

- a. #qauppat jaan mumi-qqau-tillugu miali mumi-laaq-tuq  
 tomorrow John dance-H.Past-Conj.3s Mary dance-Fut-Part.3s  
 (Tomorrow Mary will dance after John dances.)
- b. qauppat jaan mumi-lauq-tillugu miali mumi-laaq-tuq  
 tomorrow John dance-Past-Conj.3s Mary dance-Fut-Part.3s  
 ‘Tomorrow Mary will dance after John dances.’

In other words, when *-qqau* occurs within a conjunctive clause and receives the relative interpretation, the ‘same day’ requirement associated with its domain is doubly enforced, one reference point being the time of  $e_{\text{super}}$  and the other being the utterance time.

Table 5 summarizes the discussion in the current section on the relative interpretation of past tenses within a conjunctive clause.

	<b>temporal relation</b>	<b>domain restriction</b>	<b>relevant examples</b>
<i>-lauq</i>	Time ( $e_{\text{sub}}$ ) < Time ( $e_{\text{super}}$ )	(none)	(241)-(243)
<i>-qqau</i>		Time ( $e_{\text{sub}}$ ) $\subseteq$ Day ( $u$ ) $\wedge$ Time ( $e_{\text{sub}}$ ) $\subseteq$ Day ( $e_{\text{sub}}$ )	(244), (245), (246a), (247a), (248a), (249a), (250a)

Table 5: The relative interpretation of past tenses within a conjunctive clause

### 5.2.2.2 Past-tensed conjunctive clauses on the absolute interpretation

(251) and (252) exemplify sentences where a conjunctive clause containing *-lauq* receives the absolute interpretation. In such sentences,  $e_{\text{sub}}$  is understood to have occurred prior to the day of utterance, but the temporal order between  $e_{\text{sub}}$  and  $e_{\text{super}}$  is not necessarily specified.

(251) Situation: Yesterday, John and Mary went out at the same time.

- ippatsaq miali ani-lauq-tuq jaan ani-lauq-tillugu  
 yesterday Mary go.out-Part.3s John go.out-Past-Conj.3s  
 ‘Yesterday Mary went out and John went out.’

(252) Situation: Mary was sick last week. John was sick yesterday.

miali aannia-lauq-tuq pingasuarusiulauqtumit jaan aannia-lauq-tillugu ippatsaq  
Mary be.sick-Past-Part.3s last.week John be.sick-Past-Conj.3s yesterday  
'Mary was sick last week, and John was sick yesterday.'

(253)-(256) below exemplify sentences where a conjunctive clause with *-qqau* receives the absolute interpretation. In such sentences,  $e_{\text{sub}}$  is understood to have occurred within the day of utterance, but the temporal order and distance between  $e_{\text{sub}}$  and  $e_{\text{super}}$  may remain unspecified.

(253) Situation: Today, it rained all afternoon. John arrived around 2 pm.

ullumi jaan tiki-qqau-juq silalu-qqau-tillugu  
today John arrive-H.Past-Part.3s rain-H.Past-Conj.3s  
'Today John arrived and it rained.'

(254) Situation: Mary arrived last week. John arrived today.

miali tiki-lauq-tuq pingasuaruiulauqtumit jaan tiki-qqau-tillugu ullumi  
Mary arrive-Past-Part.3s last.week John arrive-H.Past-Conj.3s today  
'Mary arrived last week and John arrived today.'

(255) Situation: Mary left yesterday. John left today.

miali aulla-lauq-tuq ippatsaq jaan aulla-qqau-tillugu ullumi  
Mary leave-Past-Part.3s yesterday John leave-H.Past-Conj.3s today  
'Mary left yesterday and John left today.'

(256) Situation: It is Tuesday. Mary will leave next Tuesday. John left today.

miali aulla-laaq-tuq pingasuarusiulaaqtumit jaan aulla-qqau-tillugu  
Mary leave-Fut-Part.3s next.week John leave-H.Past-Conj.3s  
'Mary will leave next week and John left today.'

Table 6 summarizes these points on the absolute interpretation of past tenses within a conjunctive clause (shading in the 'domain restriction' column indicates that the described constraint is an implicature).

	<b>temporal relation</b>	<b>domain restriction</b>	<b>relevant examples</b>
<i>-lauq</i>	Time (e <sub>sub</sub> ) < Time (u)	Time (e <sub>sub</sub> ) ⊄ Day (u)	(251), (252)
<i>-qqau</i>		Time (e <sub>sub</sub> ) ⊆ Day (u)	(253)-(256)

Table 6: The absolute interpretation of past tenses within a conjunctive clause

### 5.2.2.3 The sequence of a past tense and negation in a conjunctive clause

A conjunctive clause containing a sequence of *-lauq*, the general past tense, and *-nngit*, the negation marker, may be used to describe an eventuality occurring after, rather than before, the eventuality described in the matrix clause. In other words, a conjunctive clause with *-lauq* may have a function similar to that of a *before*-clause, rather than of an *after*-clause, when it is negated.

(257) inngiqti-u-lauq-tuq    ilisaiji-u-lau-nngit-tillugu  
 singer-be-Past-Part.3s    teacher-be-Past-Neg-Conj.3s  
 ‘He was a singer before he was a teacher.’

(258) anqiqqa-qqau-junga    taaqs-i-lau-nngit-tillugu  
 come.back-H.Past-Part.1s    be.dark-Inc-Past-Neg-Conj.3s  
 ‘I got home before it got dark.’

(259) Situation: The weather forecast says that it will rain early afternoon today, but it will be sunny in the evening. John will arrive around 7 pm.

ullumi    jaan qai-lau-nngi-tillugu    silalung-niaq-tuq  
 today    John come-Past-Neg-Conj.3s    rain-H.Fut-Part.3s  
 ‘Today before John comes it will rain.’

(260) Situation: The weather forecast says that it will rain early afternoon tomorrow, but will be sunny in the evening. John will arrive around 7 pm.

qauppat    jaan qai-lau-nngi-tillugu    silalu-laaq-tuq  
 tomorrow    John come-Past-Neg-Conj.3s    rain-Fut-Part.3s  
 ‘Tomorrow before John comes it will rain.’

One may hypothesize that this interpretation is compositionally derived from the meanings of *-lauq*, *-nngit*, and the conjunctive mood (Hayashi, 2005). If this were the case, (257) (repeated

below in (261)), for example, would be expected to have a literal meaning along the lines of (262), when the embedded tense receives the relative interpretation.

(261) *inniqti-u-lauq-tuq*     *ilisaiji-u-lau-nngit-tillugu*  
singer-be-Past-Part.3s   teacher-be-Past-Neg-Conj.3s  
'He was a singer before he was a teacher.'

(262) He was a singer at some time  $t_1$ , and he was not a teacher prior to  $t_1$ .  
( $\approx$  He was not a teacher before he was a singer.)

(262) is not semantically equivalent to (263), but at least it conveys a similar idea.

(263) He was a singer before he was a teacher.

That is, whereas (262) differs from (263) in that it does not entail that he has ever been a teacher or that he was going to be a teacher, in a situation where it is established that the person in question was a singer and a teacher in the past, it serves to specify the temporal order of the 'singer-phase' and the 'teacher-phase' just as (263) does.

Under this 'compositional' analysis, however, it is difficult to explain why a conjunctive clause with *-qqau*, another primary tense marker, and the negation marker *-nngit* never allows a similar interpretation, even though the time of eventuality described in the clause falls within the day of utterance, as shown in (264) and (265) (The combination of *-qqau* and *-nngit* is allowed in a conjunctive clause only if *-qqau* receives an absolute interpretation, as I will show later in this section. See (271)).

(264) Situation: Today Mary ate before she danced.

- a. #*miali niri-qqau-juq*     *mumi-qqau-nngi-tillugu*  
Mary   eat-H.Past-Part.3s   dance-H.Past-Neg-Conj.3s  
(Mary ate before she danced.)
- b. *miali niri-qqau-juq*     *mumi-lau-nngi-tillugu*  
Mary   eat-H.Past-Part.3s   dance-Past-Neg-Conj.3s  
'Mary ate before she danced.'

(265) Situation: Today John arrived before Mary arrived.

- a. #jaan tiki-qqau-juq                    miali tiki-qqau-nngi-tillugu  
John arrive-H.Past-Part.3s    Mary arrive-H.Past-Neg-Conj.3s  
(John arrived before Mary arrived.)
- b. jaan tiki-qqau-juq                    miali tiki-lau-nngi-tillugu  
John arrive-H.Past-Part.3s    Mary arrive-Past-Neg-Conj.3s  
'John arrived before Mary arrived.'

(265a), for example, is expected to have a meaning along the lines of (266), but cannot be translated as 'John arrived before Mary arrived', even if it is contextually clear that the time of Mary's arrival is within the day of utterance.

(266) John arrived at some time  $t_1$  within today, and prior to  $t_1$  and within the same day as  $t_1$  Mary did not arrive.

One may attempt to attribute this disparity between *-lauq* and *-qqau* to the independently observed fact (3.3.2, (90)-(92)) that the combination of *-lauq* and negation conveys the nuance of incompleteness, as opposed to non-occurrence, as in (267).

(267) Situation: Your husband is about to throw away today's newspaper. You want to tell him not to throw it away, because you haven't read it.

suli uqalimaa-**lau-nngit**-tara  
still read-Past-Neg-Part.1s/3s  
'I haven't read it.'

Since a *before*-clause typically is used to indicate that  $e_{\text{sub}}$  has not taken place yet at, but is expected to take place after, the time of  $e_{\text{super}}$ , it is quite natural that a negated conjunctive clause containing *-lauq* would serve as a closer counterpart of the *before*-clause than one containing *-qqau*.

One flaw in this explanation is that a negated independent clause containing *-qqau* may also be used to describe an incompleteness, although it is not the preferred option.

(268) Situation: Your husband is about to throw away today's newspaper. You want to tell him not to throw it away, because you haven't read it.

suli uqalimaa-**qqau-nngit**-tara  
still read-H.Past-Neg-Part.1s/3s  
'I haven't read it.'

I conclude, tentatively, that the combination of *-lauq* and *-nngit* has acquired an idiomatic meaning to indicate temporal precedence, leaving the question open for further investigations of whether the compositional analysis cannot really be maintained.

It is worth noting, finally, that a negated conjunctive clause with *-lauq* is not always interpreted as synonymous to a *before*-clause. A past tense within a negated conjunctive clause may also receive the absolute interpretation, in which case the meaning of the conjunctive clause is along the lines of 'and it was not the case that P'.

(269) Situation: Cyndi went out yesterday. Jurgen didn't go out yesterday.

ippatsaq cyndi ani-lauq-tuq jurgen ani-lau-nngi-tillugu  
yesterday Cyndi go.out-Past-Part.3s Jurgen go.out-Past-Neg-Conj.3s  
'Yesterday Cyndi went out and Jurgen didn't go out.'

(270) Situation: John was sick yesterday. He was not sick a week ago.

jaan aannia-lauq-tuq ippatsaq aannia-lau-nngi-tillugu pingasuarusiulauqtumit  
John be.sick-Past-Part.3s yesterday be.sick-Past-Neg-Conj.3s last.week  
'John was not sick yesterday and was not sick a week ago.'

(271) Situation: Today Mary came and John didn't come.

ullumi miali qai-qqau-juq jaan qai-qqau-nngi-tillugu  
today Mary come-H.Past-Part.3s John come-H.Past-Neg-Conj.3s  
'Today Mary came and John didn't come.'

### 5.2.3 Future-tensed conjunctive clauses

A conjunctive clause may be future-tensed too, with the general future tense marker *-laaq* or the hodiernal future tense marker *-niaq*. A future-tensed conjunctive clause, like a present-tensed or past-tensed one, may receive either the absolute or relative interpretation.

### 5.2.3.1 Future-tensed conjunctive clauses on the relative interpretation

(272) and (273) exemplify sentences where a conjunctive clause with *-laaq* receives the relative interpretation and indicates that  $e_{\text{sub}}$  temporally follows  $e_{\text{super}}$ .

(272) Situation: Mary left Toronto. John left Toronto a week after Mary did.

miali aulla-lauq-tuq     jaan     aulla-laaq-tillugu  
Mary leave-Past-Part.3s John leave-Fut-Conj.3s  
'Mary left when John was going to leave.'

(273) Situation: Mary arrived yesterday. John will arrive today.

miali tiki-lauq-tuq     jaan     tiki-laaq-tillugu  
Mary arrive-Past-Part.3s John arrive-Fut-Conj.3s  
'Mary arrived when John was going to arrive.'

Likewise, (274) and (275) exemplify sentences where a conjunctive clause with *-niaq* receives the relative interpretation and indicates that  $e_{\text{sub}}$  temporally follows  $e_{\text{super}}$ . (Note that the described situations preclude the absolute interpretation of *-niaq*, specifying that  $e_{\text{sub}}$  is prior to the utterance time.)

(274) Situation: Today Mary ate at 1 pm. She danced at 2 pm.

miali niri-qqau-juq     mumir-niaq-tillugu  
Mary eat-H.Past-Part.3s dance-H.Fut-Conj.3s  
'Mary ate when she was planning to dance.'

(275) Situation: John left Toronto yesterday. Mary left Toronto this morning.

jaan aulla-lauq-tuq     Toronto-mit     ippatsaq     miali     aullar-niaq-tillugu     ullaq  
John leave-Past-Part.3s Toronto-Acc yesterday Mary leave-H.Fut-Conj.3s this.morning  
'John left Toronto yesterday when Mary was planning to leave this morning.'

A conjunctive clause with *-laaq* or *-niaq* on the relative interpretation is expected and indeed appears to have a meaning similar to that of a 'before'-clause. When elicited to provide translations in English, however, my consultant would choose constructions like 'when X is going to ...', 'when X is supposed to ...', etc., instead of 'before ...' (she, on the other hand, would

use *before*-clauses to translate conjunctive clauses with the sequence of *-lauq* and *-nngit* discussed in Section 5.2.2.3 above); the reason for this is not clear to me, but I will use her translations (with some trivial modifications) for the data discussed in this section.

A conjunctive clause with *-laaq* on the relative interpretation is blocked when  $e_{\text{super}}$  and  $e_{\text{sub}}$  both occur on the day of utterance (276). In this respect *-laaq* contrasts with *-lauq*, which is exempt from such a constraint, as illustrated in (278).

(276) a. #ullumi jaan qai-qqau-juq silalu-laaq-tillugu  
 today John come-H.Past-Part.3s rain-Fut-Conj.3s  
 (Today John came when it was going to rain.)

b. #ullumi jaan qai-niaq-tuq silalu-laaq-tillugu  
 today John come-H.Fut-Part.3s rain-Fut-Conj.3s  
 (Today John will come when it is going to rain.)

(277) a. ullumi jaan qai-qqau-juq silalung-niaq-tillugu  
 today John come-H.Past-Part.3s rain-H.Fut-Conj.3s  
 ‘Today John came when it was going to rain.’

b. ullumi jaan qai-niaq-tuq silalung-niaq-tillugu  
 today John come-H.Fut-Part.3s rain-H.Fut-Conj.3s  
 ‘Today John will come when it is going to rain.’

(278) a. ullumi jaan qai-qqau-juq silalu-lauq-tillugu  
 today John come-H.Past-Part.3s rain-Past-Conj.3s  
 ‘Today John came after it rains.’

b. ullumi jaan qai-niaq-tuq silalu-lauq-tillugu  
 today John come-H.Fut-Part.3s rain-Past-Conj.3s  
 ‘Today John will come after it rains.’

On the other hand, a conjunctive clause containing *-laaq* on the relative interpretation is acceptable when  $e_{\text{sub}}$  occurs on the day of utterance but  $e_{\text{super}}$  does not, as shown in (279a) and (280a). Also it does not require that  $e_{\text{sub}}$  occur after the day of  $e_{\text{super}}$  (281).

(279) Situation: Mary left last week. John was going to leave. He left today.

- a. pingasuarusiulauqtumit miali aulla-lauq-tuq jaan aulla-laaq-tillugu  
 last.week Mary leave-Past-Part.3s John leave-Fut-Conj.3s  
 ‘Last week Mary left when John was going to leave.’
- b. pingasuarusiulauqtumit miali aulla-lauq-tuq jaan aullar-niaq-tillugu  
 last.week Mary leave-Past-Part.3s John leave-H.Fut-Conj.3s  
 ‘Last week Mary left when John was going to leave.’

(280) Situation: Mary arrived yesterday. John will arrive today.

- a. miali tiki-lauq-tuq jaan tiki-laaq-tillugu  
 Mary arrive-Past-Part.3s John arrive-Fut-Conj.3s  
 ‘Mary arrived when John was going to arrive.’ (repeated from (273))
- b. miali tiki-lauq-tuq jaan tiki-niaq-tillugu  
 Mary arrive-Past-Part.3s John arrive-H.Fut-Conj.3s  
 ‘Mary arrived when John was going to arrive.’

(281) Situation: Yesterday, John left at 2 pm and Mary left at 5 pm.

- a. ippatsaq jaan aulla-lauq-tuq miali aulla-laaq-tillugu  
 yesterday John leave-Past-Part.3s Mary leave-Fut-Conj.3s  
 ‘Yesterday John left, when Mary was going to leave.’
- b. ippatsaq jaan aulla-lauq-tuq miali aullar-niaq-tillugu  
 yesterday John leave-Past-Part.3s Mary leave-H.Fut-Conj.3s  
 ‘Yesterday John left, when Mary was going to leave.’

To account for the illustrated distribution of *-laaq*, I propose that in conjunctive clauses on the relative interpretation, (i) the use of *-laaq* is blocked when  $e_{\text{sub}}$  occurs within the temporal domain associated with *-niaq* (as is the case in independent clauses), and (ii) the temporal domain associated with *-niaq* is shiftable between the day of utterance and the day of  $e_{\text{super}}$ . In other words, *-niaq* can be used only if the time of  $e_{\text{sub}}$  is within the day of utterance or within the day of  $e_{\text{super}}$ , and *-laaq* can be used only if the time of  $e_{\text{sub}}$  is either outside the day of utterance or outside the day of  $e_{\text{super}}$  (Table 7; shading in the ‘domain restriction’ column indicates that the described constraint is an implicature).

	<b>temporal relation</b>	<b>Domain restriction</b>	<b>relevant examples</b>
<i>-laaq</i>	Time ( $e_{\text{super}}$ ) < Time ( $e_{\text{sub}}$ )	Time ( $e_{\text{sub}}$ ) $\not\subseteq$ Day ( $u$ ) $\vee$ Time ( $e_{\text{sub}}$ ) $\not\subseteq$ Day ( $e_{\text{super}}$ )	(276), (279a), (280a), (281)
<i>-niaq</i>		Time ( $e_{\text{sub}}$ ) $\subseteq$ Day ( $u$ ) $\vee$ Time ( $e_{\text{sub}}$ ) $\subseteq$ Day ( $e_{\text{super}}$ )	(277), (279b), (280b)

Table 7: The relative interpretation of future tenses within a conjunctive clause

I will illustrate in the following how this analysis accounts for the presented data. In cases like (279) and (280) (repeated below in (282) and (283)), where  $e_{\text{sub}}$  occurs on the day of utterance and  $e_{\text{super}}$  occurs in a time preceding it, the appropriate choice would be *-niaq* if the temporal domain of *-niaq* is set to the day of utterance, and *-laaq* if it is set to the day of  $e_{\text{super}}$  (Figure 9 illustrates the configuration under discussion;  $T_U$  = the time of utterance). In other words, both *-niaq* and *-laaq* are predicted to be acceptable.

(282) Situation: Mary left last week. John was going to leave. He left today.

- a. pingasuarusiulauqtumit miali aulla-lauq-tuq jaan aulla-laaq-tillugu  
last.week Mary leave-Past-Part.3s John leave-Fut-Conj.3s  
'Last week Mary left when John was going to leave.'
- b. pingasuarusiulauqtumit miali aulla-lauq-tuq jaan aullar-niaq-tillugu  
last.week Mary leave-Past-Part.3s John leave-H.Fut-Conj.3s  
'Last week Mary left when John was going to leave.'

(283) Situation: Mary arrived yesterday. John will arrive today.

- a. miali tiki-lauq-tuq jaan tiki-laaq-tillugu  
Mary arrive-Past-Part.3s John arrive-Fut-Conj.3s  
'Mary arrived when John was going to arrive.' (repeated from (273))
- b. miali tiki-lauq-tuq jaan tiki-niaq-tillugu  
Mary arrive-Past-Part.3s John arrive-H.Fut-Conj.3s  
'Mary arrived when John was going to arrive.'

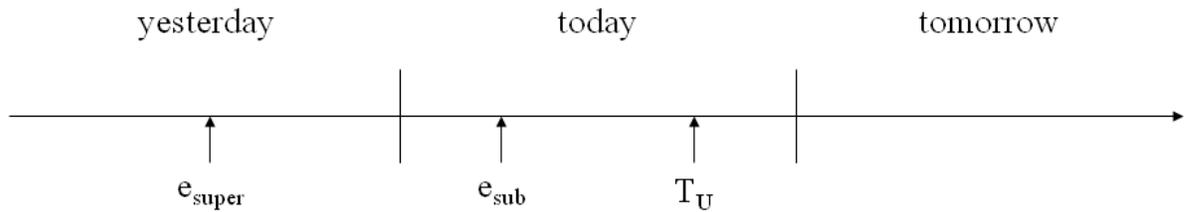


Figure 9: Temporal relation among,  $e_{\text{super}}$ ,  $e_{\text{sub}}$  and the utterance time ( $T_U$ ):  $e_{\text{sub}}$  within the day of utterance and outside the day of  $e_{\text{super}}$

In contrast, in cases like (276) and (277) (repeated below as (284) and (285)), where both  $e_{\text{sub}}$  and  $e_{\text{super}}$  occur within the day of utterance, *-niaq* is the only option because  $e_{\text{sub}}$  necessarily falls in the domain of *-niaq* (Figure 10).

(284) a. #ullumi jaan qai-qqau-juq silalu-laaq-tillugu  
 today John come-H.Past-Part.3s rain-Fut-Conj.3s  
 (Today John came when it was going to rain.)

b. #ullumi jaan qai-niaq-tuq silalu-laaq-tillugu  
 today John come-H.Fut-Part.3s rain-Fut-Conj.3s  
 (Today John will come when it is going to rain.)

(285) a. ullumi jaan qai-qqau-juq silalung-niaq-tillugu  
 today John come-H.Past-Part.3s rain-H.Fut-Conj.3s  
 ‘Today John came when it was going to rain.’

b. ullumi jaan qai-niaq-tuq silalung-niaq-tillugu  
 today John come-H.Fut-Part.3s rain-H.Fut-Conj.3s  
 ‘Today John will come when it is going to rain.’

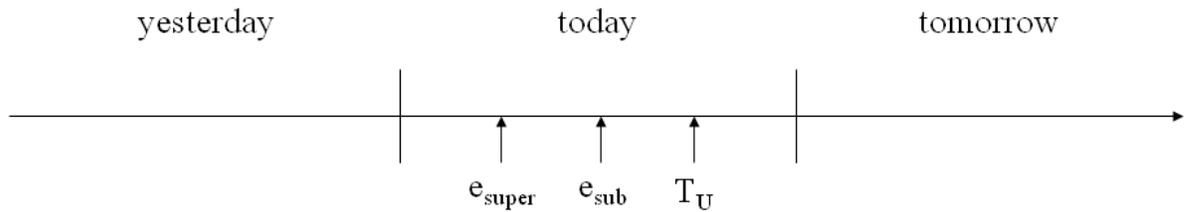


Figure 10: Temporal relation among,  $e_{\text{super}}$ ,  $e_{\text{sub}}$  and the utterance time ( $T_U$ ):  $e_{\text{sub}}$  is both within the day of utterance and the day of  $e_{\text{super}}$

The proposed hypothesis entails that in a conjunctive clause on the relative interpretation, *-niaq* as a tense marker cannot be used if  $e_{\text{super}}$  occurs both after the day of  $e_{\text{sub}}$  and outside the day of utterance. To verify it, however, is not a straightforward task, because of the ambiguity of *-niaq* between a tense marker and a modal (Chapter 3). The occurrences of *-niaq* in the sentences in (286)-(287) cannot be a tense marker under the present analysis, and thus must be regarded as a modal marker.

(286) Situation: Mary left Toronto. John left Toronto a week later.

miali aulla-lauq-tuq jaan aullar-niaq-tillugu  
 Mary leave-Past-Part.3s John leave-niaq-Conj.3s  
 ‘Mary left and John was going to leave.’

(287) Situation: Tomorrow, John will arrive in the morning and Mary will dance in the afternoon.

qauppat miali mumir-niaq-tillugu jaan tiki-laaq-tuq  
 tomorrow Mary dance-niaq-Conj.3s John arrive-Fut-Part.3s  
 ‘Tomorrow when Mary is planning to dance John will arrive.’

An interesting issue regarding future-tensed conjunctive clauses on the relative interpretation is how they semantically differ from negative conjunctive clauses with *-lauq* on the relative interpretation (discussed in Section 5.2.2.3 above), which also indicate that  $e_{\text{sub}}$  temporally follows  $e_{\text{super}}$ . For one thing, as briefly mentioned above, a future-tensed conjunctive clause

appears to carry the nuance that  $e_{\text{sub}}$  is planned or supposed to happen at the time of  $e_{\text{super}}$ , which a negative conjunctive clause with *-lauq* lacks.

Another point of difference is that only a negative conjunctive clause with *-lauq* can be used when it is contextually understood that it is desirable or necessary that  $e_{\text{super}}$  takes place before  $e_{\text{sub}}$ .

(288) Situation: You will clean the house because your sister, Naulaq, will come.

- a. iglu-ga salummaqsar-niaq-tunga naulaq qai-lau-nngi-tillugu  
house-Poss.1s/s clean-H.Fut-Part.1s Naulaq come-Past-Neg-Conj.3s  
‘I will clean my house before Naulaq comes.’
- b. #iglu-ga salummaqsar-niaq-tunga naulaq qai-niaq-tillugu  
house-Poss.1s/s clean-H.Fut-Part.1s Naulaq come-H.Fut-Conj.3s  
(I will clean my house before Naulaq comes.)
- b. #iglu-ga salummaqsar-laaq-tunga naulaq qai-laaq-tillugu  
house-Poss.1s/s clean-Fut-Part.1s Naulaq come-Fut-Conj.3s  
(I will clean my house before Naulaq comes.)

(289) Situation: Today you came home before it got dark.

- a. angiqqa-qqau-junga taaq-si-lau-nngi-tillugu  
come.home-H.Past-Part.1s dark-Inc-Past-Neg-Conj.3s  
‘Today I came home before it got dark.’
- b. #angiqqa-qqau-junga taaq-si-niaq-tillugu  
come.home-H.Past-Part.1s dark-Inc-H.Fut-Neg-Conj.3s  
(Today I came home before it got dark.)

The two constructions also contrast in the availability of the ‘non-factual’ interpretation. Namely, a negative conjunctive clause with *-lauq* may express the ‘non-factual’ subsequence relation, which can be expressed by English *before* (Ogihara, 1995, Beaver and Condoravdi, 2003 among others), while a future-tensed conjunctive clause cannot. To illustrate, a negative conjunctive clause with *-lauq* may be used to translate English sentences like (290), where the truth of the *before*-clause is not entailed, while a future-tensed conjunctive clause cannot, as shown in (291) and (292).

- (290) a. I will water the plant before it dies (so that the plant won't die).  
 b. John died before he saw his grandchildren (so that he did not see his grandchildren).
- (291) a. *piruqsiaq immili-laaq-tara tuqu-lau-nngit-tillugu*  
 plant water-Fut-Part.1s/3s die-Past-Neg-Conj.3s  
 'I will water the plant before it dies.'
- b. *#piruqsiaq immili-laaq-tara tuqu-niaq-tillugu*  
 plant water-Fut-Part.1s/3s die-H.Fut-Conj.3s  
 (I will water the plant before it dies.)
- c. *#piruqsiaq immili-laaq-tara tuqu-laaq-tillugu*  
 plant water-Fut-Part.1s/3s die-Fut-Conj.3s  
 (I will water the plant before it dies.)
- (292) a. *jaan tuqu-lauq-tuq suli irngutanga-nit taku-lau-nngi-tillugu*  
 John die-Past-Part.3s still grandchild-Acc.pl see-Past-Neg-Conj.3s  
 'John died before he saw his grandchildren.'
- b. *#jaan tuqu-lauq-tuq suli irngutanga-nit taku-niaq-tillugu*  
 John die-Past-Part.3s still grandchild-Acc.pl see-H.Fut-Conj.3s  
 (John died before he saw his grandchildren.)
- c. *#jaan tuqu-lauq-tuq suli irngutanga-nit taku-laaq-tillugu*  
 John die-Past-Part.3s still grandchild-Acc.pl see-Fut-Conj.3s  
 (John died before he saw his grandchildren.)

The absence of the non-factual interpretation of a future-tensed conjunct clause is neatly explained by the proposed analysis that a conjunctive clause is invariably interpreted as a logical conjunct (whereas a negative conjunctive clause with *-lauq* idiomatically carries the meaning of 'before'), as the truth of a conjunct is generally guaranteed by the truth of a complex sentence containing it.

### 5.2.3.2 Future-tensed conjunctive clauses on the absolute interpretation

(293) and (294) exemplify sentences where a conjunctive clause with *-laaq* receives the absolute interpretation. In such sentences,  $e_{\text{sub}}$  is generally interpreted as occurring after the day of utterance, while the temporal order between  $e_{\text{sub}}$  and  $e_{\text{super}}$  may not be specified.

(293) Situation: The weather forecast says that it will rain all tomorrow afternoon. John will arrive around 2 pm tomorrow.

qauppat silalu-laaq-tillugu jaan tiki-laaq-tuq  
tomorrow rain-Fut-Conj.3s John arrive-Fut-Part.3s  
'Tomorrow while it is raining John will arrive.'

(294) Situation: A dance competition will be held tomorrow. John will dance at 2:00 pm in room A. Mary will dance at 2:00 pm in room B. So, they will dance at the same time in different rooms.

a. jaan mumi-laaq-tuq miali mumi-laaq-tillugu  
John dance-Fut-Part.3s Mary dance-Fut-Conj.3s  
'John will dance and Mary will dance.'

b. miali mumi-laaq-tuq jaan mumi-laaq-tillugu  
Mary dance-Fut-Part.3s John dance-Fut-Conj.3s  
'Mary will dance and John will dance.'

(295)-(297) exemplify sentences where a conjunctive clause with *-niaq* receives the absolute interpretation. In such sentences,  $e_{sub}$  is interpreted as occurring within the day of utterance, while the temporal order and distance between  $e_{super}$  and  $e_{sub}$  may not be specified:

(295) Situation: The weather forecast says that it will rain all afternoon. John will arrive around 2 pm.

ullumi silalung-niaq-tillugu jaan tiki-niaq-tuq  
today rain-H.Fut-Conj.3s John arrive-H.Fut-Part.3s  
'Today while it is raining, John will arrive.'

(296) Situation: Today, John will arrive in the morning and Mary will dance in the afternoon.

ullumi miali mumir-niaq-tuq jaan tiki-niaq-tillugu  
today Mary dance-H.Fut-Part.3s John arrive-H.Fut-Conj.3s  
'Today Mary will dance and John will arrive.'

(297) Situation: Mary will leave tomorrow. John will leave today.

qauppat miali aulla-laaq-tuq jaan ullumi aullar-niaq-tillugu  
tomorrow Mary leave-Fut-Part.3s John today leave-H.Fut-Conj.3s  
'Tomorrow Mary will leave and John will leave today.'

Table 8 summarizes these points on the absolute interpretation of future tenses within a conjunctive clause (shading in the ‘domain restriction’ column indicates that the described constraint is an implicature).

	<b>temporal relation</b>	<b>Domain restriction</b>	<b>relevant examples</b>
<i>-laaq</i>	Time(u) < Time(e <sub>super</sub> )	Time(e <sub>sub</sub> ) $\not\subseteq$ Day(u)	(293), (294)
<i>-niaq</i>		Time(e <sub>sub</sub> ) $\subseteq$ Day(u)	(295)-(297)

Table 8: The absolute interpretation of future tenses within a conjunctive clause

### 5.2.4 Section Summary

This section has demonstrated the following. First, a tense in the conjunctive clause may receive either the relative interpretation or the absolute interpretation. Second, the basic semantic function of the conjunctive mood is to indicate the logical conjunction, as the English connective *and* does. A conjunctive clause specifies the temporal relation (precedence, simultaneity, or subsequence) between two events only when the tense within it is interpreted relative to e<sub>super</sub>. Third, in a relatively interpreted conjunctive clause, the domain of *-qqau* is highly restricted while the domain of *-lauq* is not restricted at all. The restriction on *-qqau* is that it can only be used only if e<sub>sub</sub> occurs on the day of utterance *and* on the day of e<sub>super</sub> (or in other words, e<sub>sub</sub> and e<sub>super</sub> both occur on the day of utterance). Fourth, in a relatively interpreted conjunctive clause, the domain of *-niaq* is shiftable between the day of utterance and the day of e<sub>super</sub>, so that *-niaq* can be used if e<sub>sub</sub> occurs either on the day of utterance or on the day of e<sub>super</sub>. The use of *-laaq* is blocked within the domain of *-niaq*; consequently *-laaq* is blocked only when both e<sub>sub</sub> and e<sub>super</sub> occur on the day of utterance.

## 5.3 The causative clause

The causative clause is a dependent clause characterized by the causative mood (Harper, 1974 for North Baffin; Fortescue, 1984 for West Greenlandic; Lowe, 1985a,b,c for Kangiryarmiut and Siglit Inuvialuit (Western Canadian Inuktun) and Uummarmiut (North Alaskan Iñupiaq); Dorais,

1988 for Arctic Quebec; Nagai, 2006 for Upper Kobuk (North Alaskan Iñupiaq).

It has been reported that, in a number of dialects of the Inuit language, the causative clause has two semantic functions: ‘when’-clause and ‘because’-clause (Harper, 1979; Fortescue, 1984; Lowe, 1985a,b,c; Dorais, 1988).

(298) a. tiki-Ø-gavit aliasu-laur-tunga  
arrive-Pres-Caus.2s be.happy-Past-Part.1s  
‘When you arrived, I rejoiced.’

b. tiki-Ø-mmat aliasu-Ø-ttunga  
arrive-Pres-Caus.3s be.happy-Pres-Part.1s  
‘Because he arrives, I am glad.’

(Arctic Quebec, Dorais, 1988:63-64, glosses added)

A SB causative clause too is sometimes translated as a ‘because’-clause, and sometimes as a ‘when’-clause.

(299) a. kaak-Ø-kama niri-langa-si-Ø-junga  
hungry-Pres-Caus.1s eat-Pros-Inc-Pres-Part.1s  
‘Because I am hungry, I am going to eat.’

b. tusarna-li-Ø-ngmat mumi-lauq-tuq  
music-Inc-Caus.3s dance-Past-Part.3s  
‘When the music started, he danced.’

A SB causative clause, however, cannot be used when the superordinate and subordinate clauses describe eventualities that occur simultaneously, and do not stand in the reason-consequence relation (300). In such cases, a conjunctive clause is used instead, as in (301).

(300) a. #uqaalauti sivani-lauq-tuq niri-Ø-gama  
phone ring-Past-Part.3s eat-Pres-Caus.1s  
‘The phone rang when I was eating.’

Comment: ‘It sounds as if the phone rang just because you were eating.’

- b. #silalu-li-lauq-tuq Toronto-muu-Ø-rama  
rain-Inc-Past-Part.3s Toronto-go-Pres-Caus.1s  
'It started raining when I went to Toronto.'

Comment: 'It sounds as if it started raining just because you arrived in Toronto.'

- (301) a. uqaalauti sivani-lauq-tuq niri-Ø-tillunga  
phone ring-Past-Part.3s eat-Pres-Conj.1s  
'The phone rang when I was eating.'
- b. silalu-li-lauq-tuq Toronto-muuq-Ø-tillunga  
rain-Inc-Past-Part.3s Toronto-to-Pres-Conj.1s  
'It started raining when I went to Toronto.'

As far as SB is concerned, thus, it seems unnecessary to assume that the causative clause has a function as a 'when'-clause, aside from the function as a 'because'-clause.

The SB causative clause can also serve as a purpose clause ('so that P', 'in order that P'), as exemplified in (302).

- (302) a. tuqsulaa-vigi-Ø-jara tusar-nia-ngmaanga  
yell-to-Freq-Pres-Part.1s/3s hear-H.Fut-Caus.3s/1s  
'I yelled so that he can hear me.'
- b. avvuq-Ø-tunga kiinaujar-nit nunasiuti-taa-laa-rama  
collect-Pres-Part.1s money-Acc.pl car-get-Fut-Caus.1s  
'I am saving money so that I can buy a car.'

Furthermore, the SB causative clause may also serve as a complement clause of verbs such as *uqaq-* 'to say' and *qaujima-* 'to know'.<sup>42</sup>

- (303) a. jaan uqa-qqau-juq miali tiki-qqau-ngmat  
John say-H.Past-Part.3s Mary arrive-H.Past-Caus.3s  
'John said that Mary arrived.'

<sup>42</sup> Dorais (1988) reports the same for the causative clause in Inuktitut spoken in Arctic Quebec.

- b. qaujima-Ø-juq      ippatsaq      aannia-lau-rama  
 know-Pres-Part.3s    yesterday    be.sick-Past-Caus.1s  
 ‘John knows that I was sick yesterday.’

In the following, temporal interpretations of tenses occurring in causative clauses will be examined. It will be demonstrated (i) that the tense in a causative clause as an adjunct clause of reason receives the absolute interpretation and is interpreted relative to the utterance time, (ii) that the tense in a causative clause as an adjunct clause of purpose receives the relative interpretation and is interpreted relative to the time of the superordinate eventuality, and (iii) that the tense in a clause as a complement clause is interpreted relative to the time of the secondary context (i.e., the context of the reported speech/attitude).

### 5.3.1 Tenses in a causative clause as an adjunct clause of reason

A tense in a causative clause on the ‘reason’ interpretation receives the absolute interpretation, and is interpreted relative to the utterance time. Thus, when the superordinate clause is past-tensed and  $e_{\text{sub}}$  holds at the same time as  $e_{\text{super}}$ , the causative clause must be past-tensed, rather than present-tensed, as shown in (304) and (305).

- (304) a. #ippatsaq quviasu-lauq-tunga      angiqqaq-sima-Ø-ngmat  
 yesterday    be.happy-Past-Part.1s    come.home-Perf-Pres-Caus.3s  
 (Yesterday I was happy because he was home.)
- b. ippatsaq quviasu-lauq-tunga      angiqqaq-sima-lau-ngmat  
 yesterday    be.happy-Past-Part.1s    come.home-Perf-Past-Caus.3s  
 ‘Yesterday I was happy because he was home.’
- (305) a. #unnuaq qai-gunna-lau-nngit-tunga      irni-ra      aannia-Ø-ngmat  
 last.night    come-can-Past-Neg-Part.1s    son-Poss.1s/s    be.sick-Pres-Caus.3s  
 (I couldn’t come to the party last night because my son was sick.)
- b. unnuaq qai-gunna-lau-nngit-tunga      irni-ra      aannia-lau-ngmat  
 last.night    come-can-Past-Neg-Part.1s    son-Poss.1s/s    be.sick-Past-Caus.3s  
 ‘I couldn’t come to the party last night because my son was sick’.
- (306) a. #miali pulaa-qqau-jara      taku-guma-Ø-gakku  
 Mary visit-H.Past-Part.1s/3s    see-want-Pres-Caus.1s/3s  
 (I visited Mary because I wanted to see her.)

- b. miali pulaa-qqau-jara      taku-guma-qqau-gakku  
 Mary visit-H.Past-Part.1s/3s see-want-H.Past-Caus.1s/3s  
 ‘I visited Mary because I wanted to see her.’

Likewise, when the superordinate clause is future-tensed and  $e_{sub}$  occurs at the same time as  $e_{super}$ , the causative clause must be future-tensed, rather than present-tensed, as shown in (307) and (308).

- (307) a. #ullumi amy qia-niaq-tuq      jaan aulla-Ø-ngmat  
 today Amy cry-H.Fut-Part.3s John leave-Pres-Caus.3s  
 (Today Amy will cry because John will leave.)
- b. ullumi amy qia-niaq-tuq      jaan aullar-nia-ngmat  
 today Amy cry-H.Fut-Part.3s John leave-H.Fut-Caus.3s  
 ‘Today Amy will cry because John will leave.’
- (308) a. #qauppat amy qia-laaq-tuq      jaan aulla-Ø-ngmat  
 tomorrow Amy cry-Fut-Part.3s John leave-Pres-Caus.3s  
 (Tomorrow Amy will cry because John will leave.)
- b. qauppat amy qia-laaq-tuq      jaan aulla-laa-ngmat  
 tomorrow Amy cry-Fut-Part.3s John leave-Fut-Caus.3s  
 ‘Tomorrow Amy will cry because John will leave.’

### 5.3.2 Tenses in a causative clause as an adjunct clause of purpose

As mentioned above, a causative clause may also serve as an adjunct clause of purpose (‘so that P’). The tense in a causative clause on the ‘so that’-interpretation receives the relative interpretation (although the absolute temporal frame too may affect the choice between *-niaq* and *-laaq*; see below (314)).

- (309) avvuq-Ø-tunga      kiinaujar-nit      nunasiuti-taa-laa-rama  
 collect-Pres-Part.1s money-Acc.pl car-get-Fut-Caus.1s  
 ‘I am saving money so that I can buy a car.’

In conjunction with the fact that a purpose (goal) always follows a purposeful action, this means that only a future tense may occur within a causative clause on this use, irrespective of what the

superordinate tense is.<sup>43</sup> (310), (311) and (312) and (313) illustrate cases where the superordinate tense is the hodiernal past, the general past, and a future, respectively.

- (310) a. #tuqsulaa-vigi-qqau-jara     tusa{-qqau/-lau}-ngmaanga  
 yell-to-Past-Part.1s/3s     hear{-H.Past/-Past}-Caus.3s/1s  
 (I yelled so that he could hear me.)
- b. tuqsulaa-vigi-qqau-jara     tusar-nia-ngmaanga  
 yell-to-Past-Part.1s/3s     hear-H.Fut-Caus.3s/1s  
 ‘I yelled so that he could hear me.’
- b. #tuqsulaa-vigi-qqau-jara     tusa-laa-ngmaanga  
 yell-to-Past-Part.1s/3s     hear-Fut-Caus.3s/1s  
 ‘I yelled so that he could hear me.’
- (311) a. #tuqsulaa-vigi-lauq-tara     tusa{-qqau/-lau}-ngmaanga  
 yell-to-Past-Part.1s/3s     hear{-H.Past/-Past}-Caus.3s/1s  
 (I yelled so that he could hear me.)
- b. tuqsulaa-vigi-lauq-tara     tusar-nia-ngmaanga  
 yell-to-Past-Part.1s/3s     hear-H.Fut-Caus.3s/1s  
 ‘I yelled so that he could hear me.’
- c. #tuqsulaa-vigi-lauq-tara     tusa-laa-ngmaanga  
 yell-to-Past-Part.1s/3s     hear-Fut-Caus.3s/1s  
 ‘I yelled so that he could hear me.’
- (312) a. #avvu-lauq-tunga kiinaujar-nit     nunasiuti-taa{-qqau/-lau}-rama  
 collect-Part.1s     money-Acc.pl     car-get{-H.Past/-Past}-Caus.1s  
 (I saved money so that I could buy a car.)
- b. avvu-lauq-tunga     kiinaujar-nit     nunasiuti-taar-nia-rama  
 collect-Part.1s     money-Acc.pl     car-get-Epis-Caus.1s  
 ‘I saved money so that I could buy a car.’
- c. avvu-lauq-tunga     kiinaujar-nit     nunasiuti-taa-laa-rama  
 collect-Part.1s     money-Acc.pl     car-get-Fut-Caus.1s  
 ‘I saved money so that I could buy a car.’
- (313) a. #tuqsulaar{-niaq/-laaq}-tunga     tusa-gunna{-qqau/-lau}-ngmaanga  
 yell{-H.Fut/Fut}-Part.1s     hear-can{-H.Past/-Past}-Caus.3s/1s  
 ‘I will yell so that he can hear me.’

<sup>43</sup> As discussed in Chapter 4 (4.4.1, (183) and (184)), the prospective aspect marker *-langa* cannot occur in an adjunct clause of purpose.

- b. tuqsulaang{-niaq/-laaq}-tunga tusa-gunnar-nia-ngmaanga  
 yell{-H.Fut/-Fut}-Part.1s hear-can-H.Fut-Caus.3s/1s  
 ‘I will yell so that he can hear me.’

The domains of *-laaq* and *-niaq* within a causative clause on the ‘so that’ interpretation are affected by the superordinate tense, unlike those within the conjunctive clause. Namely, the following holds:<sup>44</sup>

- (314) (i) When the superordinate clause is past-tensed, the domain of *-niaq* is the day of  $e_{\text{super}}$  and *-laaq* is used elsewhere.
- (ii) When the superordinate tense is future-tensed, the domain of *-niaq* is shiftable between the day of utterance and the day of  $e_{\text{super}}$ .

These patterns are summarized in Table 9.

superordinate tense	subordinate tense	temporal relation	domain restriction
past	<i>-laaq</i>	$\text{Time}(e_{\text{super}}) < \text{Time}(e_{\text{sub}})$	$\text{Time}(e_{\text{sub}}) \not\subseteq \text{Day}(e_{\text{super}})$
	<i>-niaq</i>		$\text{Time}(e_{\text{sub}}) \subseteq \text{Day}(e_{\text{super}})$
future	<i>-laaq</i>		$\text{Time}(e_{\text{sub}}) \not\subseteq \text{Day}(u) \vee$ $\text{Time}(e_{\text{sub}}) \not\subseteq \text{Day}(e_{\text{super}})$
	<i>-niaq</i>		$\text{Time}(e_{\text{sub}}) \subseteq \text{Day}(u) \vee$ $\text{Time}(e_{\text{sub}}) \subseteq \text{Day}(e_{\text{super}})$

Table 9: The relative interpretation of future tenses within a causative clause serving as a purpose clause

<sup>44</sup> When a purpose clause occurs under a present-tensed clause, the use of *-laaq* is possible only if  $e_{\text{sub}}$  is subsequent to the day of utterance (= the day of  $e_{\text{super}}$ ).

- (i) avittuq-Ø-tara banana niri-gunna-laa-ngmauk  
 cut-Pres-Part.1s/3s banana eat-can-Fut-Caus.3s/3s  
 ‘I am cutting the banana into pieces so that he can eat it (tomorrow).’  
 \*‘I am cutting the banana into pieces so that he can eat it (today).’

In such a case, of course, one cannot tell if the domain of *-niaq* is set to the day of utterance or to the day of  $e_{\text{super}}$ .

Let us first consider generalization (314i). (315b) illustrates that *-laaq* cannot be used in the configuration where  $e_{\text{sub}}$  and  $e_{\text{super}}$  occur on the same day but not within the day of utterance (note that the matrix tense *-lauq* indicates that  $e_{\text{super}}$  is in a time preceding the day of utterance). In other words, *-laaq* is not allowed within the day of  $e_{\text{super}}$ .

(315) a. ippatsaq tuqsulaa-vigi-lauq-tara tusar-nia-ngmaanga  
 yesterday yell-to-Freq-Past-Part.1s/3s hear-H.Fut-Caus.3s/1s  
 ‘Yesterday I yelled so that he could hear me.’

b. #ippatsaq tuqsulaa-vigi-lauq-tara tusa-laa-ngmaanga  
 ippatsaq yell-to-Freq-Past-Part.1s/3s hear-Fut-Caus.3s/1s  
 (Yesterday I yelled so that he could hear me.)

Comment: ‘He should have heard me right after I yelled, not in the next day (laughter).’

This indicates that the domain of *-niaq* is set to the day of  $e_{\text{super}}$ , and that it is not shiftable to the day of utterance (If it was, *-laaq* would be allowed as long as  $e_{\text{sub}}$  occurs outside the day of utterance). (316) conforms to this analysis. It illustrates that when  $e_{\text{sub}}$  occurs on the day of utterance and outside the day of  $e_{\text{super}}$ , the use of *-laaq* is allowed.

(316) Situation: You are moving to a new apartment today. You phoned John a week ago so that he could help you today.

uqaalak-vigi-lauq-tara uva-nnit ikaju-gunna-laa-ngmaanga ullumi  
 phone-to-Past-Part.1s/3s Pro.1s-Acc help-can-Fut-Caus.3s/1s today  
 ‘I phoned him (a week ago), so that he could help me today.’

The proposed analysis indicates that under a past-tensed clause the domain for *-niaq* is set to the day of  $e_{\text{super}}$ , and thus entails that *-niaq* as a tense marker may not occur in place of *-laaq* in (316), which is in a configuration where  $e_{\text{sub}}$  occurs outside the day of  $e_{\text{super}}$ . The form *-niaq* may occur in this environment, as shown in (317), but such an occurrence must be regarded as *-niaq* as a modal marker.

(317) Situation: You are moving to a new apartment today. You phoned John a week ago so that he could help you today.

uqaalak-vigi-lauq-tara    uva-nnit    ikaju-gunnar-nia-ngmaanga    ullumi  
 phone-to-Past-Part.1s/3s    Pro.1s-Acc    help-can-Fut-Caus.3s/1s    today  
 ‘I phoned him, so that he could help me today.’

Next, let us turn to generalization (314ii); when the superordinate tense is future-tensed, the domain of *-niaq* is shiftable between the day of utterance and the day of  $e_{\text{super}}$ . (318) illustrates that *-laaq* cannot be used in a purpose clause when  $e_{\text{sub}}$  and  $e_{\text{super}}$  both occur on the day of utterance.

(318) Situation: Today you will see an old man who has a hearing problem.

- a. #tuqsulaar-niaq-tunga    tusa-gunna-laa-ngmaanga  
 yell-H.Fut-Part.1s    hear-can-Fut-Caus.3s/1s  
 (I will yell so that he can hear me.)
- b. tuqsulaar-niaq-tunga    tusa-gunnang-nia-ngmaanga  
 yell-H.Fut-Part.1s    hear-can-H.Fut-Caus.3s/1s  
 ‘I will yell so that he can hear me.’

When  $e_{\text{sub}}$  occurs within the same day as  $e_{\text{super}}$  but is subsequent to the day of utterance, however, *-laaq* can be used. This is contrastive to a purpose clause under a past-tensed clause, where the use of *-laaq* is blocked if  $e_{\text{sub}}$  occurs within the same day as  $e_{\text{super}}$ .

(319) Situation: Tomorrow you will see an old man who has a hearing problem.

- a. tuqsulaa-laaq-tunga    tusa-gunna-laa-ngmaanga  
 yell-Fut-Part.1s    hear-can-Fut-Caus.3s/1s  
 ‘I will yell so that he can hear me.’
- b. tuqsulaa-laaq-tunga    tusa-gunnar-nia-ngmaanga  
 yell-Fut-Part.1s    hear-can-H.Fut-Caus.3s/1s  
 ‘I will yell so that he can hear me.’

The observations in (318) and (319) leave open two possibilities: (i) the domain of *-niaq*, in which *-laaq* is blocked, is always set to the day of utterance and (ii) it can be set either to the day

of utterance or to the day of  $e_{\text{super}}$ . To determine if the domain of *-niaq* may be set to the day of  $e_{\text{super}}$ , we need to know whether *-niaq* as a tense marker can be used in a sentence like (319), i.e., in a configuration where  $e_{\text{sub}}$  occurs on the same day as  $e_{\text{super}}$  but not the day of utterance. This is not a straightforward matter, however, because the modal marker with the same form occurs in purpose clauses, as mentioned above.

I do not have data to settle this issue, but am inclined to believe that the domain of *-niaq* can be set to the day of  $e_{\text{super}}$ , as well as to the day of utterance. An advantage of this view is that it implies a greater degree of similarity between purpose clauses and conjunctive clauses on the relative interpretation in terms of the distributions of *-niaq* and *-laaq*.

In summary, in a causative clause serving as a purpose clause, (i) a tense always receives the relative interpretation, (ii) only a future tense may occur (this follows from point (i) and the fact that a purpose/goal always follows a purposeful action), and (iii) the domain of *-niaq* is fixed to the day of  $e_{\text{super}}$  under a past-tensed superordinate clause, but is shiftable between the day of utterance and the day of  $e_{\text{super}}$  under a future-tensed superordinate clause. *-laaq* is blocked within the domain of *-niaq*.

### 5.3.3 Tenses in a causative clause as a complement clause

#### 5.3.3.1 The general pattern

A tense in a causative clause serving as a complement clause is interpreted with respect to the time of the reported utterance/attitude. Thus, in the following sentence, the present tense in the complement clause indicates that John, the agent of the report, presents the described eventuality (Mary's pregnancy) as concurrent with John's utterance.

- (320) jaan uqa-lauq-tuq miali singai-Ø-ngmat  
 Jaan say-Past-Part.3s Mary pregnant-Pres-Caus.3s  
 'John said that Mary was pregnant.'  
 (simultaneous interpretation only, i.e., John said, 'Mary is pregnant'.)

Likewise, in (321), the past tense in the complement clause indicates that John presents the

described eventuality as occurring prior to his utterance.

- (321) jaan uqa-lauq-tuq miali singai-lau-ngmat  
John say-Past-Part.3s Mary pregnant-Past-Caus.3s  
'John said that Mary was pregnant.'  
(backshifted interpretation only, i.e., John said, 'Mary was pregnant'.)

A sentence like (321) does not allow the simultaneous interpretation, which implies that in SB, 'sequence of tense', the phenomenon whereby a predicate embedded under a past-tensed utterance/attitude predicate takes the past form despite referring to the present time relative to the reported utterance/attitude, does not take place, as illustrated in (322) (Coulmas, 1986; Abusch, 1988, 1997; Ogihara, 1994, 1996; Cowper, 1996; Stowell, 1998, among others).

- (322) John said that it was raining.

The following examples illustrate the same point.

- (323) Situation: Yesterday you talked to John in Iqaluit on the phone. You heard raining in the background. He said that it was raining.

- a. jaan uqa-lauq-tuq iqalu-nnit silalu-Ø-ngmat  
John say-Past-Part.3s Iqaluit-Loc rain-Pres-Caus.3s  
'John said that it was raining in Iqaluit.'  
(simultaneous interpretation only, i.e., John said, 'It is raining in Iqaluit'.)
- b. #jaan uqa-lauq-tuq iqalu-nnit silalu-lau-ngmat  
John say-Past-Part.3s Iqaluit-Loc rain-Past-Caus.3s  
'John said that it had been raining in Iqaluit.'  
(back-shifted interpretation only, i.e., John said, 'It was raining in Iqaluit'.)

- (324) Situation: Today you talked to John in Iqaluit on the phone. You heard raining in the background. He said that it was raining.

- a. jaan uqa-qqau-juq iqalu-nnit silalu-Ø-ngmat  
John say-H.Past-Part.3s Iqaluit-Loc rain-Pres-Caus.3s  
'John said that it was raining in Iqaluit.'  
(simultaneous interpretation only, i.e., John said, 'It is raining in Iqaluit'.)

- b. #jaan uqa-qqau-juq iqalu-nnit silalu-qqau-ngmat  
 John say-H.Past-Part.3s Iqaluit-Loc rain-Past-Caus.3s  
 ‘John said that it had been raining in Iqaluit.’  
 (back-shifted interpretation only, i.e., John said, ‘It was raining in Iqaluit’.)

The following exemplifies a future tense in the complement clause indicating that the agent of the report presents the described eventuality as occurring subsequent to the time of the report.

- (325) a. jaan uqa-lauq-tuq miali singai-Ø-ngmat  
 John say-Past-Part.3s Mary be.pregnant-Pres-Caus.3s  
 ‘John said that Mary was pregnant.’  
 (simultaneous interpretation only, i.e., John said, ‘Mary is pregnant’.)
- b. jaan uqa-lauq-tuq miali singai-laa-ngmat  
 John say-Past-Part.3s Mary be.pregnant-Fut-Caus.3s  
 ‘John said that Mary would be pregnant.’  
 (forward-shifted interpretation only, i.e., John said, ‘Mary will be pregnant’.)
- (326) a. jaan uqa-qqau-juq ullumi iqalu-nnit silalu-Ø-ngmat  
 John say-H.Past-Part.3s today Iqaluit-Loc rain-Pres-Caus.3s  
 ‘John said today that it was raining in Iqaluit.’  
 (simultaneous interpretation only, i.e., John said, ‘It is raining in Iqaluit’.)
- b. jaan uqa-qqau-juq ullumi iqalu-nnit silalung-nia-ngmat  
 John say-H.Past-Part.3s today Iqaluit-Loc rain-H.Fut-Caus.3s  
 ‘John said today that it would rain in Iqaluit.’  
 (forward-shifted interpretation only, i.e., John said, ‘It will be raining in Iqaluit’.)

The illustrated pattern of tense selection/interpretation within complement clauses is quite common, and is shared by other languages such as Russian and Japanese (Comrie, 1985; Ogihara, 1994, 1996; Oshima, 2006).

Tenses anchored to the context of a reported speech/attitude have been commonly considered a kind of ‘relative tense’ (‘relatively interpreted tense’). It must be noted, however, that they are interpreted relative to the time that the secondary agent (the individual whose utterance/attitude is reported) associates with the reported utterance/attitude, rather than the time of the superordinate eventuality (Bary and Maier, 2009; Oshima, 2009). The two usually match, but not always. In the following English example, the time that John, the secondary agent, associates

with his belief is a time on January 9th, and the time of John's holding the relevant belief is a time on January 7th. The embedded past tense is anchored to the former (if it was anchored to the latter, a past tense would be inappropriate). The distinction does not have direct empirical bearing on the discussion of SB data to follow (where it is always assumed that the two times match), but I will keep it for the sake of precision.

(327) Situation: It is January 7th, but John mistakenly believes that it is January 9th.  
 John believes that he **was** in Tokyo on January 8th.

Tenses within a complement clause are invariably anchored to the time associated with the reported utterance/attitude (Time(r)). Their domains, on the other hand, are sometimes set to the day of the reported utterance/attitude (Day(r)) and sometimes to the day of the external utterance (Day(u)). Namely, the choice between the general past (indicated by *-lauq*) and the hodiernal past (indicated by *-qqau*), and the choice between the general future (indicated by *-laaq*) and the hodiernal future (indicated by *-niaq*), sometimes depends on whether  $e_{\text{sub}}$  occurs on Day(r), and sometimes on whether  $e_{\text{sub}}$  occurs on Day(u). In the following, I will first examine the opposition of *-lauq* and *-qqau*, and then the one between *-laaq* and *-niaq*, within complement clauses.

### 5.3.3.2 The opposition of *-lauq* and *-qqau* in complement clauses

As shown above, *-lauq* and *-qqau* occurring in a complement clause both induce a back-shifted interpretation.

- (328) a. jaan uqa-qqau-juq      ullumi iqalu-nnit    silalu-qqau-ngmat  
 John say-H.Past-Part.3s    today Iqaluit-Loc    rain-H.Past-Caus.3s  
 'John said today that it had rained in Iqaluit.'  
 \*'John said today that it was raining in Iqaluit (then).'
- b. jaan uqa-lauq-tuq    ippatsaq iqalu-nnit    silalu-lau-ngmat  
 John say-Past-Part.3s    yesterday Iqaluit-Loc    rain-Past-Caus.3s  
 'John said yesterday that it had rained in Iqaluit.'  
 \*'John said yesterday that it was raining in Iqaluit (then).'

We have seen, in Chapter 3, (i) that *-qqau* on a matrix predicate indicates that the described eventuality is located within the day of utterance, and (ii) that whenever *-qqau* can be used, it

must be used (i.e. *-lauq* cannot be used). The distributions of *-lauq* and *-qqau* in complement clauses largely follow the same pattern, but there are two complications. First, the temporal domain associated with *-qqau* is affected by the superordinate tense, like the case of purpose clauses. When the superordinate clause is past-tensed, the relevant domain is Day(u); when the superordinate clause is future-tensed, the relevant domain is shiftable between Day(u) and Day(r).<sup>45</sup> Second, the complementarity of the distributions of *-qqau* and *-lauq* is not as clear as in matrix environments. That is, the use of *-lauq* within the domain of *-qqau* is sometimes, though not invariably, judged as acceptable. These points are summarized in Table 10 (the domain restriction of *-lauq*, which is not always enforced, is put between parentheses).

superordinate tense	subordinate tense	temporal relation	domain restriction
past	<i>-lauq</i>	Time(e <sub>sub</sub> ) < Time(r)	(Time(e <sub>sub</sub> ) ⊄ Day(u))
	<i>-qqau</i>		Time(e <sub>sub</sub> ) ⊆ Day(u)
Future	<i>-lauq</i>		(Time(e <sub>sub</sub> ) ⊄ Day(u) ∨ Time(e <sub>sub</sub> ) ⊄ Day(r))
	<i>-qqau</i>		Time(e <sub>sub</sub> ) ⊆ Day(u) ∨ Time(e <sub>sub</sub> ) ⊆ Day(r)

Table 10: The relative interpretation of past tenses within a causative clause serving as a complement clause

In the following, I elaborate on the presented generalizations, examining in order possible configurations that contrast in terms of (i) whether e<sub>sub</sub> is within Day(u), (ii) whether e<sub>sub</sub> is within Day(r), and (iii) whether the superordinate tense is past or future (Table 11).

<sup>45</sup> Complement clauses under a present-tensed clause will not be discussed.

configurations		possible scenarios
<b>superordinate tense: past</b>		
(A)	$\text{Time}(e_{\text{sub}}) \subseteq \text{Day}(u) \wedge$ $\text{Time}(e_{\text{sub}}) \subseteq \text{Day}(r)$	Time( $e_{\text{sub}}$ ) and Time( $r$ ) are both within today. ('X said today that Y happened today.')
(B)	$\text{Time}(e_{\text{sub}}) \subseteq \text{Day}(u) \wedge$ $\text{Time}(e_{\text{sub}}) \not\subseteq \text{Day}(r)$	(none)
(C)	$\text{Time}(e_{\text{sub}}) \not\subseteq \text{Day}(u) \wedge$ $\text{Time}(e_{\text{sub}}) \subseteq \text{Day}(r)$	Time( $e_{\text{sub}}$ ) and Time( $r$ ) are both within yesterday. ('X said yesterday that Y happened yesterday.')
(D)	$\text{Time}(e_{\text{sub}}) \not\subseteq \text{Day}(u) \wedge$ $\text{Time}(e_{\text{sub}}) \not\subseteq \text{Day}(r)$	Time( $e_{\text{sub}}$ ) is within the day before yesterday; Time( $r$ ) is within yesterday. ('X said yesterday that Y happened the day before yesterday.')
<b>superordinate tense: future</b>		
(E)	$\text{Time}(e_{\text{sub}}) \subseteq \text{Day}(u) \wedge$ $\text{Time}(e_{\text{sub}}) \subseteq \text{Day}(r)$	Time( $e_{\text{sub}}$ ) and Time( $r$ ) are both within today. ('X will say today that Y happened today.')
(F)	$\text{Time}(e_{\text{sub}}) \subseteq \text{Day}(u) \wedge$ $\text{Time}(e_{\text{sub}}) \not\subseteq \text{Day}(r)$	Time( $e_{\text{sub}}$ ) is within today; Time( $r$ ) is within tomorrow. ('X will say tomorrow that Y happened today.')
(G)	$\text{Time}(e_{\text{sub}}) \not\subseteq \text{Day}(u) \wedge$ $\text{Time}(e_{\text{sub}}) \subseteq \text{Day}(r)$	Time( $e_{\text{sub}}$ ) and Time( $r$ ) are both within tomorrow. ('X will say tomorrow that Y happened tomorrow.')
(H)	$\text{Time}(e_{\text{sub}}) \not\subseteq \text{Day}(u) \wedge$ $\text{Time}(e_{\text{sub}}) \not\subseteq \text{Day}(r)$	Time( $e_{\text{sub}}$ ) is within tomorrow; Time( $r$ ) is within the day after tomorrow. ('X will say the day after tomorrow that Y happened tomorrow.')

Table 11: Configurations for the past tenses within a causative clause serving as a complement clause

Let us begin with the cases where the superordinate tense is past. In configuration (A) (as described in Table 11), the use of *-qqau* is fully acceptable (the (a) sentences of (329)-(332)). The speaker's judgments on the use of *-lauq* are, on the other hand, unstable. My consultant judges (329b) and (330b) as acceptable, and (331b) and (332b) as unacceptable, although the relation

between Time(e<sub>sub</sub>), Time(u), and Time(r) is identical across all of these examples.

(329) Situation: You went to John's office **this afternoon**. He was not there. His secretary, Mary, said 'John left for Montreal **this morning**'.

a. miali uqa-qqau-juq      jaan aula-qqau-ngmat      ullaag  
Mary say-H.Past-Part.3s    John    leave-H.Past-Caus.3s    this.morning  
'Mary said that John left this morning.'

b. miali uqa-qqau-juq      jaan aula-lau-ngmat      ullaag  
Mary say-H.Past-Part.3s    John    leave-Past-Caus.3s    this.morning  
'Mary said that John left this morning.'

(330) Situation: You went ice-fishing with Susan **today**. You used your sister's boots without telling her. Your sister came back **this afternoon**. When she came home, you told her that you borrowed her boots.

a. angiqqaq-Ø-tillugu      uqau-ti-qqau-jara      atu-qqau-gakkit  
come.home-Pres-conj.3s    say-Tr-H.Past-Ind.1s/3s    use-H.Past-Caus.1s/3p  
kamalu-ngit  
boot-Poss.3s/p  
'When she came home, I told her that I used her boots.'

b. angiqqaq-Ø-tillugu      uqau-ti-qqau-jara      atu-lau-rakkit  
come.home-Pres-conj.3s    say-Tr-H.Past-Ind.1s/3s    use-Past-Caus.1s/3p  
kamal-ungit  
boot-Poss.3s/p  
When she came home, I told her that I used her boots.

(331) Situation: John said 'It rained this morning'.

a. jaan    uqa-qqau-juq      ullumi    iqalu-nnit      silalu-qqau-ngmat  
John    say-H.Past-Part.3s    today    Iqaluit-Loc    rain-H.Past-Part.3s  
'John said today that it had rained earlier in Iqaluit.'

b. #jaan    uqa-qqau-juq      ullumi    iqalu-nnit      silalu-lau-ngmat  
John    say-H.Past-Part.3s    today    Iqaluit-Loc    rain-Past-Part.3s  
(John said today that it had rained earlier in Iqaluit.)

(332) Situation: You asked Midori for lunch, but she said that she had already had lunch.

a. midori uqa-qqau-juq      niri-qqau-gami  
Midori say-H.Past-Part.3s    eat-H.Past-Caus.3Rs  
'Midori said that she had eaten.'

- b. #midori uqa-qqau-juq niri-lau-rami  
 Midori say-H.Past-Part.3s eat-Past-Caus.3Rs  
 (Midori said that she had eaten.)

As has been argued earlier, the blocking of a general tense within the domain of a corresponding hodiernal tense can be understood as the effect of a conversational implicature (or possibly some conventionalized principle originating in a conversational implicature) (3.3). It appears that this blocking effect can be weakened and become marginally violable in complement clauses in this configuration. (A similar phenomenon will be observed below regarding the use of the general future marker *-laaq*.)

There is no possible scenario where configuration (B) ( $e_{\text{sub}}$  is within Day(u) and outside Day(r)) is instantiated. This is because the superordinate past tense indicates that the time of the reported utterance/attitude precedes the time of the external utterance ( $\text{Time}(r) < \text{Time}(u)$ ), and the embedded past tense indicates that the time of  $e_{\text{sub}}$  precedes the time of the reported utterance/attitude ( $\text{Time}(e_{\text{sub}}) < \text{Time}(r) < \text{Time}(u)$ , in short); if  $e_{\text{sub}}$  occurs on the day of the external utterance, it also must be located within the day of the reported utterance/attitude.

In configurations (C), which is exemplified in (333) and (334), and (D), which is exemplified in (335) and (336), *-laaq* is the only option; when the superordinate tense is *-laaq*, the subordinate tense cannot be *-qqau*, because *-laaq* in the superordinate clause indicates that  $e_{\text{super}}$  occurs outside Day(u). (Recall that under the current analysis the domain of *-qqau* is fixed to Day(u) when the superordinate tense is past, as indicated in Table 10.)

- (333) a. #ippatsaq jaan uqa-lauq-tuq miali ningaungma-qqau-ngmat ullaakut  
 yesterday John say-Past-Part.3s Mary be.upset-H.Past-Caus.3s in.the.morning  
 (Yesterday John said that Mary had been upset in the morning.)

- b. ippatsaq jaan uqa-lauq-tuq miali ningaungma-lau-ngmat ullaakut  
 yesterday John say-Past-Part.3s Mary be.upset-Past-Caus.3s in.the.morning  
 ‘Yesterday John said that Mary had been upset in the morning.’

- (334) a. #ippatsaq jaan uqa-lauq-tuq tiki-qqau-gami ullaakut  
 Yesterday John say-Past-Part.3s arrive-H.Past-Caus.3Rs in.the.morning  
 (John said yesterday that he had arrived in the morning.)

Comment: ‘But, we are talking about yesterday. *-qqau-gami* is for today.’

- b. ippatsaq jaan uqa-lauq-tuq tiki-lau-rami ullaakut  
 yesterday John say-Past-Part.3s arrive-Past-Caus.3Rs in.the.morning  
 ‘John said yesterday that he had arrived in the morning.’

(335) Situation: You went ice-fishing with Susan **the day before yesterday**. You used your sister’s boots without telling her, because she was away. So, when she came home **yesterday**, you told her that you used her boots.

- a. #uqauti-lauq-tara atu-qqau-gakkit kamalu-ngit  
 say-Fut-Part.1s/3s use-H.Past-Caus.1s/3p boot-Poss.3s/p  
 (I told her that I used her boots.)
- b. uqauti-lauq-tara atu-lau-rakkit kamalu-ngit  
 say-Fut-Part.1s/3s use-Past-Caus.1s/3p boot-Poss.3s/p  
 ‘I told her that I used her boots’

(336) Situation: John left for Japan a week ago. You bumped into John yesterday. He said, ‘I came back yesterday’. So, yesterday, John said that he came back the day before yesterday.

- a. #ippatsaq jaan uqa-lauq-tuq ippatsaanit tiki-qqau-ngmat  
 yesterday John say-Past-Part.3s the.day.before arrive-H.Past-Caus.3Rs  
 (John said (yesterday) that he had arrived (the day before yesterday).)
- b. ippatsaq jaan uqa-lauq-tuq ippatsaanit tiki-lau-ngmat  
 yesterday John say-Past-Part.3s the.day.before arrive-Past-Caus.3Rs  
 ‘John said yesterday that he had arrived the day before yesterday.’

Let us now move on to cases where the superordinate tense is future. In configuration (E), parallel to the case of configuration (A) (see (329)-(332)), *-qqau* is fully acceptable, while the use of *-lauq* is marginal, sometimes judged acceptable and sometimes not ((337)-(340)).

(337) Situation: You will go to John’s office **this afternoon**. Amy told you that John left for Japan **this morning** so he won’t be there. So when you go to his office this afternoon, Mary, his secretary, will say that he left this morning.

- a. ullumi miali uqar-niaq-tuq jaan aulla-qqau-ngmat ullaag  
 today Mary say-H.Fut-Part.3s John leave-H.Past-Caus.3s this.morning  
 ‘Today Mary will say that John left this morning.’
- b. ullumi miali uqar-niaq-tuq jaan aulla-lau-ngmat ullaag  
 today Mary say-H.Fut-Part.3s John leave-Past-Caus.3s this.morning  
 ‘Today Mary will say that John left this morning.’

(338) Situation: You need to see John around noon today. It is 9:00am. You phoned John, and Mary, his wife, answered. You say, ‘I will come by around noon to see John’. She says, ‘he will leave at 11:00am. So, if you come around noon, I will say that he has left.’

- a. miali uqar-niaq-tuq jaan aulla-qqau-ngmat  
 Mary say-H.Fut-Part.3s John leave-H.Past-Caus.3s  
 ‘Mary will say that John left.’
- b. #miali uqar-niaq-tuq jaan aulla-lau-ngmat  
 Mary say-H.Fut-Part.3s John leave-Past-Caus.3s  
 (Mary will say that John left.)

(339) Situation: You went ice-fishing with Susan **today**. You used your sister’s boots without telling her. Your sister will come back **tonight**.

- a. unnuk uqau-ti-niaq-para atu-qqau-gakkit kamalu-ngit  
 tonight say-Tr-H.Fut-Ind.1s/3s use-H.Past-Caus.1s/3p boot-Poss.3s/p  
 ‘Tonight I will tell her that I used her boots (today).’
- b. unnuk uqau-ti-niaq-para atu-lau-rakkit kamalu-ngit  
 tonight say-Tr-H.Fut-Ind.1s/3s use-Past-Caus.1s/3p boot-Poss.3s/p  
 ‘Tonight I will tell her that I used her boots (today).’

(340) Situation: You invited Alana for lunch, but she already had lunch. You say, ‘OK, I will ask Midori.’ Alana says, ‘I just saw her in the dining room. She will say that she has eaten, too.’

- a. Midori uqar-niaq-tuq niri-qqau-gami  
 Midori say-H.Fut-Part.3s eat-H.Past-Caus.3Rs  
 ‘Midori will say that she has eaten.’
- b. #midori uqar-niaq-tuq niri-lau-rami  
 Midori say-H.Fut-Part.3s eat-H.Past-Caus.3Rs  
 (Midori will say that she has eaten.)

In configurations (F) ( $e_{sub}$  falls within Day(u) and outside Day(r)) and (G) ( $e_{sub}$  falls outside Day(u) and within Day(r)), *-lauq* and *-qqau* are both possible. This implies that the domain of *-qqau* can either be Day(u) or Day(r). (341) and (342) illustrate scenarios under configuration (F).

(341) Situation: You will go ice-fishing with Susan **today**. You will use your sister’s boots without telling her, because she is away until tomorrow. So, when she comes home **tomorrow**, you will tell her that you used her boots.

- a. qauppat uqau-ti-laaq-tara atu-qqau-gakkit kamalu-ngit  
 tomorrow say-Tr-Fut-Part.1s/3s use-H.Past-Caus.1s/3p boot-Poss.3s/p  
 ‘Tomorrow I will tell her that I used her boots (today).’
- b. qauppat uqau-ti-laaq-tara atu-lau-rakkit kamalu-ngit  
 tomorrow say-Tr-Fut-Part.1s/3s use-Past-Caus.1s/3p boot-Poss.3s/p  
 ‘Tomorrow I will tell her that I used her boots (today).’

(342) Situation: You will go to John’s office **tomorrow afternoon**. John left for Japan **this morning**. So, if you go to his office tomorrow, Mary (his secretary) will say that he left.

- a. qauppat miali uqa-laaq-tuq jaan aula-qqau-ngmat  
 tomorrow Mary say-Fut-Part.3s John leave-H.Past-Caus.3s  
 ‘Tomorrow Mary will say that John left.’
- b. qauppat miali uqa-laaq-tuq jaan aula-lau-ngmat  
 tomorrow Mary say-Fut-Part.3s John leave-Past-Caus.3s  
 ‘Tomorrow Mary will say that John left.’

(343) and (344), likewise, illustrate scenarios under configuration (G).

(343) Situation: You will go ice-fishing with Susan **tomorrow**. You will use your sister’s boots without telling her, because she is away until tomorrow night. So, when she comes home **tomorrow night**, you will tell her that you used her boots.

- a. qauppat uqau-ti-laaq-tara atu-qqau-gakkit kamalu-ngit  
 tomorrow say-Tr-Fut-Part.1s/3s use-H.Past-Caus.1s/3p boot-Poss.3s/p  
 ‘Tomorrow I will tell her that I used her boots.’
- b. qauppat uqau-ti-laaq-tara atu-lau-rakkit kamalu-ngit  
 tomorrow say-Tr-Fut-Part.1s/3s use-Past-Caus.1s/3p boot-Poss.3s/p  
 ‘Tomorrow I will tell her that I used her boots.’

(344) Situation: You will go to John’s office tomorrow afternoon. John will leave for Japan **tomorrow morning**. So, when you go to his office **tomorrow afternoon**, Mary (his secretary) will say that he left.

- a. qauppat miali uqa-laaq-tuq jaan aula-qqau-ngmat  
 tomorrow Mary say-Fut-Part.3s John leave-H.Past-Caus.3s  
 ‘Tomorrow Mary will say that John left.’
- b. qauppat miali uqa-laaq-tuq jaan aula-lau-ngmat  
 tomorrow Mary say-Fut-Part.3s John leave-Past-Caus.3s  
 ‘Tomorrow Mary will say that John left.’

In configuration (H) ( $e_{\text{sub}}$  is neither within Day(u) or Day(r)), finally, *-lauq* is the only possible option (345).

(345) Situation: You will go ice-fishing with Susan **tomorrow**. You will use your sister's boots without telling her, because she is away until the day after tomorrow. So, when she comes home **the day after tomorrow**, you will tell her that you used her boots.

- a. #uqau-ti-laaq-tara     atu-qqau-gakkit     kamalu-ngit  
 say-Tr-Fut-Part.1s/3s   use-H.Past-Caus.1s/3p   boots-Poss.3s/p  
 ((the day after tomorrow) I will tell her that I used her boots.)
- b. uqau-ti-laaq-tara     atu-lau-rakkit     kamalu-ngit  
 say-Tr-Fut-Part.1s/3s   use-Past-Caus.1s/3p   boot-Poss.3s/p  
 '(the day after tomorrow) I will tell her that I used her boots.'

(346) Situation: You will go to John's office the day after tomorrow. John will leave for Japan **tomorrow**. So, when you go to his office **the day after tomorrow**, Mary (his secretary) will say that he left.

- a. #miali uqa-laaq-tuq     jaan     aulla-qqau-ngmat  
 Mary   say-Fut-Part.3s   John   leave-H.Past-Caus.3s  
 '(the day after tomorrow) Mary will say that John left.'
- b. miali uqa-laaq-tuq     jaan     aulla-lau-ngmat  
 Mary   say-Fut-Part.3s   John   leave-Past-Caus.3s  
 '(the day after tomorrow) Mary will say that John left.'

All configurations described in Table 11 have now been examined, with the results endorsing the claims (i) that the domain of *-qqau* occurring in a complement clause is fixed to Day(u) under a past-tensed superordinate clause but is shiftable between Day(u) and Day( $e_{\text{super}}$ ) under a future-tensed superordinate clause, and (ii) that the use of *-lauq* is not always blocked within the domain of *-qqau*.

### 5.3.3.3 The opposition of *-laaq* and *-niaq* in complement clauses

Let us now turn to the opposition of *-laaq* and *-niaq* in complement clauses. In Chapter 4, I argued (i) that *-laaq* indicates a general future tense, (ii) *-niaq* is used either as a marker of a near future tense, which is used when the described eventuality occurs within the day of utterance, or as a marker of a future-oriented modal of expectation, and (iii) the use of *-laaq* is blocked when

the use of *-niaq* as a near-future maker is possible (4.4.2). In other words, the opposition between *-laaq* and *-niaq* is like the one between *-lauq* (general past) and *-qqau* (hodiernal past), except that *-niaq*, in contrast to *-qqau*, has a use as a modal marker and can be used to refer to an eventuality that does not occur within the day of utterance.

In the previous section, it was demonstrated that the temporal domain of *-qqau* occurring in a complement clause is fixed to the day of the external utterance, Day (u), when the superordinate clause is past-tensed, but it may be shifted to the day of the reported utterance/attitude, Day (r), when the superordinate clause is future-tensed. The distribution of *-niaq* in a complement clause is simpler; it is shiftable between the day of the external utterance and the day of the reported utterance/attitude, irrespective of the superordinate tense (Table 12; the domain restriction of *-laaq* is put in parenthesis to indicate its unstable status).

superordinate tense	subordinate tense	temporal relation	domain restriction
(irrelevant)	<i>-laaq</i>	Time(r) < Time(e <sub>sub</sub> )	(Time(e <sub>sub</sub> ) ⊄ Day(u) ∨ Time(e <sub>sub</sub> ) ⊄ Day(r))
	<i>-niaq</i>		Time(e <sub>sub</sub> ) ⊆ Day(u) ∨ Time(e <sub>sub</sub> ) ⊆ Day(r)

Table 12: The relative interpretation of future tenses within a causative clause serving as a complement clause

Again, I will examine the possible configurations in turn (Table 13).

	<b>Configurations</b>	<b>possible scenarios</b>
<b>superordinate tense: past</b>		
(I)	$\text{Time}(e_{\text{sub}}) \subseteq \text{Day}(u) \wedge$ $\text{Time}(e_{\text{sub}}) \subseteq \text{Day}(r)$	Time( $e_{\text{sub}}$ ) and Time( $r$ ) are both within today. ('X said today that Y would happen today.')
(J)	$\text{Time}(e_{\text{sub}}) \subseteq \text{Day}(u) \wedge$ $\text{Time}(e_{\text{sub}}) \not\subseteq \text{Day}(r)$	Time( $e_{\text{sub}}$ ) is within yesterday; Time( $r$ ) is within today. ('X said yesterday that Y would happen today.')
(K)	$\text{Time}(e_{\text{sub}}) \not\subseteq \text{Day}(u) \wedge$ $\text{Time}(e_{\text{sub}}) \subseteq \text{Day}(r)$	Time( $e_{\text{sub}}$ ) and Time( $r$ ) are both within yesterday. ('X said yesterday that Y would happen yesterday.')
(L)	$\text{Time}(e_{\text{sub}}) \not\subseteq \text{Day}(u) \wedge$ $\text{Time}(e_{\text{sub}}) \not\subseteq \text{Day}(r)$	Time( $e_{\text{sub}}$ ) is within yesterday; Time( $r$ ) is within the day before yesterday. ('X said the day before yesterday that Y would happen yesterday.')
<b>superordinate tense: future</b>		
(M)	$\text{Time}(e_{\text{sub}}) \subseteq \text{Day}(u) \wedge$ $\text{Time}(e_{\text{sub}}) \subseteq \text{Day}(r)$	Time( $e_{\text{sub}}$ ) and Time( $r$ ) are both within today. ('X will say today that Y will happen today.')
(N)	$\text{Time}(e_{\text{sub}}) \subseteq \text{Day}(u) \wedge$ $\text{Time}(e_{\text{sub}}) \not\subseteq \text{Day}(r)$	(none)
(O)	$\text{Time}(e_{\text{sub}}) \not\subseteq \text{Day}(u) \wedge$ $\text{Time}(e_{\text{sub}}) \subseteq \text{Day}(r)$	Time( $e_{\text{sub}}$ ) and Time( $r$ ) are both within tomorrow. ('X will say tomorrow that Y will happen tomorrow.')
(P)	$\text{Time}(e_{\text{sub}}) \not\subseteq \text{Day}(u) \wedge$ $\text{Time}(e_{\text{sub}}) \not\subseteq \text{Day}(r)$	Time( $e_{\text{sub}}$ ) is within the day after tomorrow; Time( $r$ ) is within tomorrow. ('X will say tomorrow that Y will happen the day after tomorrow.')

Table 13: Configurations for future tenses within a causative clause serving as a complement clause

Let us again begin with the cases where the superordinate tense is past. In configuration (I),  $e_{\text{sub}}$  is both within Day( $u$ ) and Day( $r$ ) and the hodiernal tense is fully acceptable. On the other hand, the general tense is marginal; it is sometimes judged acceptable and sometimes not ((347)-(349)). This is analogous to configurations (A) ((329)-(332)) and (E) ((337)-(340)) discussed above.

(347) Situation: You are talking to John about Amy, who just got back from Iqaluit. You met her **today**. You say, ‘She said that she would call you **tonight**.’

- a. uqa-qqau-juq      illin-nut    uqaalar-nia-rami      unnukkut  
 say-H.Past-Part.3s    you-All    phone-Fut-Caus.3Rs    at.night  
 ‘She said that she would call you tonight.’
- b. uqa-qqau-juq      illin-nut    uqaala-laa-rami      unnukkut  
 say-H.Past-Part.3s    you-All    phone-Fut-Caus.3Rs    at.night  
 ‘She said that she would call you tonight.’

(348) Situation: You walk Sunny every morning. But you are not feeling well today, so you asked Jurgen to do it. He said, ‘Sure. I am going to walk Sunny **this afternoon**.’ You went to see a doctor and came back home around noon. You say to Jurgen, ‘Jurgen, this morning you said that you were going to walk Sunny **this afternoon**. Did you?’ Jurgen said ‘Yes I did’.

- a. ullaag            uqa-qqau-jutit      pisu-raja-qatigi-nia-raviuk      sunny  
 this.morning    say-H.Past-Part.2s    walk-would-with-H.Fut-Caus.2s/3s    Sunny  
 ‘This morning you said that you would walk Sunny (this afternoon).’
- b. #ullaag            uqa-qqau-jutit      pisu-rajaa-qatigi-laa-raviuk      sunny  
 this.morning    say-H.Past-Part.2s    walk-would-with-Fut-Caus.2s/3s    Sunny  
 (This morning you said that you would walk Sunny (this afternoon).)

(349) Situation: (John is your boss and Mary is his secretary.) This morning you went to John’s office but he was not there. Mary told you that he would come back shortly.

- a. miali uqa-qqau-juq      jaan    qai-gi-**nia-ngmat**  
 Mary say-H.Past-Pary.3s    John come-again-Fut-Caus.3s  
 ‘Mary said that John would come back shortly.’
- b. #miali uqa-qqau-juq      jaan    qai-gi-**laa-ngmat**  
 Mary say-H.Past-Pary.3s    John come-again-Fut-Caus.3s  
 (Mary said that John would come back shortly.)

In both configurations (J), which is exemplified in (350) and (351) ( $e_{\text{sub}}$  is within Day(u) and outside Day(r)) and (K), which is exemplified in (352) and (353)) ( $e_{\text{sub}}$  is outside Day(u) and within Day(r)), the use of *-laaq* is fully acceptable, which implies that the domain of *-niaq* is shiftable in a complement clause under a past tense. If the domain of *-niaq* was fixed to the day of utterance, then the use of *-laaq* would be blocked or marginal in configuration (J); conversely, if the domain of *-niaq* was fixed to the day of the reported utterance/attitude, then the use of *-laaq* would be blocked or marginal in configuration (K).

(350) Situation: **Yesterday**, you talked to Mary on the phone. She said ‘I will call John tomorrow’. Now you are telling John that she would call him **today**.

- a. uqa-lauq-tuq ilin-nut uqaalar-nia-rami  
say-Past-Part.3s you-All phone-H.Fut-Caus.3Rs  
‘She said that she would call you (today).’
- b. uqa-lauq-tuq ilin-nut uqaala-laa-rami  
say-Past-Part.3s you-All phone-Fut-Caus.3Rs  
‘She said that she would call you (today).’

(351) Situation: You went to John’s office **yesterday**. He was not there. His secretary, Mary, said ‘John left for Montreal this morning. He will come back tomorrow’. So, he will come back **today**.

- a. ippatsaq miali uqa-lauq-tuq jaan angiqqar-nia-ngmat  
yesterday Mary say-Past-Part.3s John come.back-H.Fut-Caus.3s  
‘Yesterday Mary said that John would come back (today).’
- b. ippatsaq miali uqa-lauq-tuq jaan angiqqa-laa-ngmat  
yesterday Mary say-Past-Part.3s John come.back-Fut-Caus.3s  
‘Yesterday Mary said that John would come back (today).’

(352) Situation: **Yesterday**, you talked to Mary on the phone. She said ‘I will call John tonight’. Now you are telling John that she would have called him **last night**.

- a. uqa-lauq-tuq ilin-nut uqaalar-nia-ngmat  
say-Past-Part.3s you-All phone-H.Fut-Caus.3Rs  
‘She said that she would call you (at night).’
- b. uqa-lauq-tuq ilin-nut uqaala-laa-ngmat  
say-Past-Part.3s you-All phone-Fut-Caus.3Rs  
‘She said that she would call you (at night).’

(353) Situation: You went to John’s office **yesterday**. He was not there. His secretary, Mary, said ‘John left for Montreal this morning. He will come back tonight’. So, he came back **last night**.

- a. ippatsaq miali uqa-lauq-tuq jaan angiqqar-nia-ngmat  
yesterday Mary say-Past-Part.3s John come.back-H.Fut-Caus.3s  
‘Yesterday Mary said that John would come back (at night).’
- b. ippatsaq miali uqa-lauq-tuq jaan angiqqa-laa-ngmat  
yesterday Mary say-Past-Part.3s John come.back-Fut-Caus.3s  
‘Yesterday Mary said that John would come back (at night).’

In configuration (L), which is exemplified in (354) and (355), *-laaq* is fully acceptable. I do not

have data to demonstrate that *-niaq* as a tense marker is blocked in this configuration, but it is rather natural to expect it to be the case,  $e_{\text{sub}}$  being both outside Day (u) and Day (r) (the occurrences of *-niaq* in (354a) and (355a) are thus to be regarded as modal markers; see the discussion below regarding configuration (P)).

(354) Situation: **The day before yesterday**, you talked to Mary on the phone. She said ‘I will call John tomorrow’. Now you are telling John that she would have called him **yesterday**.

- a. miali uqa-lauq-tuq illin-nut jaan uqaalar-nia-Ø-ngmat  
 Mary say-Past-Part.3s you-All John phone-Epis-Pres-Caus.3s  
 ‘Mary said (the day before yesterday) that John would call you (yesterday).’
- b. miali uqa-lauq-tuq illinnut jaan uqaala-laa-ngmat  
 Mary say-Past-Part.3s you-All John phone-Fut-Caus.3s  
 ‘Mary said (the day before yesterday) that John would call you (yesterday).’

(355) Situation: The day before yesterday, Jurgen said, “I will walk Sunny tomorrow”. You say, ‘Jurgen, **the day before yesterday**, you said that you would walk Sunny **the next day**. Did you?’

- a. uqa-lauq-tutit pisu-raja-qatigi-nia-Ø-raviuk sunny  
 say-Past-Part.2s walk-would-with-Epis-Pres-Caus.2s/3s Sunny  
 ‘You said (the day before yesterday) that you would walk Sunny (the next day).’
- b. uqa-lauq-tutit pisu-raja-qatigi-laa-raviuk sunny  
 say-Past-Part.2s walk-would-with-Fut-Caus.2s/3s Sunny  
 ‘You said (the day before yesterday) that you would walk Sunny (the next day).’

Let us now turn to cases where the superordinate tense is future (as stated above, the domains of *-niaq* and *-laaq* are not affected by the superordinate tense). Configuration (M) is analogous to configuration (I) in that  $e_{\text{sub}}$  is both within Day(u) and Day(r)); here too, *-niaq* is fully acceptable while *-laaq* is marginal.

(356) Situation: This afternoon, you will meet Mary, who just came back from Iqaluit. Now you are talking to John. He didn’t know that Mary is back. You say, ‘I will see her this afternoon. I am sure she wants to see you, too. She will say that she will call you tonight’.

- a. miali uqar-niaq-tuq illin-nut uqaalar-nia-ngmat  
 Mary say-H.Fut-Part.3s you-All call-H.Fut-Caus.3Rs  
 ‘Mary will say that she will call you.’

- b. miali uqar-niaq-tuq illin-nut uqaala-laa-ngmat  
 Mary say-H.Fut-Part.3s you-All call-Fut-Caus.3Rs  
 ‘Mary will say that she will call you.’
- (357) a. ullumi jurgen uqar-niaq-tuq sini-gasua-saali-nia-rami unnukkut  
 today Jurgen say-H.Fut-Part.3s sleep-try-early-H.Fut-Caus.3Rs at.night  
 ‘Today Jurgen will say that he will go to bed early tonight.’
- b. ullumi jurgen uqar-niaq-tuq sini-gasua-saali-laa-rami unnukkut  
 today Jurgen say-H.Fut-Part.3s sleep-try-early-Fut-Caus.3Rs at.night  
 ‘Today Jurgen will say that he will go to bed early tonight.’
- (358) Situation: You are supposed to meet Amy this afternoon. She is planning to go out with her boyfriend tonight.
- a. ullumi amy uqar-niaq-tuq ani-nia-rami  
 today Amy say-H.Fut-Part.3s go.out-H.Fut-Caus.3Rs  
 ‘Today Amy will say that she will go out.’
- b. #ullumi amy uqar-niaq-tuq ani-laa-rami  
 today Amy say-H.Fut-Part.3s go.out-Fut-Caus.3Rs  
 ‘Today Amy will say that she will go out.’
- (359) Situation: Today Jurgen will say that he will walk Sunny this afternoon.
- a. jurgen uqar-niaq-tuq pisu-raja-qatigi-nia-ngmauk sunny  
 Jurgen say-H.Fut-Part.3s walk-would-with-H.Fut-Caus.3Rs/3s Sunny  
 ‘Jurgen will say that he will walk Sunny.’
- b. #jurgen uqar-niaq-tuq pisu-raja-qatigi-laa-ngmauk sunny  
 Jurgen say-H.Fut-Part.3s walk-would-with-Fut-Caus.3Rs/3s Sunny  
 ‘Jurgen will say that he will walk Sunny.’

Configuration (N) ( $e_{\text{sub}}$  is within Day(u) and outside Day(r)) like configuration (B) above, cannot be realized. This is because the superordinate future tense indicates that the time of the external utterance precedes the time of the reported utterance/attitude (i.e.,  $\text{Time}(u) < \text{Time}(r)$ ), and the embedded future tense indicates that the time of the reported utterance/attitude precedes the time of  $e_{\text{sub}}$  ( $\text{Time}(u) < \text{Time}(r) < \text{Time}(e_{\text{sub}})$ , in short); if  $e_{\text{sub}}$  occurs on the day of the external utterance, Day(u), it also must be located within the day of the reported utterance/attitude, Day(r).

In configuration (O) ( $e_{\text{sub}}$  is within Day(u) and outside Day(r)), *-laaq* is fully acceptable, and this indicates that the domain of *-niaq* may be set to the day of the external utterance.

(360) Situation: **Tomorrow morning** Jurgen will say ‘I’m going to walk Sunny this afternoon’. So, he will walk Sunny **tomorrow afternoon**.

- a. qauppat uqa-laaq-tuq pisu-raja-qatigi-ngmauk sunny  
 tomorrow say-Fut-Part.3s walk-would-with-H.Fut-Caus.3Rs/3s Sunny  
 ‘Tomorrow he will say that he will walk Sunny.’
- b. qauppat uqa-laaq-tuq pisu-raja-qatigi-laa-ngmauk sunny  
 tomorrow say-Fut-Part.3s walk-would-with-Fut-Caus.3Rs/3s Sunny  
 ‘Tomorrow he will say that he will walk Sunny.’

(361) Situation: John is your boss. Whenever you go to his office, he is not there and his secretary, Mary, says that he will come back shortly. **Tomorrow** you have to go to his office again. You say ‘Mary will say again that he will come back **shortly**’.

- a. qauppat miali uqa-laa-mi-juq jaan qai-gi-nia-ngmat  
 tomorrow Mary say-Fut-again-Part.3s John come-again-H.Fut-Caus.3s  
 ‘Tomorrow Mary will say again that John will come back shortly.’
- b. qauppat miali uqa-laa-mi-juq jaan qai-gi-laa-ngmat  
 tomorrow Mary say-Fut-again-Part.3s John come-again-Fut-Caus.3s  
 ‘Tomorrow Mary will say again that John will come back shortly.’

The remaining question is: can the domain of *-niaq* be set to Day(r) too (in other words, is its domain restriction ‘Time ( $e_{\text{sub}}$ )  $\subseteq$  Day(u)’ or ‘Time ( $e_{\text{sub}}$ )  $\subseteq$  Day(u)  $\vee$  Time ( $e_{\text{sub}}$ )  $\subseteq$  Day(r)’)? One may suspect that it cannot, considering that the domain of *-qqau* is fixed to Day(u) in a complement clause under a past tense, as it is reasonable to expect that ‘a hodiernal past under a past tense’ and ‘a hodiernal future under a future tense’ share a common property.

To settle this issue, we need to determine whether *-niaq* as a tense marker may occur in this configuration. In Section 4.4.2, it was demonstrated that *-niaq* occurring in an independent clause that describes an eventuality in a future time beyond the day of utterance is a modal, based on the following reasoning.

(362) (i) If *-niaq* is a tense marker, then a sentence of the form ‘P-*niaq* or ¬P-*niaq*’ must be true (cf. *It will rain or it will not rain.*).

(ii) If *-niaq* is a modal, then a sentence of the form ‘P-*niaq* or ¬P-*niaq*’ may be false. (cf. *It is certain to rain or it is certain to not be raining.*)

(363) Situation: Every morning John has either coffee or tea, but not both.

a. (uttered in the early morning, before John wakes up)

jaan kaapi-tur-**niaq**-tuq                      **ullaq**                      uvvalunniit  
 John coffee-consume-*niaq*-Part.3s    this.morning    or  
 tii-tur-**niaq**-tuq                              **ullaq**  
 tea-consume-*niaq*-Part.3s    this.morning

‘John will have coffee today or John will have tea today.’

b. #jaan kaapi-tur-**niaq**-tuq                      **qauppat**                      uvvalunniit  
 John coffee-consume-*niaq*-Part.3s    tomorrow    or  
 tii-tur-**niaq**-tuq                                      **qauppat**  
 tea-consume-*niaq*-Part.3s    tomorrow

(John will have coffee tomorrow or John will have tea tomorrow.)

A similar test can be applied to *-niaq* occurring in a complement clause. My consultant judges (364a) as true; this indicates that *-niaq* as a tense marker may occur in Configuration (O), which in turn implies that the domain of *-niaq* is shiftable in a complement clause under a future tense.

(364) Situation: John drinks either coffee or tea on Friday afternoon. Mary is going to be his new secretary. Tomorrow, which happens to be *Friday*, is her first day. Tomorrow morning, at John’s office, John’s previous secretary, Emily, will teach her what to do. One thing John’s secretary must to do is to serve him drinks. Emily will say to Mary ‘John drinks coffee or tea on Friday afternoon. Sometimes he asks for coffee, sometimes he asks for tea, so you cannot tell which until he actually asks you. So on Fridays, you have to make sure that you have both tea leaf and coffee beans ready’.

a. qauppat    Emily uqa-laaq-tuq    jaan    kaapi-tur-nia-ngmat  
 tomorrow    Emily say-Fut-Part.3s    John    coffee-consume-H.Fut-Caus.3s  
unnusakkut                      uvvalunnit    jaan    tii-tur-nia-ngmat  
 in.the.afternoon    or                      John    tea-consume-H.Fut-Caus.3s  
unnusakkut  
 in.the.afternoon

‘Tomorrow Emily will say that John will drink coffee in the afternoon or John will drink tea in the afternoon.’

- b. qauppat Emily uqa-laaq-tuq jaan kaapi-tu-laa-ngmat  
 tomorrow Emily say-Fut-Part.3s John coffee-consume-Fut-Caus.3s

unnusakkut uvvalunnit jaan tii-tu-laa-ngmat  
 in.the.afternoon or John tea-consume-Fut-Caus.3s  
unnusakkut  
 in.the.afternoon

‘Tomorrow Emily will say that John will drink coffee in the afternoon or John will drink tea in the afternoon.’

In Configuration (P), it is expected that only *-laaq*, but not *-niaq* (as a tense marker) can be used; this is borne out by the following data; (365a) is judged as false, implying that the occurrence of *-niaq* in it can only be a modal marker.

(365) Situation: John drinks either coffee or tea on Friday afternoon. Mary is going to be his new secretary. Tomorrow, which happens to be *Thursday*, is her first day. Tomorrow morning, at John’s office, John’s previous secretary, Emily, will teach her what to do. One thing John’s secretary must do is to serve him drinks. Emily will say to Mary ‘John drinks coffee or tea on Friday afternoon. Sometimes he asks for coffee, sometimes he asks for tea, so you cannot tell which until he actually asks you. So on Fridays, you have to make sure that you have both tea leaf and coffee beans ready’.

- a. #qauppat Emily uqa-laaq-tuq jaan kaapi-tur-nia-Ø-ngmat  
 tomorrow Emily say-Fut-Part.3s John coffee-consume-Epis-Caus.3s  
Friday-mit uvvalunnit jaan tii-tur-nia-Ø-ngmat  
 Friday-Loc or John tea-consume-Epis-Caus.3s  
Friday-mit  
 Friday-Loc

(Tomorrow Emily will say that John will drink coffee on Friday or John will drink tea on Friday.)

- b. qauppat Emily uqa-laaq-tuq jaan kaapi-tu-laa-ngmat  
 tomorrow Emily say-Fut-Part.3s John coffee-consume-Fut-Caus.3s  
Friday-mit uvvalunnit jaan tii-tu-laa-ngmat  
 Friday-Loc or John tea-consume-Fut-Caus.3s  
Friday-mit  
 Friday-Loc

‘Tomorrow Emily will say that John will drink coffee in the afternoon or John will drink tea in the afternoon.’

### 5.3.4 Section Summary

This section discussed the interpretation of tenses in the causative clause. The key findings are as follows.

Tenses within a causative clause receive either the absolute or the relative interpretation depending on the semantic function of the clause. Within a causative clause as an adjunct clause of reason, the tense is interpreted relative to the time of utterance. Within a causative clause as an adjunct clause of purpose, the tense is interpreted relative to the time of the superordinate eventuality. Within a causative clause as a complement clause, the tense is interpreted relative to the time of the reported utterance/attitude.

Generally, within causative clauses general tenses cannot be used within the domains of their corresponding hodiernal tenses. Within causative clauses as complement clauses, however, this blocking effect is weaker.

Within causative clauses as an adjunct clause of purpose, the domain relevant to the choice between the hodiernal and general future tenses (a) is fixed to the day of the  $e_{\text{super}}$  when the superordinate tense is past, but (b) is shiftable between the day of  $e_{\text{super}}$  and the day of utterance when the superordinate tense is future.

Within causative clauses as a complement clause, the domain relevant to the choice between hodiernal and general tenses (a) is fixed to the day of utterance when both the subordinate and superordinate tenses are past, but (b) is shiftable between the day of utterance and the day of the reported utterance/attitude otherwise.

## 5.4 Conditional clauses

This section examines interpretations of tenses occurring in conditional clauses, which are

characterized by the conditional mood, and have a similar function as an English *if*-clause serving as the antecedent of a conditional construction.<sup>46</sup> (Note that here the term conditional construction refers to a complex sentence of the form ‘if P, then Q’, rather than just ‘if P’.) A conditional construction in SB, where a conditional clause serves as the antecedent, is exemplified below.

- (366) niri-niaq-tunga    kaak-Ø-kuma  
 eat-H.Fut-Part.1s    hungry-Pres-Cond.1s  
 ‘I will eat if I am hungry.’

To illustrate how tenses in SB conditional clauses are interpreted, it would probably be useful to make a comparison with the case of English *if*-clauses (Iatridou, 2000, among others). English, like many other European languages, has two types of conditional constructions:

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<sup>46</sup> For some other dialects of the Inuit, it has been reported that a conditional clause has two functions, serving either as a ‘when’-clause and ‘if’-clause (Fortescue, 1984 for West Greenlandic; Nagai, 2006 for North Alaskan Iñupiaq).

- (i) a. apuuk-kuni    niri-guma-ssa-aq  
 arrive-Cond.3Rs    eat-want-future-Ind.3s  
 ‘When he arrives he will want to eat.’  
 (West Greenlandic, Fortescue, 1984:56, glosses slightly modified)
- b. pakasa-anna-rukku    pissanganar-niru-vuq  
 surprise-just-Cond.2s/3s    be.exciting-more-Ind.3s  
 ‘If you just surprise him it will be more exciting.’  
 (West Greenlandic, Fortescue, 1984:66 glosses slightly modified)

A SB conditional clause, however, cannot be used to link two clauses that describe simultaneously occurring eventualities but do not stand in the conditional relation. In such cases, a conjunctive clause is used instead.

- (ii) Situation: Your friend, Janet, will arrive by train from Hamilton at 2:00pm. The weather forecast says that it will rain all afternoon tomorrow. So, Janet will arrive in Toronto when it is raining.
- a. #qauppat    janet    tiki-laaq-tuq    silaluk-Ø-pat  
 tomorrow    Janet    arrive-Fut-Part.3s    rain-Pres-Cond.3s  
 ‘Tomorrow Janet will arrive when it is raining.’
- b. qauppat    janet    tiki-laaq-tuq    silaluk-Ø-tillugu  
 tomorrow    Janet    arrive-Fut-Part.3s    rain-Pres-Conj.3s  
 ‘Tomorrow Janet will arrive when it is raining.’

It is thus unnecessary to postulate a second temporal meaning for the SB conditional clause (See also the discussion of the putative temporal interpretation of a causative clause in Section (5.3, (300))).

non-counterfactual (indicative) conditionals, and counterfactual (subjunctive) conditionals. A non-counterfactual conditional has an antecedent describing a situation consistent with the known facts, and a counterfactual conditional has an antecedent describing a situation contrary to the known facts. Following Iatridou (2000), I take the view that there cannot be a ‘future counterfactual (conditional)’, as the future is not conceptualized as fact.

In a non-counterfactual *if*-clause, a present form is used to describe a state of affairs in the present time or in the future, as in (367), and a past form is used to describe a state of affairs in the past, as in (368).

(367) a. If he takes this syrup, he would get better.

b. If he is smart, he must be rich.

(368) a. If he took this syrup, he must feel better now.

b. If he took the train at 7 pm, he will be here by 9 pm.

The putative future-tense marker *will* does not occur in the *if*-clause of a non-counterfactual conditional.

In a counterfactual *if*-clause, on the other hand, a past form is used to describe a state of affairs in the present time, as in (369), and a pluperfect form is used to describe a state of affairs in the past, as in (370).

(369) If he were smart, he would be rich. (In reality, he is not smart.)

(370) If he had been smart, he would have been rich. (In reality, he was not smart.)

Neither present nor future form occurs in the *if*-clause of a counterfactual conditional. Past tenses occurring in the *if*-clause of a counterfactual conditional are sometimes called a ‘fake past’, because it does not have the function to locate an eventuality in the past (relative to the reference time) and only indicates counterfactuality.

The choice and interpretation of tenses in SB conditional clauses is similar to those in English *if*-clause in certain respects, but different in others. In the following, I will first discuss present-tensed conditional clauses, and then past-tensed ones.

#### 5.4.1 Present-tensed conditional clauses

In a SB conditional clause, regardless of whether it describes a counterfactual condition or not, the present tense can be used to refer to an eventuality in the present or future (relative to the utterance time). (371) exemplifies present-tensed non-counterfactual conditional clauses describing a present state of affairs.

- (371) a. jaan maanna angiqqaq-sima-Ø-guni, uqaalauti kiu-gajaq-tanga  
 John now come.home-Perf-Pres-Cond.3Rs phone answer-would-Part.3s/3s  
 ‘If John is home now, he will answer the phone.’
- b. qanni-Ø-runi sila-mi(t) maanna niglasuk-Ø-tuq  
 snow-Pres-Cond.3Rs outside-Loc now be.cold-Pres-Part.3s  
 ‘If it is snowing, it is cold outside.’

(372) exemplifies present-tensed counterfactual conditional clauses describing a present state of affairs.

- (372) a. igvi-u-Ø-guma quviasu-gajaq-Ø-tunga  
 you-be-Cond.1s happy-would-Pres-Part.1s  
 ‘If I were you, I would be happy.’
- b. uqalima-gunna-Ø-ruma Chinese-titut quviasu-gajaq-Ø-tunga  
 speak-can-Pres-Cond.1s Chinese-like happy-would-Pres-Part.1s  
 ‘If I could/was able to speak Chinese, I would be happy.’

The predicate of the consequent of a counterfactual conditional must contain the modal marker *-gajaq*.<sup>47</sup> The same morpheme may occur in the consequent of a non-counterfactual too, but only optionally. (Thus, the absence of *-gajaq* indicates non-counterfactuality, but the presence thereof does not imply counterfactuality.)

<sup>47</sup> *-gajaq*, like *-lluaq* ‘should’, cannot co-occur with a future tense marker (see Section 4.4.2).

(373) exemplifies a present-tensed non-counterfactual conditional clause describing a future state of affairs.

- (373) a. salatsa-Ø-**ngi-kkuma** nuqqa-langa-Ø-junga  
 win-Pres-Neg-Cond.1s quit-Pros-Pres-Part.1s  
 ‘If I lose, I will quit.’
- b. maqu-Ø-**guni** qauppat ai-sima-niaq-Ø-tunga  
 rain-Pres-Cond.3Rs tomorrow go.home-Perf-Epis-Pres-Part.3s  
 ‘If it rains tomorrow, I will stay home.’
- c. quviasung-niaq-tunga kaapi-tu-Ø-**ruma**  
 happy-H.Fut-Part.1s coffee-consume-Pres-Cond.1s  
 ‘I will be happy if I have a coffee.’

A future tense cannot occur in a conditional clause, even if it describes a future state of affairs.

- (374) a. \*salatsar{-**niaq/-laaq**}-**nngi-kkuma** nuqqa-langa-Ø-junga  
 win{-H.Fut/-Fut}-Neg-Cond.1s quit-Pros-Pres-Part.1s  
 ‘If I lose, I will quit.’
- b. \*maqu-**laa-runi** qauppat ai-sima-niaq-Ø-tunga  
 rain-Fut-Cond.3Rs tomorrow go.home-Perf-Epis-Pres-Part.3s  
 ‘If it rains tomorrow, I will stay home.’
- c. \*quviasung-niaq-tunga kaapi-tur{-**niaq/-laa**}-**ruma**  
 happy-Fut-Part.1s coffee-consume{-H.Fut/-Fut}-Cond.1s  
 ‘I will be happy if I have coffee.’

#### 5.4.2 Past-tensed conditional clauses

In the SB conditional clause, regardless of whether it describes a counterfactual condition or not, a past tense can be used to refer to an eventuality in the past (relative to the utterance time). The opposition of *-lauq* (the general past marker) and *-qqau* (the hodiernal past marker) carries over to conditional clauses, although there are cases where a conditional clause with *-lauq* refers to an eventuality in a past time within the day of utterance (see below).

(375) and (376) exemplify a past-tensed non-counterfactual conditional clause describing a past

eventuality.

(375) Situation: Your son has had a cold for a week. You took him to a doctor a few days ago, and he gave you syrup. This morning you take your son to the doctor again because he is not feeling any better. The doctor says ‘If he drank the syrup, he must be a lot better now. Are you sure he drank the syrup?’

ijaga-lau-runi, akau-si-llua-liq-Ø-tuq maanna  
take.pill-Past-Cond.3Rs be.good-Inc-should-Inc-Pres-Part.3s now  
‘If he had the medicine, he must be a lot better now.’

(376) Situation: You just woke up. You don’t know if it rained or not this morning. You say, ‘If it rained this morning, the ground must be wet. Let’s go outside and find out.’

maqu-qqau-guni sila-mit qausi-lluaq-Ø-puq  
rain-H.Past-Cond.3Rs outside-Loc be.wet-should-Pres-Ind.3s  
‘If it rained, the ground would be wet.’

(377) and (378) exemplify a past-tensed counterfactual conditional clause describing a past state of affairs.

(377) Situation: You have been sick since yesterday. You didn’t go see a doctor because you thought you would feel better soon.

taku-lau-rukku luttaq ippatsaq akau-si-niqsa-u-gajaq-Ø-tunga  
see-Past-Cond.1s/3s doctor yesterday be.good-Inc-more-be-would-Pres-Part.1s  
‘If I had seen a doctor yesterday, I would have been feeling better.’

(378) Situation: You have been sick today. You didn’t go see a doctor because you thought you would feel better soon. Now it is late at night and you don’t feel any better. It is now too late to go see a doctor.

taku-qqau-gukku luttaq ullumi akausi-niqsa-u-gajaq-Ø-tunga  
see-H.Past-Cond.1s/3s doctor today be.good-Inc-be-would-Pres-Part.1s  
‘If I had seen a doctor today, I would have been feeling better.’

In a counterfactual conditional clause describing a present state of affairs, *-lauq* can be used instead of the zero form (cf. (372)); that is, a conditional clause with *-lauq* can be used as a fake

past.<sup>48</sup>

- (379) a. igvi-u-lau-ruma quviasu-gajaq-Ø-tunga  
you-be-Past-Cond.1s happy-would-Pres-Part.1s  
'If I were you, I would be happy.'
- b. uqalima-gunna-lau-ruma Chinese-titut quviasu-gajaq-Ø-tunga  
speak-can-Past-Cond.1s Chinese-like happy-would-Pres-Part/1s  
'If I could / was able to speak Chinese, I would be happy.'

*-qqau*, on the other hand, cannot be used as a fake past.

- (380) a. \*igvi-u-qqau-guma quviasu-gajaq-Ø-tunga  
you-be-H.Past-Cond.1s happy-would-Pres-Part.1s  
'If I were you, I would be happy.'
- b. \*uqalima-gunna-qqau-guma Chinese-titut quviasu-gajaq-Ø-tunga  
speak-can-H.Past-Cond.1s Chinese-like happy-would-Pres-Part.1s  
'If I could/was able to speak Chinese, I would be happy.'

*-lauq* may also occur within a counterfactual conditional clause describing a state of affairs in a past time within today, although *-qqau* is the preferred choice in this configuration. That is, *-lauq* may replace *-qqau* as a 'fake general past', as it may replace the present tense as a fake past.

(381) Situation: You have been sick today. You didn't go to see a doctor because you thought you would feel better soon. Now it is late at night and you don't feel any better. It is now too late to go see a doctor.

- a. taku-qqau-gukku luttaq ullumi akau-si-niqsa-u-gajaq-Ø-tunga  
see-H.Past-Cond.1s/3s doctor today be.good-Inc-more-be-would-Pres-Part.1s  
'If I had seen a doctor today, I would have been feeling better.'
- b. taku-lau-rukku luttaq ullumi akau-si-niqsa-u-gajaq-Ø-tunga  
see-Past-Cond.1s/3s doctor today good-Inc-more-be-would-Pres-Part.1s  
'If I had seen a doctor today, I would have been feeling better.'

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<sup>48</sup> It is not clear whether there is a difference in interpretation between (372a) and (379a) and between (372b) and (379b). This will have to be answered in future research.

(382) Situation: Today, you visited your sister’s place late afternoon. Your sister says, ‘I cooked caribou meat for lunch. We have just eaten it up. If you had come earlier, you could have eaten some.’

- a. qai-saali-lau-ruvit tuktuviniq-tu-raja-qqau-vutit  
come-early-Past-Cond.2s caribou.meat-consume-would-H.Past-Ind.2s  
‘If you had come earlier, you could have eaten some caribou meat.’
- b. qai-saali-qqau-guvit tuktuviniq-tu-raja-qqau-vutit  
come-early-H.Past-Cond.2s caribou.mear-consume-would-H.Past-Ind.2s  
‘If you had come earlier, you could have eaten some caribou meat.’

Naturally, *-qqau* cannot occur within a (counterfactual or non-counterfactual) conditional clause describing an eventuality in a time prior to the day of utterance.

(383) Situation: You went to Florida last week. It was been raining all the time while you were there.

- a. silalsiavau-lauq-pat puijura-gaja-lauq-punga tariukut  
be.sunny-Past-Cond.3s swim-would-Past-Ind.1s in.the.sea  
‘If the weather had been nice, I would have swum in the sea.’
- b. #silatsiavau-qqau-pat puijura-gaja-lauq-punga tariukut  
be.sunny-H.Past-Cond.3s swim-would-Past-Ind.1s in.the.sea  
‘If the weather had been nice, I would have swum in the sea.’

(384) Situation: You have been sick since yesterday. You didn’t go see a doctor because you thought you would feel better soon.

- a. taku-lau-rukku luttaq ippatsaq akausiniq-sau-gajaq-Ø-tunga  
see-Past-Cond.1s/3s doctor yesterday feel.good-gradually-would-Pres-Part.1s  
‘If I had seen a doctor yesterday, I would have been feeling better.’
- b. #taku-qqau-gukku luttaq ippatsaq akausiniq-sau-gajaq-Ø-tunga  
see-H.Past-Cond.1s/3s doctor yesterday feel.good-gradually-would-Pres-Part.1s  
‘If I had seen a doctor yesterday, I would have been feeling better.’

In sum, *-lauq* may occur, as a fake (general) past, where the zero form or *-qqau* is expected; *-qqau* does not exhibit such irregularity and is used only to describe a state of affairs within the day of utterance.

### 5.4.3 Section Summary

This section discussed the interpretation of tenses in the conditional clause, which serves as the antecedent of a conditional construction. It was demonstrated (i) that the present tense in a conditional clause may refer either to an eventuality in the present time or to an eventuality in a future time, and (ii) that the hodiernal past tense and the general past tense refer to an eventuality in a past time within the day of utterance, and an eventuality in a past time prior to the day of utterance, respectively, and (iii) that the general past tense may also occur in a conditional clause describing a present or past-within-today state of affairs, serving as a ‘fake past’ indicating counterfactuality. A future tense does not occur in a conditional clause.

## 5.5 Summary

This chapter examined the distribution and interpretation of the five primary tenses (the present, the general past, the hodiernal past, the general future, and the hodiernal future) in three types of clauses characterized by distinct mood morphemes: (i) the conjunctive clause, (ii) the causative clause, and (iii) the conditional clause

A conjunctive clause, semantically, stands in the conjunctive relation with its superordinate clause. Tenses in conjunctive clauses may be interpreted either relative to the utterance time (the absolute interpretation), or relative to the time of the eventuality described in the superordinate clause (the relative interpretation). When the tense in a conjunctive clause receives the relative interpretation, it serves to specify the temporal order (simultaneity, precedence, or subsequence) between the superordinate and subordinate eventualities, so that the conjunctive clause carries a function similar to that of a ‘when’-, ‘after’-, or ‘before’-clause.

Causative clauses have three distinct uses, which contrast with each other with regard to the interpretation of tenses occurring within them: the adjunct clause of reason (‘because P’), the adjunct clause of purpose (‘so that P’, ‘in order that P’), and the complement clause of an utterance/attitude verb. When they serve as an adjunct clause of reason, the tenses occurring within them receive the absolute interpretation. When they serve as an adjunct clause of purpose, the tenses occurring within them are interpreted relative to the time of the superordinate

eventuality. Since an adjunct clause of purpose always describes a state of affairs realized as a result of the action described in the superordinate clause, this implies that only a future tense (*-niaq* or *-laaq*) may occur within a causative clause as an adjunct clause of purpose. When causative clauses serve as a complement clause, tenses occurring within them are interpreted relative to the time of the reported utterance/attitude.

Conditional clauses serve as the antecedent clause of a conditional construction. The present tense in a conditional clause may either refer to an eventuality in the present time or in a future time. The general and hodiernal past tenses refer to an eventuality in a past time within the day of utterance, and a past time prior to the day of utterance, respectively. The general past tense marker *-lauq* may also occur in a conditional clause describing a present or past-within-today state of affairs, serving as a ‘fake past’ indicating counterfactuality. A future tense does not occur in a conditional clause.

When an embedded tense is interpreted relative to the time of the superordinate eventuality or the time of the reported utterance/attitude, general and hodiernal tenses exhibit rather complicated distribution patterns, the relevant domain sometimes being fixed to the day of utterance, and sometimes being shiftable to the day of the superordinate eventuality or the day of the reported utterance/attitude. The findings regarding relatively interpreted embedded tenses are summarized in Table 14.

<b>Conjunctive clause</b>			
<b>superordinate tense</b>	<b>subordinate tense</b>	<b>temporal relation</b>	<b>domain restriction</b>
(irrelevant)	$\emptyset$	$\text{Time}(e_{\text{sub}}) = \text{Time}(e_{\text{super}})$	(none)
	<i>-lauq</i>	$\text{Time}(e_{\text{sub}}) < \text{Time}(e_{\text{super}})$	(none)
	<i>-qqau</i>		$\text{Time}(e_{\text{sub}}) \subseteq \text{Day}(u) \wedge$ $\text{Time}(e_{\text{sub}}) \subseteq \text{Day}(e_{\text{sub}})$
	<i>-laaq</i>	$\text{Time}(e_{\text{super}}) < \text{Time}(e_{\text{sub}})$	$(\text{Time}(e_{\text{sub}}) \not\subseteq \text{Day}(u) \vee$ $\text{Time}(e_{\text{sub}}) \not\subseteq \text{Day}(e_{\text{super}}))$
	<i>-niaq</i>		$\text{Time}(e_{\text{sub}}) \subseteq \text{Day}(u) \vee$ $\text{Time}(e_{\text{sub}}) \subseteq \text{Day}(e_{\text{super}})$
<b>Causative clause serving as a purpose clause</b>			
<b>superordinate tense</b>	<b>subordinate tense</b>	<b>specified temporal relation</b>	<b>domain restriction</b>
past	<i>-laaq</i>	$\text{Time}(e_{\text{super}}) < \text{Time}(e_{\text{sub}})$	$\text{Time}(e_{\text{sub}}) \not\subseteq \text{Day}(e_{\text{super}})$
	<i>-niaq</i>		$\text{Time}(e_{\text{sub}}) \subseteq \text{Day}(e_{\text{super}})$
Future	<i>-laaq</i>		$\text{Time}(e_{\text{sub}}) \not\subseteq \text{Day}(u) \vee$ $\text{Time}(e_{\text{sub}}) \not\subseteq \text{Day}(e_{\text{super}})$
	<i>-niaq</i>		$\text{Time}(e_{\text{sub}}) \subseteq \text{Day}(u) \vee$ $\text{Time}(e_{\text{sub}}) \subseteq \text{Day}(e_{\text{super}})$
<b>Causative clause serving as a complement clause</b>			
<b>superordinate tense</b>	<b>subordinate tense</b>	<b>specified temporal relation</b>	<b>domain restriction</b>
past	<i>-lauq</i>	$\text{Time}(e_{\text{sub}}) < \text{Time}(r)$	$(\text{Time}(e_{\text{sub}}) \not\subseteq \text{Day}(u))$
	<i>-qqau</i>		$\text{Time}(e_{\text{sub}}) \subseteq \text{Day}(u)$
	<i>-laaq</i>	$\text{Time}(r) < \text{Time}(e_{\text{sub}})$	$(\text{Time}(e_{\text{sub}}) \not\subseteq \text{Day}(u) \vee$ $\text{Time}(e_{\text{sub}}) \not\subseteq \text{Day}(r))$
	<i>-niaq</i>		$\text{Time}(e_{\text{sub}}) \subseteq \text{Day}(u) \vee$ $\text{Time}(e_{\text{sub}}) \subseteq \text{Day}(r)$

Future	<i>-lauq</i>	$\text{Time}(e_{\text{sub}}) < \text{Time}(r)$	$(\text{Time}(e_{\text{sub}}) \not\subseteq \text{Day}(u) \vee \text{Time}(e_{\text{sub}}) \not\subseteq \text{Day}(r))$
	<i>-qqau</i>		$\text{Time}(e_{\text{sub}}) \subseteq \text{Day}(u) \vee \text{Time}(e_{\text{sub}}) \subseteq \text{Day}(r)$
	<i>-laaq</i>	$\text{Time}(r) < \text{Time}(e_{\text{sub}})$	$(\text{Time}(e_{\text{sub}}) \not\subseteq \text{Day}(u) \vee \text{Time}(e_{\text{sub}}) \not\subseteq \text{Day}(r))$
	<i>-niaq</i>		$\text{Time}(e_{\text{sub}}) \subseteq \text{Day}(u) \vee \text{Time}(e_{\text{sub}}) \subseteq \text{Day}(r)$

Table 14: Summary of the interpretation of relatively interpreted of tenses within the three types of dependent clauses

## Chapter 6 Conclusion

This thesis explored the tense system in the South Baffin (SB) dialect of the Inuit language, which belongs to the Eskaleut family. I would like to conclude by summarizing the major findings and briefly discussing their contributions and implications for future investigations.

First, it was demonstrated that SB has the distinction between the present, past, and future tenses. This finding provides an affirmative answer to the research question of whether varieties of Inuit have tenses or not, which has been extensively discussed in the existing literature (Shaer, 2003; Bittner, 2005; Hayashi and Spreng, 2005; Hayashi, 2005). This is the very first thesis that asserts that a variety of Inuit is tensed, while others, most notably West Greenlandic, has been argued to be tenseless (Shaer, 2003; Bittner, 2005). This thesis thus raises the following questions; (i) Can languages in the same family vary in terms of whether it has tenses? and (ii) Can we reanalyze West Greenlandic as being tensed so that we can maintain that varieties of the Inuit language are all tensed?

Second, it was demonstrated that the present tense is indicated by the absence of an explicit tense marker, and the aspectual interpretation of a present-tensed (i.e., zero-marked) verb is determined by the durativity of the base. A durative verb receives the imperfective interpretation, and a punctual verb receives the perfect interpretation. A verb on the perfect interpretation was shown to have the following properties: (i) it can only refer to an eventuality in a recent time, (ii) it cannot co-occur with a temporal adverbial referring to a specific past time (e.g., ‘yesterday’), and (iii) it does not have an experiential use.

Third, it was demonstrated that SB has (at least) five past tenses, which are associated with different degrees of temporal remoteness. Furthermore, the past tenses contrast with each other with respect to, roughly speaking, whether (i) they have the potential to block the use of a tense with a less specific meaning, and (ii) they may be the only possible choice in describing certain situations. Based on these criteria, the general past encoded by *-lauq* and the hodiernal past

encoded by *-qqau* are grouped together as primary tenses, and the recent past encoded by *-kainnaq* or *-rataaq*, the pre-hodiernal past encoded by *-juu*, and the distant past encoded by *-lauqsima*, are grouped together as secondary tenses. The general past is not associated with a specific temporal domain (in the past) at the semantic level, but its use is blocked when the use of the hodiernal past is possible, due to a pragmatic implicature.

Fourth, it was demonstrated that SB has (at least) three future tenses, which are also associated with different degrees of temporal remoteness. The general future encoded by *-laaq* and the hodiernal future encoded by *-niaq* are primary tenses, and the distant future encoded by *-gumaaq* is a secondary tense. The general future is not associated with a specific temporal domain (in the future) at the semantic level, but its use is blocked when the use of the hodiernal future is possible, due to a pragmatic implicature. The form *-niaq* has, apart from the use as a tense marker, a use as a modal. *-langa*, another putative future marker, is better analyzed as a marker of prospective aspect.

The key point on the third and fourth findings is that the past and future tenses in SB ‘divide the labor’ in a more complex way than previously argued. The opposition of primary vs. secondary tenses, as well as the general vs. non-general distinction within the primary layer, may have broader, cross-linguistic applicability, because these ideas may make it possible to provide more adequate descriptions of tense systems in other languages where multiple past or future tenses are distinguished based on temporal remoteness (e.g., Hymes, 1975; Comrie, 1985; Schwenter, 1995; Dahl, 1983, 1985, 2008; Foley, 1991; Dixon, 2004).

Finally, it was demonstrated that, in dependent clauses, the anchoring point for tenses can be shifted to a time other than the time of utterance, yielding a so-called relative interpretation. When embedded tenses receive a relative interpretation, however, the temporal domains associated with them (e.g., the day of utterance for *-qqau*) are not always relativized. It was also demonstrated that a past tense occurring in a conditional clause does not necessarily convey temporal information, but may encode counterfactuality. Cross-linguistic universals and variation in the interpretations of embedded tenses have attracted a great deal of scholarly attention (von Stechow, 1995; Ogihara, 1996; Arregui and Kusumoto, 1998; Kusumoto, 1999; Schlenker, 2003;

Kubota et al., 2009), and yet there has been little discussion of how tenses with remoteness specifications are interpreted in embedded environments. The data and findings from SB would thus make a significant contribution towards a fuller typological understanding of embedded tenses.

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