The Structure of Multiple Tenses in Inuktitut

by

Midori Hayashi

A thesis submitted in conformity with the requirements for the degree of doctor of philosophy

Department of Linguistics
University of Toronto

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Midori Hayashi
Doctor of Philosophy
Department of Linguistics
University of Toronto
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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 future and past 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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Keren Rice was not on my committee, but her warm encouragement and smiles always made me feel happy. The department has great staff – Mary Hsu and Bill Forrest. Both of them happened
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Chapter 3: The Past Tense ................................................................. 35
  3.1 Introduction.................................................................................. 35
  3.2 -qqau and -lauq: primary tense markers ..................................... 37
    3.2.1 Diagnostic criteria for tense markers .................................. 40
    3.2.2 Obligatoriness ................................................................. 41
    3.2.3 No restrictions on co-occurrence with members of particular aspectual classes .... 41
    3.2.4 Co-occurrence with members of the same category ............... 44
    3.2.5 Entailment of a state change ............................................ 45
  3.3 Specifications of remoteness ..................................................... 46
    3.3.1 -qqau and -lauq: hodiernal vs. pre-hodiernal? ..................... 47
    3.3.2 Non-occurrence vs. incompletion ....................................... 54
  3.4 Secondary tenses ....................................................................... 56
    3.4.1 -kainnaq ................................................................. 61
    3.4.2 -rataaq ................................................................. 64
    3.4.3 -juu ................................................................. 66
    3.4.4 -lauqsima ............................................................ 69
  3.5 Summary .................................................................................. 71

Chapter 4: The Future Tense ........................................................... 74
  4.1 Introduction.................................................................................. 74
  4.2 Do -langa, -niaq and -laaq indicate tenses? ............................... 75
    4.2.1 Obligatoriness ................................................................. 77
    4.2.2 No restrictions on co-occurrence with members of particular aspectual classes .... 79
    4.2.3 Co-occurrence restrictions with members of the same category ............... 81
    4.2.4 Entailment of a state change ............................................ 82
    4.2.5 Summary ....................................................................... 84
  4.3 Future tense or future-oriented modality? ................................... 84
    4.3.1 Impossibility of co-occurrence with another tense ............... 88
    4.3.2 Obligatory future-time reference ....................................... 88
    4.3.3 Morphological/syntactic similarities with other tense markers ........... 89
    4.3.4 Summary ....................................................................... 90
  4.4 How do -langa, -niaq, and -laaq differ? .................................... 91
<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.4.1 Comparison of -langa and -niaq</td>
<td>92</td>
</tr>
<tr>
<td>4.4.2 Comparison of -niaq and -laoa</td>
<td>98</td>
</tr>
<tr>
<td>4.5 -gumaaq: a secondary future tense marker</td>
<td>105</td>
</tr>
<tr>
<td>4.6 Summary</td>
<td>110</td>
</tr>
<tr>
<td>Chapter 5: Tense in Dependent Clauses</td>
<td>112</td>
</tr>
<tr>
<td>5.1 Introduction</td>
<td>112</td>
</tr>
<tr>
<td>5.2 Conjunctive clauses</td>
<td>113</td>
</tr>
<tr>
<td>5.2.1 Present-tensed conjunctive clauses</td>
<td>116</td>
</tr>
<tr>
<td>5.2.2 Past-tensed conjunctive clauses</td>
<td>118</td>
</tr>
<tr>
<td>5.2.2.1 Past-tensed conjunctive clauses on the relative interpretation</td>
<td>118</td>
</tr>
<tr>
<td>5.2.2.2 Past-tensed conjunctive clauses on the absolute interpretation</td>
<td>121</td>
</tr>
<tr>
<td>5.2.2.3 The sequence of a past tense and negation in a conjunctive clause</td>
<td>123</td>
</tr>
<tr>
<td>5.2.3 Future-tensed conjunctive clauses</td>
<td>126</td>
</tr>
<tr>
<td>5.2.3.1 Future-tensed conjunctive clauses on the relative interpretation</td>
<td>127</td>
</tr>
<tr>
<td>5.2.3.2 Future-tensed conjunctive clauses on the absolute interpretation</td>
<td>134</td>
</tr>
<tr>
<td>5.2.4 Section Summary</td>
<td>136</td>
</tr>
<tr>
<td>5.3 The causative clause</td>
<td>136</td>
</tr>
<tr>
<td>5.3.1 Tenses in a causative clause as an adjunct clause of reason</td>
<td>139</td>
</tr>
<tr>
<td>5.3.2 Tenses in a causative clause as an adjunct clause of purpose</td>
<td>140</td>
</tr>
<tr>
<td>5.3.3 Tenses in a causative clause as a complement clause</td>
<td>145</td>
</tr>
<tr>
<td>5.3.3.1 The general pattern</td>
<td>145</td>
</tr>
<tr>
<td>5.3.3.2 The opposition of -lauq and -qau in complement clauses</td>
<td>148</td>
</tr>
<tr>
<td>5.3.3.3 The opposition of -laoa and -niaq in complement clauses</td>
<td>156</td>
</tr>
<tr>
<td>5.3.4 Section Summary</td>
<td>166</td>
</tr>
<tr>
<td>5.4 Conditional clauses</td>
<td>166</td>
</tr>
<tr>
<td>5.4.1 Present-tensed conditional clauses</td>
<td>169</td>
</tr>
<tr>
<td>5.4.2 Past-tensed conditional clauses</td>
<td>170</td>
</tr>
<tr>
<td>5.4.3 Section Summary</td>
<td>174</td>
</tr>
<tr>
<td>5.5 Summary</td>
<td>174</td>
</tr>
</tbody>
</table>
Chapter 6: Conclusion

References
List of Tables

Table 1: Aspectual classes and their semantic specifications 5
Table 2: The future markers tested against the four criteria for tense 84
Table 3: The future markers tested against the three criteria for tense 91
Table 4: Interpretations of present tense within a conjunctive clause 118
Table 5: The relative interpretation of past tenses within a conjunctive clause 121
Table 6: The absolute interpretation of past tenses within a conjunctive clause 123
Table 7: The relative interpretation of future tenses within a conjunctive clause 130
Table 8: The absolute interpretation of future tenses within a conjunctive clause 136
Table 9: The relative interpretation of future tenses within a causative clause serving as a purpose clause 142
Table 10: The relative interpretation of past tenses within a causative clause serving as a complement clause 149
Table 11: Configurations for the past tenses within a causative clause serving as a complement clause 150
Table 12: The relative interpretation of future tenses within a causative clause serving as a complement clause 157
Table 13: Configurations for future tenses within a causative clause 158
Table 14: Summary of the interpretation of relatively interpreted of tenses within the three types of dependent clauses 177
List of Figures

Figure 1: Representation of time (Comrie, 1985:2) 2
Figure 2: Eskaleut languages (adapted from Dorais, 2003:15) 6
Figure 3: Dialects of the Inuit language (adapted from Dorais, 2003:15) 7
Figure 4: A taxonomy of eventualities in Tarramiut (Swift, 2000:25) 17
Figure 5: Temporal domains of the past markers in Tarramiut (Swift, 2000:96) 35
Figure 6: The system of the past tenses in SB 37
Figure 7: Temporal domains of the future markers in Tarramiut (Swift, 2000:82) 74
Figure 8: The system of the future tenses in SB 111
Figure 9: Temporal relation among, e_{super}, e_{sub} and the utterance time (T_{U}): e_{sub} within the day of utterance and outside the day of e_{super} 131
Figure 10: Temporal relation among, e_{super}, e_{sub} and the utterance time (T_{U}): e_{sub} is both within the day of utterance and the day of e_{super} 132
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 = Intransitiviser
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)](image)

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*, 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, 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).

---

1 Eventuality is a term covering both (dynamic) events and states (Parsons, 2002).
2 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).
<table>
<thead>
<tr>
<th>Class</th>
<th>Examples</th>
<th>Dynamic</th>
<th>Durative</th>
<th>Telic</th>
</tr>
</thead>
<tbody>
<tr>
<td>State</td>
<td>know, believe, love, have,</td>
<td>−</td>
<td>+</td>
<td>−</td>
</tr>
<tr>
<td>Activity</td>
<td>run, swim, drive a car, push a cart</td>
<td>+</td>
<td>+</td>
<td>−</td>
</tr>
<tr>
<td>Accomplishment</td>
<td>paint a picture, build a house, deliver</td>
<td>+</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td></td>
<td>a sermon, recover from illness</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Achievement</td>
<td>find, lose, arrive at the station, reach</td>
<td>+</td>
<td>−</td>
<td>+</td>
</tr>
<tr>
<td></td>
<td>the summit</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Semelfactive</td>
<td>cough, knock the door, hiccup, blink</td>
<td>+</td>
<td>−</td>
<td>−</td>
</tr>
</tbody>
</table>

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).

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.
Dialects of the Inuit language are said to be 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\(^3\) 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.\(^4\) 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.

\(^3\) 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.

\(^4\) 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-nggit-tuq
   come-want-Past-Neg-Part.3s
   ‘(S)he didn’t want to come.’

(3a) consists of a root qai-⁵ ‘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 -nggit, a negation morpheme, is added after -lauq, changing the meaning of the sentence into ‘(s)he didn’t want to come’.

⁵ 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\textsuperscript{6}, 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.

\begin{enumerate}
\item \textit{tikit-tunga} \arrive-Part.1s 'I arrived.'
\item \textit{tikit-tutit} \arrive-Part.2s 'You arrived.'
\item \textit{taku-jara} \see-Part.1s/3s 'I saw him/her.'
\item \textit{taku-jaa} \see-Part.3s/3s '(S)he saw him/her.'
\end{enumerate}

SB has eight kinds of mood: participial, indicative, interrogative, imperative, conjunctive\textsuperscript{7}, causative, conditional, and dubitative.

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

\textsuperscript{6} 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):

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

\textsuperscript{7} 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.

9
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-laup-paa?
    which.way be.in.pain-Past-Int.2s
    ‘Where did he get hurt?’

    B: sura-lauq-\textit{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) qa\textit{i-vat}?
    arrive-Int.3p
    ‘Did they come?’

(7) qa\textit{i-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 \textit{when-}, \textit{before-} and \textit{after-} clauses (8b) (Harper, 1979; Hayashi, 2005).

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

    b. qa\textit{-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. tuqulaa-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-iaaq-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.*
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.8

(13) anguti-\textbf{up} nanuq-∅ kapi-\textbf{jaa}  
\text{man-Erg polar.bear-Abs spear-Part.3s/3s}  
\text{‘The man stabbed the polar-bear.’}

---

8 The ergative case is also referred to as the relative case (Lowe, 1985a,b,c; Dorais, 1988; Johns, 2006; Nagai, 2006).
(14) jaan-Ø  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.\(^9\)

(15) jaan-Ø  piuksaq-tuq  miali-\textbf{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 -\textit{lauq} is in T, because I will claim that -\textit{lauq} is a
general past tense in Chapter 3).

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

\begin{center}
\begin{tikzpicture}
  \node {$jaan$} child {node {$aullaq$}} child {node {$-lauq$} edge from parent node [right] {\textit{-lauq}} parent
    node [below] {CP} edge from parent node [above] {T} edge from parent node [above] {C} edge from parent node [above] {vP} edge from parent node [above] {TP} edge from parent node [above] {CP}};
\end{tikzpicture}
\end{center}

9 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 -\textit{mit} is homophonous
with the ablative case marker, although comparative considerations suggest that it used to have the form -\textit{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.).

10 Following Compton and Pittman (2010), I assume that all the verbal contructions 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; Bohnemeyer, 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\textsuperscript{11} 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

\textsuperscript{11} 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)](image)

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. 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.

12 She spent some formative years in Coral Harbour (on Southernputon 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.
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. 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 ilinniaqt-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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13 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\textsuperscript{14}-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.

\textsuperscript{14} \textit{-anik} becomes \textit{-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}.)
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}.)
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).\textsuperscript{15}

\textsuperscript{15} 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, _taaq_, ‘to get’.

(32)  **piaraq-taaq-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!’

---

open for the future research.
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.\(^{16}\)

(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 prefect, 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,

\(^{16}\) 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):

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

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.  

(48) a. jaan iglu-liuq-tuq  
     John house-make-Part.3s  
     ‘John is building a house.’

b. miali qisi-liri-juq tuku-tup 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.’

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.

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17 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) -lauqsimi: 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) -lauqsimu: 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](image)

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 quviasu-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**  **ullaaq**
    John arrive-lauq-Part.3s this.morning
    (John arrived this morning.)

b. *jaan mumi-**lauq-tuq**  **ullaaq**
    John dance-lauq-Part.3s this.morning
    (John danced / was dancing this morning.)

c. *jaan qamuti-liu-**lauq-tuq**  **ullaaq**
    John sled-make-lauq-Part.3s this.morning
    (John made / was making a sled this morning.)

d. *jaan quviasu-**lauq-tuq**  **ullaaq**
    John be.happy-lauq-Part.3s this.morning
    (John was happy this morning.)

One important research question regarding -**qgau** 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 -**qgau** 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:18

(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 -qgau and -lauq satisfy these four criteria, (56) and (57), and thus can be safely regarded as tense markers.19

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18 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.

19 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.

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

(58) a. *jaan tikit-\textit{tuq} \textit{ullaaq}  
John arrive-Part.3s this.morning  
(John arrived this morning.)

\hline
b. jaan tiki-\textit{qqau}-juq \textit{ullaaq}  
John arrive-qqau-Part.3s this.morning  
‘John arrived this morning.’

(59) a. *jaan mumiq-\textit{tuq} \textit{ippatsaq}  
John dance-Part.3s yesterday  
(John danced/was dancing yesterday.)

\hline
b. jaan mumi-\textit{lauq}-\textit{tuq} \textit{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., -\textit{qqau}, -\textit{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
coop-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  ullaaq
   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  ullaaq
   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 ullaaq
   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 ullaaq
   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):

\[
\begin{align*}
\text{(67) a. } & \text{jaan mumi-**qqau**-**lauq**-tuq} \\
& \text{John dance-qqau-lauq-Part.3s} \\
\text{b. } & \text{jaan mumi-**lauq**-**qqau**-juq} \\
& \text{John dance-lauq-qqau-Part.3s}
\end{align*}
\]

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).

\[
\begin{align*}
\text{(68) a. } & \text{jaan mumi-**anik**-**sima**-juq} \\
& \text{John dance-Term-Perf-Part.3s} \\
& \text{‘John has finished dancing.’} \\
\text{b. } & \text{jaan mumi-**qattaq**-**sima**-juq} \\
& \text{John dance-Freq-Perf-Part.3s} \\
& \text{‘John used to dance.’}
\end{align*}
\]

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 ullaaq
    John be.sick-*qqau*-Part.3s this.morning
    'John was sick this morning.'

    b. jaan aannia-*qqau*-juq ullaaq suli 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 suli 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).
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 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.)

(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 ullaaq ‘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-laq-tuq  
   Tom call-laq-Part.3s  
   ‘Tom phoned.’

b. #Tom uqaala-qqau-juq  
   Tom call-qqau-Part.3s  
   (Tom phoned.)

The speaker can thus use -laq (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-laq-tuq  
   Tom call-laq-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 -laq 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-ngit-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-ngit-tuq means that he didn’t die, but tuqu-qqau-juq means he died.’

b. #tusaq-vigi-lau-ngit-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
Mary call-lauq-Part.3s three.times
‘Mary phoned three times.’

20 ‘&’ 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(uituity)-principle\(^{21}\), which partly corresponds to Grice’s maxims of conversation\(^{22}\). 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):

\(^{21}\) 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 Pāṇini 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).

\(^{22}\) 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).
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 <qau, -lauq> 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 \( S_1 : [ \ldots V-lauq \ldots ] \) if the speaker believes that in the relevant context she can use \( S_2 : [ \ldots V-qqau \ldots ] \), 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).23

3.3.2 Non-occurrence vs. incompletion

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 suli tiki-launngit-tuq
      no     still arrive-lauq-Neg-Part.3s
      ‘No, he hasn’t arrived yet.’

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

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

23 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-ngit-tuq
   still eat-lauq-Neg-Part.3s
   ‘She hasn’t eaten yet.’

b. suli niri-qqau-ngit-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-ngit-tuq ullaaq
   John arrive-lauq-Neg-Part.3s this.morning
   (John didn’t arrive this morning.)

b. jaan tiki-qqau-ngit-tuq ullaaq
   John arrive-qqau-Neg-Part.3s this.morning
   ‘(S)he didn’t get up this morning.’

(94) a. *maki-lau-ngit-tuq ullaaq
   get.up-lauq-Neg-Part.3s this.morning
   ((S)he didn’t get up this morning.)

b. maki-qqau-ngit-tuq ullaaq
   get.up-qqau-Neg-Part.3s this.morning
   ‘(S)he didn’t get up 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.

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.  

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

---

24 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.25

(98) (i)  -rataaq

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

\[
\text{taku-rataaq-para} \\
\text{see-Imm.Past-Part.1s/3s} \\
\text{‘I just saw it.’ (Harper, 1979:88, glosses added)}
\]

(ii)  -juu

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

\[
\text{taku-juu-jara} \\
\text{see-Dist.Past-Part.1s/3s} \\
\text{‘I saw it long ago.’ (Harper, 1979:90, glosses added)}
\]

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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25 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 \text{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):

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.²⁶

(100) primary tenses

(i)   -lauq: general past

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

(ii)  -qqau: hodiernal past

²⁶ 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.
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-$\emptyset$-tuq
    John dance-Pres-Part.3s
    ‘John is dancing.’

    b. *jaan ani-$\emptyset$-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**-Ø-tuq  
John go.out-kainnaq-Pres-Part.3s  
‘John was out for a while.’

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

3.4.2  \textbf{-rataaq}

\textbf{-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-\textbf{rataaq}-tuq  
John  dance-rataaq-tuq  
‘John was dancing a minute ago.’

b. jaan  ani-\textbf{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-\textbf{rataaq}-tuq  
John  go.out-rataaq-Part.3s  
‘John just left.’

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

As is the case for \textbf{-kainnaq}, \textbf{-rataaq} generally can be replaced with \textbf{-qqau}.

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

a. jaan  ani-\textbf{rataaq}-tuq  
John  go.out-kainnaq-Part.3s  
‘John just went out.’

b. jaan  ani-\textbf{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-\textit{rataaq}-tuq
   John go.out-rataaq-Part.3s
   'John just went out.'

b. jaan ani-\textit{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-\textit{rataaq}-tuq
   John go.out-rataaq-Part.3s
   'John just went out'

b. jaan ani-\textit{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-\textit{rataaq}-tuq
   John go.out-kainnaq-part.3s
   'John just went out.'

b. jaan ani-\textit{qqau}-juq
   John go.out-H.Past-Part.3s
   'John just went out.'

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

Apart from its use as a tense marker, the form \textit{-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 \textit{-qqau} and \textit{-lauq}, but not with a future tense marker like \textit{-niaq} and \textit{-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 ullaaq
    John go.out-juu-Part.3s this morning
    (John went out this morning.)

    b. *jaan mumi-juu-juq ullaaq
    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)\textsuperscript{27}

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

\textsuperscript{27} 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 muni-\textit{lauq-tuq} pingasuarusiulauqtumit
   \textit{John dance-Past-Part.3s last.week}
   ‘John danced last week.’

One may thus be tempted to consider -\textit{juu} as a synonym, or a stylistic variant, of -\textit{lauq}. This cannot be the case, however, as there are cases where -\textit{juu} and -\textit{lauq} are not interchangeable. First, -\textit{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-\textit{lauq-tuq}
   Tom call-Past-Part.3s
   ‘Tom phoned.’

b. #tom uqaala-\textit{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-\textit{lauq-piu-llii}
   hear-from-Past-Int.2s/3s-Emp

   ‘Did you hear from her?’

b. #tusa-vigi-\textit{juu-piu-llii}?
   hear-from-juu-Int.2s/3s-Emp
   (Did you hear from her?)

Second, -\textit{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-ńngit-tara
   still read-Past-Neg-Part.3s/1s
   ‘I haven’t read it.’

b. #suli uqalimaa-juu-ńngit-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-ńngit-tuq
   still eat-Past-Neg-Part.3s
   ‘She hasn’t eaten yet.’

b. #suli niri-juu-ńngit-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 -laaq. -juu contrasts with -laaq, however, in that its availability does not block the use of -laaq. -juu generally can be replaced with -laaq. Furthermore, my consultant remarks that -laaq 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 -laaq (see (120) and (122)), and -laaq 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.28

(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 20arraagulauqsimajunnit  
   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.29

28 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 20arraagulauqsimajunit  
   Susan leave-lauqsima-Part.3s Iqaluit-Acc Christmas-on 20.years.ago  
   ‘Susan left Iqaluit 20 years ago on Christmas.’

29 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.

\[
\text{jaan tiki-} \text{lauqsima-juq}
\]
\[
\text{John arrive-lauqsima-Part.3s}
\]
\['John arrived.'\]

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. *\text{jaan tiki-} \text{lauqsima-} \text{juq ippatsaq}
\]
\[
\text{jaan arrive-lauqsima-Part.3s yesterday}
\]
(John arrived yesterday.)

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

\[
\text{#jaan tiki-} \text{lauqsima-juq}
\]
\[
\text{John arrive-lauqsima-Part.3s}
\]
(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

---

(i) Situation: My father died the day before yesterday.

\[
\text{#ataata-ga tuqu-} \text{lauqsima-juq}
\]
\[
\text{Father-Gen.1s die-lauqsima-Part.3s}
\]
\['My father died.'\]

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

(ii) Situation: John broke his leg a week ago.

\[
\text{#jaan sura-} \text{lauqsima-juq niu-nga}
\]
\[
\text{John hurt-lauqsima-Part.3s leg-Gen.3s}
\]
\['John hurt his leg.'\]

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

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

\[
\text{#pulaa-} \text{lauqsima-} \text{junga angaju-ga}
\]
\[
\text{visit-lauqsima-Part.1s older.sister-Gen.1s}
\]
\['I visited my sister.'\]

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 Atanarjuaq?’

   B: ii. tautu-ani-lauqsima-jara atanarjuat
   yes watch-already-lauqsima-Part.3s/1s Atanarjuaq
   ‘Yes, I have already seen Atanarjuaq.’

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).

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.\(^{30}\) 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

\(^{30}\) 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:31

(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.

31 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 -gqau 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)
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.'

   b. sini{-langa/-niaq/-laaq}-tuq
       sleep{-langa/-niaq/-laaq}-Part.3s
       '(S)he will sleep.'

   (Transitory state)

   (Activity)
c. qisi-liri {-langa/-niaq/-laaq}-tuq tuktu-up aminga-nit
   skin-work.on{-langa/-niaq/-laaq}-Part.3s caribou-Gen skin-Acc.pl
   '(S)he will skin a caribou skin.' (Accomplishment)

d. tiki{-langa/-niaq/-laaq}-tuq
   arrive{-langa/-niaq/-laaq}-Part.3s
   '(S)he will arrive.' (Achievement)

e. tagiu{-langa/-niaq/-laaq}-tuq
   arrive{-langa/-niaq/-laaq}-Part.3s
   '(S)he will sneeze.' (Semelfactive)

(144) a. *taki{-langa/-niaq/-laaq}-tuq
   tall{-langa/-niaq/-laaq}-Part.3s
   '(S)he will be tall.) (Essential property)

   *ammalu{-langa/-niaq/-laaq}-tuq
   round{-langa/-niaq/-laaq}-Part.3s
   'It will be round.' (Essential property)

To combine a future marker with this type of stative predicate, the predicate must be suffixed by
the nominalizer -tuq, which in turn must be followed by the copula -u.

(145) a. taki-ju-u{-langa/-niaq/-laaq}-tuq
   tall-Nom-Cop{-langa/-niaq/-laaq}-Part.3s
   '(S)he will be tall.'

   ammaluq-tu-u{-langa/-niaq/-laaq}-tuq
   round-Nom-Cop{-langa/-niaq/-laaq}-Part.3s
   'It will be round.'

It should be noted that the past tense markers, -qqau and -lauq, are subject to no such constraint.
They can directly occur on a verb denoting an essential property.

(146) a. taki{-qqau/-lauq}-tuq
   tall{-H.Past/-Past}-Part.3s
   'It was tall.'

   ammalu{-qqau/-lauq}-tuq
   round{-H.Past/-Past}-Part.3s
   'It was round.'
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.
The linear order between a future marker and a past tense marker cannot be reversed.

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

-\textit{laaq}, on the other hand, can neither be followed nor preceded by a past tense marker.

These observations suggest that -\textit{niaq} and -\textit{langa} do not, or do not always, indicate a tense.\footnote{\textit{-niaq}, -\textit{langa}, and -\textit{laaq} as a rule cannot co-occur with each other; this point will be addressed in Section 4.4 below.}

\subsection*{4.2.4 Entailment of a state change}

\begin{center}
\begin{tabular}{|l|}
\hline
Tenses do not encode a state change, while aspects may.  \\
\hline
\end{tabular}
\end{center}

If -\textit{langa}, -\textit{niaq}, and -\textit{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
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).

(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. suli sini-langa-juq 11-mit
   still sleep-langa-Part.3s 11-Loc
   ‘He will be still sleeping at 11.’

b. suli 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. suli 6-mit jaan mumi-langa-juq.
   still 6-Loc John dance-langa-Part.3s
   ‘John will still be dancing at 6.’

b. suli 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. suli uqalimaa-langa-jara uqalimagaaq qauppat ullakkut
   still read-langa-Part.1s/3s book tomorrow morning
   ‘I will be still reading this book tomorrow morning.’

-7aaq 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 uqalimagaaq qauppat ullakkut
still read-niaq-Part.1s/3s book tomorrow morning
‘I will be still reading this book tomorrow morning.’

c. suli uqalimaa-лаaq-tara uqalimagaaq qauppat ullakkut
still read-лаaq-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.

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

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:

(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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34 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.\(^{35}\)

(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)).\(^{36}\)

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

\(^{35}\) 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.

(159) a. It may not be snowing now.
   b. It is not the case that it may be snowing now. (a) ≠ (b)

(160) a. It is probably not snowing now.
   b. It is not the case that it is probably snowing now. (a) ≠ (b)

(161) a. It will not snow tomorrow.
   b. It is not the case that it will snow tomorrow. (a) ≃ (b)

(162) a. It did not snow yesterday.
   b. It is not the case that it snowed yesterday. (a) ≃ (b)

(163) a. It is not snowing now.
   b. It is not the case that it is snowing now. (a) ≃ (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.

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

(167) a. *jaan sini{-larga/-niaq/-laaq}-tuq maanna
   John sleep{-larga/-niaq/-laaq}-Part.3s now
   (John will be sleeping now.)

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

When -larga 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 -larga 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{-lauq} gunna-tuq
     John sleep{-Past/-H.Past}-can-Part.3s
     ‘John could sleep.’

     b. jaan sini{-giaq} lauq-tuq
     John sleep{-Past/-H.Past}-have.to-Part.3s
     ‘John had to sleep.’

(170) a. *jaan sini{-lauq/-qaq}-gunna-tuq
     John sleep{-Past/-H.Past}-can-Part.3s

     b. *jaan sini{-lauq/-qaq}-giaq-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{-langa/-niaq/-laaq}-tuq
    John sleep-can{-langa/-niaq/-laaq}-Part.3s
    ‘John can sleep.’

    b. jaan sini{-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-can{-langa/-niaq/-laaq}-can-Part.3s

    b. *jaan sini{-langa/-niaq/-laaq}-riaqaq-tuq
    John sleep-can{-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-laalauq-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.
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. suli 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-**niaq**-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

93
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-laar-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-Pasrt.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-ataa-langa-gama
    collect-Pres-Part.1s money-Acc.pl car-get-langa-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-∅-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 -larga cannot occur in a purpose clause can also be accounted for by the proposed analysis of -larga. 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 -larga 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 -larga 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-larga-junga
   sneeze-larga-Part.1s
   ‘I am going to sneeze.’

Also, under the proposed analysis, it is only natural that -larga 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{-laaq/-qqau}-juq
     John dance-langa{-Past/-H.Past}-Part.3s
     'John was going to dance.'

     b. jaan mumir-nia{-laaq/-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-\textit{-laaq}-tuq qauppat
leaves-\textit{-laaq}-Part.3s tomorrow
‘(S)he will leave tomorrow.’

b. *aulla-\textit{-laaq}-tuq ullumi
leaves-\textit{-laaq}-Part.3s today
‘(S)he will leave today.’

(193) a. mumi-\textit{-laaq}-tunga qauppat
leaves-\textit{-laaq}-Part.1s tomorrow
‘I will dance tomorrow.’

b. *mumi-\textit{-laaq}-tunga ullumi
leaves-\textit{-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, uvaluniit 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 ammalu 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.

sanattali-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).37

(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.’

37 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 -luuaq is generally blocked when the clause refers to an eventuality occurring within the day of utterance.
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.

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.

Situation: Every morning John has either coffee or tea, but not both.

a. #jaan kaapi-tur-niaq-tuq qauppat uvvalunniit 
   jaan tii-tur-niaq-tuq qauppat 
   (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 ullaaq uvvalunniit 
   jaan tii-tur-niaq-tuq ullaaq 
   (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/-l uaq}-tuq qauppat
John dance{can/have.to/should}-Part.3s tomorrow

‘John can/have.to/should dance tomorrow.’

(209) jaan mumi{-gunnaq/-giaqaq/-l uaq}-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.)
It is not clear to me why this must 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-{laaq/-qaau}-tuq
   John leave-should{-Past/-H.Past}-Part.3s
   ‘John should have left.’

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

(214) a. jaan aulla-riaqa-{laaq/-qaau}-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-{laaq/-qaau}-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…’

(Fortescue, 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-ka\textipa{\textasciitilde{l}ua}-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-ka\textipa{\textasciitilde{l}uar}-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-\textit{gumaaq}-tuq arrani
John leave-gumaaq-Part.3s next.year
'John will leave next year.'

b. jaan mumi-\textit{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-\textit{gumaaq-laaq}-tuq pingasuarusiulaaqtumit
John arrive-gumaaq-Fut-Part.3s next.week
(John will arrive next week.)

b. *jaan tiki-\textit{gumaaq-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-\textit{gumaa-riq-tuq} qauppat
Saila teach-gumaaq-already-Part.3s tomorrow
(Saila is already going to teach tomorrow.)

b. #Saila ilisai-\textit{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.
(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 -gummaq 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 quili-nit ilinnaivijjua-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 quili-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 -juul-lauqsima (Section 3.4) and -laaq. 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
4.6 Summary

This chapter discussed the four putative future markers: -\textit{langa}, -\textit{niaq}, -\textit{laaq} and -\textit{gumaaq}, and argued the following:

(235) (i) -\textit{langa} is a prospective aspect marker.

(ii) -\textit{niaq} is ambiguous between two uses; it may indicate a hodiernal future tense or a strong epistemic modal with strict future-orientation.

(iii) -\textit{laaq} indicates a general future tense.

(iv) -\textit{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 Conjunctional 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-\textit{tsuni} pisu-laur-tuq
    eat-Conj.3Rs walk-Past-Part.3s
    ‘While eating, (s)he walks.’

    b. niri-\textit{luni} pisu-laar-tuq
    eat-Fut.Conj.3Rs walk-Fut-Part.3s
    ‘While eating, (s)he will walk.’

    c. niri-\textit{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, -\textit{llu} and -\textit{tillu}.\textsuperscript{38} 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)

38 The marker of the conjunctive mood, incidentally, is likely to be cognate with the affix \textit{lu}, which is used to coordinate two nominals, as in uvanga-lu ‘and me’, ‘me too’ (Johns and Smallwood, 1999:160).
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). 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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39 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.

\[(238) \text{a. } \text{jaan tiki-Ø-tillgu miali tiki-laaq-tuq} \]
\[\text{John arrive-Pres-Conj.3s Mary arrive-Fut-Part.3s}\]
\[\text{‘When John arrives, Mary will arrive.’}\]

\[(238) \text{b. } \text{tautuk-Ø-tillunga tusa-lauq-tara} \]
\[\text{look.at-Pres-Conj.3s hear-Past-Part.1s/3s}\]
\[\text{‘While looking at it, I heard it.’}\]

Based on such data, one may hypothesize that the semantic function of a conjunctive clause is to indicate simultaneity of the subordinate eventuality (e\textsubscript{sub}) and the superordinate eventuality (e\textsubscript{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\textsubscript{super}, but at the utterance time.\footnote{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).}

\[(239) \text{a. } \text{jaan tiki-Ø-tillgu miali tiki-laaq-tuq} \]
\[\text{John arrive-Pres-Conj.3s Mary arrive-Fut-Part.3s}\]
\[\text{‘When John arrives, Mary will arrive.’ (relative interpretation)}\]
(239) Situation: A dance competition is being held. John danced this morning. Mary is dancing now.

jaan mumi-qqau-juq  ullaaq  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  pingasuarusiulaqutumit  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), 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

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  ullaaq  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  ullaaq
Mary  dance-Conj.3s  now  Jaan  dance-H.Past-Part.3s  this.morning
‘Mary is dancing now and John danced this morning.’  (absolute interpretation)

41 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).

<table>
<thead>
<tr>
<th>Interpretation</th>
<th>specified temporal relation</th>
<th>relevant examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>absolute (‘and’)</td>
<td>$\text{Time (e}_{\text{sub}}\text{)} = \text{Time (u)}$</td>
<td>(239), (240)</td>
</tr>
<tr>
<td>relative (‘when’)</td>
<td>$\text{Time (e}<em>{\text{sub}}\text{)} = \text{Time (e}</em>{\text{super}}\text{)}$</td>
<td>(238a,b)</td>
</tr>
</tbody>
</table>

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 $e_{\text{sub}}$ temporally precedes $e_{\text{super}}$, 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\textsubscript{sub} occurs in a time outside the day of e\textsubscript{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 -qgau on the relative interpretation entails (i) that e_sub occurs on the same day as e_super and, furthermore, (ii) that e_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-qaq-tuq miali aulla-qgau-tillugu
   John leave-Fut-Part.3s Mary leave-H.Past-Conj.3s
   (John will leave after Mary leaves.)

b. jaan aulla-qaq-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-qaq-tuq qauppat jaan tiki-qgau-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-qaq-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-qgau-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-qgau-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. #qauppattjaan mumi-qqautillugu miali mumi-laaqtuq
tomorrow John dance-H.Past-Conj.3s Mary dance-Fut-Part.3s
(Tomorrow Mary will dance after John dances.)

b. qauppattjaan 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 ε<sub>super</sub> 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.

<table>
<thead>
<tr>
<th></th>
<th>temporal relation</th>
<th>domain restriction</th>
<th>relevant examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>-lauq</td>
<td>Time (ε&lt;sub&gt;sub&lt;/sub&gt;) &lt; Time (ε&lt;sub&gt;super&lt;/sub&gt;)</td>
<td>(none)</td>
<td>(241)-(243)</td>
</tr>
<tr>
<td>-qqau</td>
<td>Time (ε&lt;sub&gt;sub&lt;/sub&gt;) ⊆ Day (u) ∧ Time (ε&lt;sub&gt;sub&lt;/sub&gt;) ⊆ Day (ε&lt;sub&gt;sub&lt;/sub&gt;)</td>
<td>(244), (245), (246a), (247a), (248a), (249a), (250a)</td>
<td></td>
</tr>
</tbody>
</table>

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, ε<sub>sub</sub> is understood to have occurred prior to the day of utterance, but the temporal order between ε<sub>sub</sub> and ε<sub>super</sub> is not necessarily specified.

(251) Situation: Yesterday, John and Mary went out at the same time.

ippatsuq 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 \underline{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_{sub} is understood to have occurred within the day of utterance, but the temporal order and distance between e_{sub} and e_{super} may remain unspecified.

(253) Situation: Today, it rained all afternoon. John arrived around 2 pm.

ullumi jaan tiki-qqau-juq \underline{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 pingasuaruulauqtumit jaan \underline{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 \underline{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 pingasuaruulaaqtumit jaan \underline{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).
<table>
<thead>
<tr>
<th>temporal relation</th>
<th>domain restriction</th>
<th>relevant examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>-lauq</td>
<td>Time $(e_{sub}) &lt; \text{Time} (u)$</td>
<td>(251), (252)</td>
</tr>
<tr>
<td>-qqau</td>
<td>Time $(e_{sub}) \subseteq \text{Day} (u)$</td>
<td>(253)-(256)</td>
</tr>
</tbody>
</table>

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) angiqqa-qqau-junga taaq-si-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) 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.’

(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 incompletion, 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 uqlimaa-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 $e_{sub}$ has not taken place yet at, but is expected to take place after, the time of $e_{super}$, 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 incompleted eventuality, 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 -laluq receives the relative interpretation and indicates that e\textsubscripts{sub} temporally follows e\textsubscripts{super}.

(272) Situation: Mary left Toronto. John left Toronto a week after Mary did.

\begin{verbatim}
miali aulla-lauq-tuq jaan aulla-laluq-tillugu Mary leave-Past-Part.3s John leave-Fut-Conj.3s ‘Mary left when John was going to leave.’
\end{verbatim}

(273) Situation: Mary arrived yesterday. John will arrive today.

\begin{verbatim}
miali tiki-lauq-tuq jaan tiki-laluq-tillugu Mary arrive-Past-Part.3s John arrive-Fut-Conj.3s ‘Mary arrived when John was going to arrive.’
\end{verbatim}

Likewise, (274) and (275) exemplify sentences where a conjunctive clause with -niaq receives the relative interpretation and indicates that e\textsubscripts{sub} temporally follows e\textsubscripts{super}. (Note that the described situations preclude the absolute interpretation of -niaq, specifying that e\textsubscripts{sub} is prior to the utterance time.)

(274) Situation: Today Mary ate at 1 pm. She danced at 2 pm.

\begin{verbatim}
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.’
\end{verbatim}

(275) Situation: John left Toronto yesterday. Mary left Toronto this morning.

\begin{verbatim}
jaan aulla-lauq-tuq Toronto-mit ippatsaq miali aulla-niaq-tillugu ullaaq 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.’
\end{verbatim}

A conjunctive clause with -laluq 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_{super} and e_{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.  kullumi jaan qai-qqau-juq silalu-**lauq**-tillugu
today John come-H.Past-Part.3s rain-Fut-Conj.3s
(Today John came after it rains.)

b.  kullumi 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.  kullumi 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.  kullumi 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.  kullumi jaan qai-qqau-juq silalu-**laaq**-tillugu
today John come-H.Past-Part.3s rain-Past-Conj.3s
‘Today John came after it rains.’

b.  kullumi 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_{sub} occurs on the day of utterance but e_{super} does not, as shown in (279a) and
(280a). Also it does not require that e_{sub} occur after the day of e_{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_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_super. In other words, -niaq can be used only if the time of e_sub is within the day of utterance or within the day of e_super, and -laaq can be used only if the time of e_sub is either outside the day of utterance or outside the day of e_super (Table 7; shading in the ‘domain restriction’ column indicates that the described constraint is an implicature).
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-\texttt{-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-\texttt{-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-\texttt{-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-\texttt{-niaq-tillugu}  
Mary arrive-Past-Part.3s John arrive-H.Fut-Conj.3s  
‘Mary arrived when John was going to arrive.’

<table>
<thead>
<tr>
<th>temporal relation</th>
<th>Domain restriction</th>
<th>relevant examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>-laaq</td>
<td>Time ( (e_{\text{super}}) &lt; ) Time ( (e_{\text{sub}}) )</td>
<td>(276), (279a), (280a), (281)</td>
</tr>
<tr>
<td>-niaq</td>
<td>Time ( (e_{\text{sub}}) \subseteq ) Day ((u) \lor ) Time ( (e_{\text{sub}}) \subseteq ) Day ( (e_{\text{super}}) )</td>
<td>(277), (279b), (280b)</td>
</tr>
</tbody>
</table>

Table 7: The relative interpretation of future tenses within a conjunctive clause
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-\textit{niaq-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-\textit{niaq-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-\textit{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-\textit{niaq-tillugu} \\
    today John come-H.Fut-Part.3s rain-H.Fut-Conj.3s  \\
    ‘Today John will come when it is going to rain.’
The proposed hypothesis entails that in a conjunctive clause on the relative interpretation, -niaq as a tense marker cannot be used if e\textsubscript{super} occurs both after the day of e\textsubscript{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.

\[
\text{miali aulla-lauq-tuq jaan aullar-niaq-tillugu}
\]
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.

\[
\text{qauppat miali mumir-niaq-tillugu jaan tiki-laaq-tuq}
\]
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\textsubscript{sub} temporally follows e\textsubscript{super}. For one thing, as briefly mentioned above, a future-tensed conjunctive clause
appears to carry the nuance that \( e_{sub} \) is planned or supposed to happen at the time of \( e_{super} \), 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 \( e_{super} \) takes place before \( e_{sub} \).

(288) Situation: You will clean the house because your sister, Naulaq, will come.

\[
\text{a. } \text{iglu-ga salummaqsar-niaq-tunga naulaq gai-} \text{-lauq-nngi-tillugu} \\
\text{house-Poss.1s/s clean-H.Fut-Part.1s Naulaq come-Past-Neg-Conj.3s} \\
\text{‘I will clean my house before Naulaq comes.’} \\
\text{b. } \#\text{iglu-ga salummaqsar-niaq-tunga naulaq gai-niaq-tillugu} \\
\text{house-Poss.1s/s clean-H.Fut-Part.1s Naulaq come-H.Fut-Conj.3s} \\
\text{(I will clean my house before Naulaq comes.)} \\
\text{b. } \#\text{iglu-ga salummaqsa-laaq-tunga naulaq gai-laaq-tillugu} \\
\text{house-Poss.1s/s clean-Fut-Part.1s Naulaq come-Fut-Conj.3s} \\
\text{(I will clean my house before Naulaq comes.)}
\]

(289) Situation: Today you came home before it got dark.

\[
\text{a. } \text{angiqqa-qqau-junga taaq-si-lau-nngi-tillugu} \\
\text{come.home-H.Past-Part.1s dark-Inc-Past-Neg-Conj.3s} \\
\text{‘Today I came home before it got dark.’} \\
\text{b. } \#\text{angiqqa-qqau-junga taaq-si-niaq-tillugu} \\
\text{come.home-H.Past-Part.1s dark-Inc-H.Fut-Neg-Conj.3s} \\
\text{(Today I came home before it got dark.)}
\]

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 \textit{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 \textit{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-llaq-tara tuqu-lau-ngit-tillugu
    plant water-Fut-Part.1s/3s die-Past-Neg-Conj.3s
    ‘I will water the plant before it dies.’

b. #piruqsiaq immili-llaq-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-llaq-tara tuqu-luaq-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 suili irngutanga-nit taku-lau-ngi-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 suili 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 suili irngutanga-nit taku-luaq-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 -llaq receives the absolute interpretation. In such sentences, e_{sub} is generally interpreted as occurring after the day of utterance, while the temporal order between e_{sub} and e_{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.

\[
\text{qauppat silalu-} \text{laaq-} \text{tillugu} \quad \text{jaan tiki-laaq-tuq} \\
\text{tomorrow rain-Fut-Conj.3s} \quad \text{John arrive-Fut-Part.3s}
\]

‘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. \[
\text{jaan mumi-laaq-tuq miali mumi-} \text{laaq-tillugu} \\
\text{John dance-Fut-Part.3s Mary dance-Fut-Conj.3s}
\]

‘John will dance and Mary will dance.’

b. \[
\text{miali mumi-laaq-tuq jaan mumi-} \text{laaq-tillugu} \\
\text{Mary dance-Fut-Part.3s John dance-Fut-Conj.3s}
\]

‘Mary will dance and John will dance.’

(295)-(297) exemplify sentences where a conjunctive clause with \text{-niaq} receives the absolute interpretation. In such sentences, \text{e_{sub}} is interpreted as occurring within the day of utterance, while the temporal order and distance between \text{e_{super}} and \text{e_{sub}} may not be specified:

(295) Situation: The weather forecast says that it will rain all afternoon. John will arrive around 2 pm.

\[
\text{ullumi silalung-} \text{niaq-} \text{tillugu} \quad \text{jaan tiki-niaq-tuq} \\
\text{today rain-H.Fut-Conj.3s} \quad \text{John arrive-H.Fut-Part.3s}
\]

‘Today while it is raining, John will arrive.’

(296) Situation: Today, John will arrive in the morning and Mary will dance in the afternoon.

\[
\text{ullumi miali mumir-niaq-tuq jaan tiki-} \text{niaq-tillugu} \\
\text{today Mary dance-H.Fut-Part.3s John arrive-H.Fut-Conj.3s}
\]

‘Today Mary will dance and John will arrive.’

(297) Situation: Mary will leave tomorrow. John will leave today.

\[
\text{qauppat miali aulla-laaq-tuq jaan ullumi aullar-} \text{niaq-tillugu} \\
\text{tomorrow Mary leave-Fut-Part.3s John today leave-H.Fut-Conj.3s}
\]

‘Tomorrow Mary will leave and John will leave today.’

135
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).

<table>
<thead>
<tr>
<th>temporal relation</th>
<th>Domain restriction</th>
<th>relevant examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>-laaq</td>
<td>Time(u) &lt; Time(e_{super})</td>
<td>Time(e_{sub}) \notin Day(u)</td>
</tr>
<tr>
<td>-niaq</td>
<td>Time(e_{sub}) \subseteq Day(u)</td>
<td>(295)-(297)</td>
</tr>
</tbody>
</table>

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_{super}. 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} occurs on the day of utterance and on the day of e_{super} (or in other words, e_{sub} and e_{super} 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_{super}, so that -niaq can be used if e_{sub} occurs either on the day of utterance or on the day of e_{super}. The use of -laaq is blocked within the domain of -niaq; consequently -laaq is blocked only when both e_{sub} and e_{super} 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 Kangiryuarmiut and Siglit Inuvialuit (Western Canadian Inuktun) and Uummarmiut (North Alaskan Iñupiaq); Dorais,
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. \textit{tiki-\texttt{gavit} aliasu-laur-tunga} arrive-Pres-Caus.2s be.happy-Past-Part.1s ‘When you arrived, I rejoiced.’

b. \textit{tiki-\texttt{mmat} aliasu-\texttt{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. \textit{kaak-\texttt{kama} niri-langa-si-\texttt{junga}} hungry-Pres-Caus.1s eat-Pros-Inc-Pres-Part.1s ‘Because I am hungry, I am going to eat.’

b. \textit{tusarna-li-\texttt{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. \textit{#uqaalauti sivani-lauq-tuq niri-\texttt{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-∅-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-∅-tillunga
    phone ring-Past-Part.3s eat-Pres-Conj.1s
    ‘The phone rang when I was eating.’

    b. silalu-li-lauq-tuq Toronto-muuq-∅-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-∅-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-∅-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’. 42

(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.’

42 Dorais (1988) reports the same for the causative clause in Inuktitut spoken in Arctic Quebec.
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-$\emptyset$-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-ngit-tunga irni-ra aannia-$\emptyset$-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-ngit-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-$\emptyset$-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  
\textbf{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 $e_{\text{sub}}$ occurs at the same time as $e_{\text{super}}$, the causative clause must be future-tensed, rather than present-tensed, as shown in (307) and (308).

(307) a. #ullumi amy qia-niaq-tuq  
\textbf{jaan}  
\textbf{aulla-Ø-nigmat}  
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  
\textbf{jaan}  
\textbf{aulla-nia-nigmat}  
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  
\textbf{jaan}  
\textbf{aulla-Ø-nigmat}  
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  
\textbf{jaan}  
\textbf{aulla-laa-nigmat}  
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  
\textbf{kiinaujar-nit}  
\textbf{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.\(^{43}\) (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. \#\textit{tuqsulaa-vigi-qqau-jara} tusa{-\textit{qqau/-laau}-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-\textit{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 tusar-\textit{laa-ngmaanga}  
yell-to-Past-Part.1s/3s hear-Fut-Caus.3s/1s  
‘I yelled so that he could hear me.’

(311) a. \#\textit{tuqsulaa-vigi-lauq-tara} tusa{-\textit{qqau/-laau}-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-\textit{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 tusar-\textit{laa-ngmaanga}  
yell-to-Past-Part.1s/3s hear-Fut-Caus.3s/1s  
‘I yelled so that he could hear me.’

(312) a. \#\textit{avvu-lauq-tunga} kiinaujar-nit nunasiuti-taa{-\textit{qqau/-laau}-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-\textit{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-\textit{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. \#\textit{tuqsulaar{-niaq/-laaq}-tunga} tusa-gunna{-\textit{qqau/-laau}-ngmaanga}  
yell{-H.Fut/Fut}-Part.1s hear-can{-H.Past/-Past}-Caus.3s/1s  
‘I will yell so that he can hear me.’

\(^{43}\) 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. tuqulaang{-niaq/-laaq}-tunga tusagnar-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:44

(314) (i) When the superordinate clause is past-tensed, the domain of -niaq is the day of e
  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 super.

These patterns are summarized in Table 9.

<table>
<thead>
<tr>
<th>superordinate tense</th>
<th>subordinate tense</th>
<th>temporal relation</th>
<th>domain restriction</th>
</tr>
</thead>
<tbody>
<tr>
<td>past</td>
<td>-laaq</td>
<td>Time(e super) &lt; Time(e sub)</td>
<td>Time(e sub) ∉ Day(e super)</td>
</tr>
<tr>
<td></td>
<td>-niaq</td>
<td></td>
<td>Time(e sub) ⊆ Day(e super)</td>
</tr>
<tr>
<td>future</td>
<td>-laaq</td>
<td></td>
<td>Time(e sub) ⊆ Day(u) \∨</td>
</tr>
<tr>
<td></td>
<td>-niaq</td>
<td></td>
<td>Time(e sub) ⊆ Day(e super)</td>
</tr>
</tbody>
</table>

Table 9: The relative interpretation of future tenses within a causative clause serving as a purpose
clause

44 When a purpose clause occurs under a present-tensed clause, the use of -laaq is possible only if e sub is
subsequent to the day of utterance (= the day of e 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 super.
Let us first consider generalization (314i). (315b) illustrates that -lauq cannot be used in the configuration where e_{sub} and e_{super} occur on the same day but not within the day of utterance (note that the matrix tense -lauq indicates that e_{super} is in a time preceding the day of utterance). In other words, -lauq is not allowed within the day of e_{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_{super}, and that it is not shiftable to the day of utterance (If it was, -lauq would be allowed as long as e_{sub} occurs outside the day of utterance). (316) conforms to this analysis. It illustrates that when e_{sub} occurs on the day of utterance and outside the day of e_{super}, the use of -lauq 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_{super}, and thus entails that -niaq as a tense marker may not occur in place of -lauq in (316), which is in a configuration where e_{sub} occurs outside the day of e_{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.

`uqalaq-vi-lauq-tara uva-nnit ikaju-gunna-n`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. #tuqsu-laa-niaq-tunga tusa-gunna-nia-ngaanga
   yell-H.Fut-Part.1s hear-can-Fut-Caus.3s/1s
   (I will yell so that he can hear me.)

b. tuqsu-laaq-tunga tusa-gunnar-n`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. tuqsu-laaq-tunga tusa-gunna-n`ngmaanga
   yell-Fut-Part.1s hear-can-Fut-Caus.3s/1s
   ‘I will yell so that he can hear me.’

b. tuqsu-laaq-tunga tusa-gunnar-n`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

super. To determine if the domain of -niaq may be set to the day of e

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

sub occurs on the same day as e

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

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

super under a past-tensed superordinate clause, but is shiftable between the day of utterance and the day of e

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-ŋ-ŋmat
   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’.)
(325) a. jaan uqa-lauq-tuq miali singai-∅-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 igalu-ntit silalu-∅-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 igalu-ntit 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_sub occurs on Day(r), and
sometimes on whether e_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).\textsuperscript{45} 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).

<table>
<thead>
<tr>
<th>superordinate tense</th>
<th>subordinate tense</th>
<th>temporal relation</th>
<th>domain restriction</th>
</tr>
</thead>
<tbody>
<tr>
<td>past</td>
<td>-lauq</td>
<td>Time(e\textsubscript{sub}) &lt; Time(r)</td>
<td>(Time(e\textsubscript{sub}) \notin Day(u))</td>
</tr>
<tr>
<td></td>
<td>-qqau</td>
<td></td>
<td>Time(e\textsubscript{sub}) \subseteq Day(u)</td>
</tr>
<tr>
<td>Future</td>
<td>-lauq</td>
<td></td>
<td>(Time(e\textsubscript{sub}) \notin Day(u) \lor Time(e\textsubscript{sub}) \notin Day(r))</td>
</tr>
<tr>
<td></td>
<td>-qqau</td>
<td></td>
<td>Time(e\textsubscript{sub}) \subseteq Day(u) \lor Time(e\textsubscript{sub}) \subseteq Day(r)</td>
</tr>
</tbody>
</table>

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\textsubscript{sub} is within Day(u), (ii) whether e\textsubscript{sub} is within Day(r), and (iii) whether the superordinate tense is past or future (Table 11).

\textsuperscript{45} Complement clauses under a present-tensed clause will not be discussed.
<table>
<thead>
<tr>
<th>configurations</th>
<th>possible scenarios</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>superordinate tense: past</strong></td>
<td></td>
</tr>
<tr>
<td>(A) $\text{Time}(e_{\text{sub}}) \subseteq \text{Day}(u) \land \text{Time}(e_{\text{sub}}) \subseteq \text{Day}(r)$</td>
<td>‘$\text{Time}(e_{\text{sub}})$ and $\text{Time}(r)$ are both within today. (‘X said today that Y happened today.’)’</td>
</tr>
<tr>
<td>(B) $\text{Time}(e_{\text{sub}}) \subseteq \text{Day}(u) \land \text{Time}(e_{\text{sub}}) \not\subseteq \text{Day}(r)$</td>
<td>(none)</td>
</tr>
<tr>
<td>(C) $\text{Time}(e_{\text{sub}}) \not\subseteq \text{Day}(u) \land \text{Tim}(e_{\text{sub}}) \subseteq \text{Day}(r)$</td>
<td>‘$\text{Time}(e_{\text{sub}})$ and $\text{Time}(r)$ are both within yesterday. (‘X said yesterday that Y happened yesterday.’)’</td>
</tr>
<tr>
<td>(D) $\text{Time}(e_{\text{sub}}) \not\subseteq \text{Day}(u) \land \text{Time}(e_{\text{sub}}) \not\subseteq \text{Day}(r)$</td>
<td>‘$\text{Time}(e_{\text{sub}})$ is within the day before yesterday; $\text{Time}(r)$ is within yesterday. (‘X said yesterday that Y happened the day before yesterday.’)’</td>
</tr>
<tr>
<td><strong>superordinate tense: future</strong></td>
<td></td>
</tr>
<tr>
<td>(E) $\text{Time}(e_{\text{sub}}) \subseteq \text{Day}(u) \land \text{Time}(e_{\text{sub}}) \subseteq \text{Day}(r)$</td>
<td>‘$\text{Time}(e_{\text{sub}})$ and $\text{Time}(r)$ are both within today. (‘X will say today that Y happened today.’)’</td>
</tr>
<tr>
<td>(F) $\text{Time}(e_{\text{sub}}) \subseteq \text{Day}(u) \land \text{Time}(e_{\text{sub}}) \not\subseteq \text{Day}(r)$</td>
<td>‘$\text{Time}(e_{\text{sub}})$ is within today; $\text{Time}(r)$ is within tomorrow. (‘X will say tomorrow that Y happened today.’)’</td>
</tr>
<tr>
<td>(G) $\text{Time}(e_{\text{sub}}) \not\subseteq \text{Day}(u) \land \text{Tim}(e_{\text{sub}}) \subseteq \text{Day}(r)$</td>
<td>‘$\text{Time}(e_{\text{sub}})$ and $\text{Time}(r)$ are both within tomorrow. (‘X will say tomorrow that Y happened tomorrow.’)’</td>
</tr>
<tr>
<td>(H) $\text{Time}(e_{\text{sub}}) \not\subseteq \text{Day}(u) \land \text{Time}(e_{\text{sub}}) \not\subseteq \text{Day}(r)$</td>
<td>‘$\text{Time}(e_{\text{sub}})$ is within tomorrow; $\text{Time}(r)$ is within the day after tomorrow. (‘X will say the day after tomorrow that Y happened tomorrow.’)’</td>
</tr>
</tbody>
</table>

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 *-qgau* 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$_{sub}$), 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 aulla-qqau-ngmat ullaq
   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 aulla-lau-ngmat ullaq
   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-∅-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-∅-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
   kamalu-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.’
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 -lauq.)

There is no possible scenario where configuration (B) (e\textsubscript{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 (Time(r) < Time(u)), and the embedded past tense indicates that the time of e\textsubscript{sub} precedes the time of the reported utterance/attitude (Time(e\textsubscript{sub}) < Time(r) < Time(u), in short); if e\textsubscript{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), -lauq is the only option; when the superordinate tense is -lauq, the subordinate tense cannot be -qqau, because -lauq in the superordinate clause indicates that e\textsubscript{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-H.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 ullaaq 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 ullaaq today Mary say-H.Fut-Part.3s John leave-Past-Caus.3s this.morning
   ‘Today Mary will say that John left this morning.’
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.)

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).’

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. Midor 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).

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 aulla-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 aulla-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 aulla-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 aulla-lau-ngmat
tomorrow Mary say-Fut-Part.3s John leave-Past-Caus.3s
‘Tomorrow Mary will say that John left.’
In configuration (H) (e_{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_{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 -lauq 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 -lauq is put in parenthesis to indicate its unstable status).

<table>
<thead>
<tr>
<th>superordinate tense</th>
<th>subordinate tense</th>
<th>temporal relation</th>
<th>domain restriction</th>
</tr>
</thead>
</table>
| (irrelevant)        | -lauq             | Time(r) < Time(e
textsub) | (Time(e
sub) \notin Day(u) \lor Time(e
sub) \notin Day(r)) |
|                     | -niaq             | Time(\text{e_sub}) \subseteq Day(u) \lor Time(\text{e_sub}) \subseteq 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).
<table>
<thead>
<tr>
<th>Configurations</th>
<th>possible scenarios</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>superordinate tense: past</strong></td>
<td></td>
</tr>
<tr>
<td>(I) Time(e_{sub}) \subseteq \text{Day(u)} \land Time(e_{sub}) \subseteq \text{Day(r)}</td>
<td>'Time(e_{sub}) and Time(r) are both within today. ('X said today that Y would happen today.')</td>
</tr>
<tr>
<td>(J) Time(e_{sub}) \subseteq \text{Day(u)} \land Time(e_{sub}) \not\subseteq \text{Day(r)}</td>
<td>'Time(e_{sub}) is within yesterday; Time(r) is within today. ('X said yesterday that Y would happen today.')</td>
</tr>
<tr>
<td>(K) Time(e_{sub}) \not\subseteq \text{Day(u)} \land Time(e_{sub}) \subseteq \text{Day(r)}</td>
<td>'Time(e_{sub}) and Time(r) are both within yesterday. ('X said yesterday that Y would happen yesterday.')</td>
</tr>
<tr>
<td>(L) Time(e_{sub}) \not\subseteq \text{Day(u)} \land Time(e_{sub}) \not\subseteq \text{Day(r)}</td>
<td>'Time(e_{sub}) is within yesterday; Time(r) is within the day before yesterday. ('X said the day before yesterday that Y would happen yesterday.')</td>
</tr>
<tr>
<td><strong>superordinate tense: future</strong></td>
<td></td>
</tr>
<tr>
<td>(M) Time(e_{sub}) \subseteq \text{Day(u)} \land Time(e_{sub}) \subseteq \text{Day(r)}</td>
<td>'Time(e_{sub}) and Time(r) are both within today. ('X will say today that Y will happen today.')</td>
</tr>
<tr>
<td>(N) Time(e_{sub}) \subseteq \text{Day(u)} \land Time(e_{sub}) \not\subseteq \text{Day(r)}</td>
<td>(none)</td>
</tr>
<tr>
<td>(O) Time(e_{sub}) \not\subseteq \text{Day(u)} \land Time(e_{sub}) \subseteq \text{Day(r)}</td>
<td>'Time(e_{sub}) and Time(r) are both within tomorrow. ('X will say tomorrow that Y will happen tomorrow.')</td>
</tr>
<tr>
<td>(P) Time(e_{sub}) \not\subseteq \text{Day(u)} \land Time(e_{sub}) \not\subseteq \text{Day(r)}</td>
<td>'Time(e_{sub}) is within the day after tomorrow; Time(r) is within tomorrow. ('X will say tomorrow that Y will happen the day after tomorrow.')</td>
</tr>
</tbody>
</table>

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_{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.
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-laar-rami unnukkut
   say-H.Past-Part.3s you-All phone-Fut-Caus.3Rs at.night
   ‘She said that she would call you tonight.’

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. ullaaq uqa-qqau-jutit pisu-rajaa-raqiti-riaa-viik 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).’

b. #ullaaq uqa-qqau-jutit pisu-rajaa-raqiti-riaa-viik 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).)

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-laar-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_sub is within Day(u) and outside Day(r)) and (K), which is exemplified in (352) and (353)) (e_sub is outside Day(u) and within Day(r)), the use of -laaq is fully acceptable, which implies that the domain of -niaaq is shiftable in a complement clause under a past tense. If the domain of -niaaq 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 -niaaq 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 angiggar-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 angigga-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 angiggar-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 angigga-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_{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 illin nut jaan uqaala-laα-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-laα-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 -laαq are not affected by the superordinate tense). Configuration (M) is analogous to configuration (I) in that e_{sub} is both within Day(u) and Day(r); here too, -niaq is fully acceptable while -laαq 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-\textit{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 \textit{sini-gasua-saali-nia-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.'

b. ullumi jurgen uqar-niaq-tuq \textit{sini-gasua-saali-laam-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 \textit{ani-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 \textit{ani-laam-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 \textit{pisu-raja-qatigi-rami-ngaamuk 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 \textit{pisu-raja-qatigi-laam-ngaamuk 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) (\textit{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., Time(u) < Time(r)), and the embedded future tense indicates that the time of the reported utterance/attitude precedes the time of \textit{e}_{\text{sub}} (Time(u) < Time(r) < Time(\textit{e}_{\text{sub}}), in short); if \textit{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-\textbf{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-\textbf{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-\textbf{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) $\lor$ 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 ullaaq uvvalunniit  
John coffee-consume-niaq-Part.3s this.morning or tii-tur-niaq-tuq ullaaq  
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 
```
jaan kaapi-tur-niaq-tuq qauppat ullaaq 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 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-nngmat 
tomorrow Emily say-Fut-Part.3s John coffee-consume-H.Fut-Caus.3s uninusakkut uvvalunniit jaan tii-tur-nia-nngmat 
in.the.afternoon or John tea-consume-H.Fut-Caus.3s uninusakkut 
in.the.afternoon
```

164
'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. (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  
et-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:

\[\text{(i) } a. \quad \text{apuuk-kuni} \quad \text{niri-guma-ssa-aq} \]
\[\text{arrive-Cond.3Rs} \quad \text{eat-want-future-Ind.3s} \]
\[\text{‘When he arrives he will want to eat.’} \]
\[\text{West Greenlandic, Fortescue, 1984:56, glosses slightly modified}\]

\[\text{b. } \text{pakasa-anna-rukku} \quad \text{pissanganar-niru-vuq} \]
\[\text{surprise-just-Cond.2s/3s} \quad \text{be.exciting-more-Ind.3s} \]
\[\text{‘If you just surprise him it will be more exciting.’} \]
\[\text{West Greenlandic, Fortescue, 1984:66 glosses slightly modified}\]

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.

\[\text{(ii) } \text{Situation: Your friend, Janet, will arrive by train from Hamilton at 2:00pm. The weather forecast says that it will rain all afternoon tomorrow. So, Janet will arrive in Toronto when it is raining.}\]

\[\text{a. } \text{#qauppat janet tiki-laaq-tuq} \quad \text{silaluk-Ø-pat} \]
\[\text{tomorrow Janet arrive-Fut-Part.3s} \quad \text{rain-Pres-Cond.3s} \]
\[\text{‘Tomorrow Janet will arrive when it is raining.’}\]

\[\text{b. } \text{qauppat janet tiki-laaq-tuq} \quad \text{silaluk-Ø-tillugu} \]
\[\text{tomorrow Janet arrive-Fut-Part.3s} \quad \text{rain-Pres-Conj.3s} \]
\[\text{‘Tomorrow Janet will arrive when it is raining.’}\]

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, uqaaluti 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. *ganni-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*. 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.)

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47 *-gajaq*, like *-lluaq* ‘should’, cannot co-occur with a future tense marker (see Section 4.4.2).

169
(373) exemplifies a present-tensed non-counterfactual conditional clause describing a future state of affairs.

(373) a. salatsa-Ø-ngi-**kkum**a 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 coffee.’

A future tense cannot occur in a conditional clause, even if it describes a future state of affairs.

(374) a. *salatsar-[niaq/-laa]{-niaq/-laa}]-nn**g**i-**kkum**a 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-ru**ni**] 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]{-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 -**qgau** (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-lluia-liq-∅-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-qgau-guni sila-mit quausi-lluia-∅-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-∅-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-qgau-gukku luttaq ullumi akausi-niqsa-u-gajaq-∅-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.  

(379) a.  \texttt{igvi-u-lau-ruma quviasu-gajaq-Ø-tunga}  
\quad you-be-Past-Cond.1s happy-would-Pres-Part.1s  
\quad ‘If I were you, I would be happy.’  

b.  \texttt{uqalima-gunna-lau-ruma}  
\quad Chinese-titut quviasu-gajaq-Ø-tunga  
\quad speak-can-Past-Cond.1s Chinese-like happy-would-Pres-Part/1s  
\quad ‘If I could/is able to speak Chinese, I would be happy.’  

-\texttt{qqau}, on the other hand, cannot be used as a fake past.

(380) a.  \texttt{*igvi-u-qqau-guma quviasu-gajaq-Ø-tunga}  
\quad you-be-H.Past-Cond.1s happy-would-Pres-Part.1s  
\quad ‘If I were you, I would be happy.’  

b.  \texttt{*uqalima-gunna-qqau-guma}  
\quad Chinese-titut quviasu-gajaq-Ø-tunga  
\quad speak-can-H.Past-Cond.1s Chinese-like happy-would-Pres-Part.1s  
\quad ‘If I could/was able to speak Chinese, I would be happy.’  

-\texttt{lauq} may also occur within a counterfactual conditional clause describing a state of affairs in a past time within today, although -\texttt{qqau} is the preferred choice in this configuration. That is, -\texttt{lauq} may replace -\texttt{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.  \texttt{taku-qqau-gukku} luttaq ullumi akau-si-niqsa-u-gajaq-Ø-tunga  
\quad see-H.Past.1s/3s doctor today be.good-Inc-more-be-would-Pres-Part.1s  
\quad ‘If I had seen a doctor today, I would have been feeling better.’  

b.  \texttt{taku-lau-ruku} luttaq ullumi akau-si-niqsa-u-gajaq-Ø-tunga  
\quad see-Past-Cond.1s/3s doctor today good-Inc-more-be-would-Pres-Part.1s  
\quad ‘If I had seen a doctor today, I would have been feeling better.’  

\textsuperscript{48} 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-laugh-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 aakusiniq-sau-gajaq-∅-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 aakusiniq-sau-gajaq-∅-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 (-\textit{niaq} or -\textit{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 -\textit{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.
### Conjunctive clause

<table>
<thead>
<tr>
<th>superordinate tense</th>
<th>subordinate tense</th>
<th>temporal relation</th>
<th>domain restriction</th>
</tr>
</thead>
<tbody>
<tr>
<td>(irrelevant)</td>
<td>∅</td>
<td>Time(e\textsubscript{sub}) = Time(e\textsubscript{super})</td>
<td>(none)</td>
</tr>
<tr>
<td></td>
<td>-lauq</td>
<td>Time(e\textsubscript{sub}) &lt; Time(e\textsubscript{super})</td>
<td>(none)</td>
</tr>
<tr>
<td></td>
<td>-qqau</td>
<td></td>
<td>Time(e\textsubscript{sub}) \subseteq Day(u) \land Time(e\textsubscript{sub}) \subseteq Day(e\textsubscript{sub})</td>
</tr>
<tr>
<td></td>
<td>-laaq</td>
<td>Time(e\textsubscript{super}) &lt; Time(e\textsubscript{sub})</td>
<td>(Time(e\textsubscript{sub}) \subseteq Day(u) \lor Time(e\textsubscript{sub}) \subseteq Day(e\textsubscript{super}))</td>
</tr>
<tr>
<td></td>
<td>-niaq</td>
<td></td>
<td>Time(e\textsubscript{sub}) \subseteq Day(u) \lor Time(e\textsubscript{sub}) \subseteq Day(e\textsubscript{super})</td>
</tr>
</tbody>
</table>

### Causative clause serving as a purpose clause

<table>
<thead>
<tr>
<th>superordinate tense</th>
<th>subordinate tense</th>
<th>specified temporal relation</th>
<th>domain restriction</th>
</tr>
</thead>
<tbody>
<tr>
<td>past</td>
<td>-lauq</td>
<td>Time(e\textsubscript{super}) &lt; Time(e\textsubscript{sub})</td>
<td>Time(e\textsubscript{sub}) \subseteq Day(e\textsubscript{super})</td>
</tr>
<tr>
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<td>-niaq</td>
<td></td>
<td>Time(e\textsubscript{sub}) \subseteq Day(e\textsubscript{super})</td>
</tr>
<tr>
<td>Future</td>
<td>-lauq</td>
<td></td>
<td>Time(e\textsubscript{sub}) \subseteq Day(u) \lor Time(e\textsubscript{sub}) \subseteq Day(e\textsubscript{super})</td>
</tr>
<tr>
<td></td>
<td>-niaq</td>
<td></td>
<td>Time(e\textsubscript{sub}) \subseteq Day(u) \lor Time(e\textsubscript{sub}) \subseteq Day(e\textsubscript{super})</td>
</tr>
</tbody>
</table>

### Causative clause serving as a complement clause

<table>
<thead>
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<th>superordinate tense</th>
<th>subordinate tense</th>
<th>specified temporal relation</th>
<th>domain restriction</th>
</tr>
</thead>
<tbody>
<tr>
<td>past</td>
<td>-lauq</td>
<td>Time(e\textsubscript{sub}) &lt; Time(r)</td>
<td>(Time(e\textsubscript{sub}) \subseteq Day(u))</td>
</tr>
<tr>
<td></td>
<td>-qqau</td>
<td></td>
<td>Time(e\textsubscript{sub}) \subseteq Day(u)</td>
</tr>
<tr>
<td></td>
<td>-laaq</td>
<td>Time(r) &lt; Time(e\textsubscript{sub})</td>
<td>(Time(e\textsubscript{sub}) \subseteq Day(u) \lor Time(e\textsubscript{sub}) \subseteq Day(r))</td>
</tr>
<tr>
<td></td>
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<td></td>
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</tr>
<tr>
<td>Future</td>
<td>-lauq</td>
<td>Time(e_{sub}) &lt; Time(r)</td>
<td>(Time(e_{sub}) ∉ Day(u) ∨ Time(e_{sub}) ∉ Day(r))</td>
</tr>
<tr>
<td>----------</td>
<td>---------------------</td>
<td>-------------------------</td>
<td>---------------------------------------------------</td>
</tr>
<tr>
<td>-qqau</td>
<td></td>
<td></td>
<td>Time(e_{sub}) ⊆ Day(u) ∨ Time(e_{sub}) ⊆ Day(r)</td>
</tr>
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<td>(Time(e_{sub}) ∉ Day(u) ∨ Time(e_{sub}) ∉ Day(r))</td>
<td></td>
</tr>
<tr>
<td>-niaq</td>
<td></td>
<td></td>
<td>Time(e_{sub}) ⊆ Day(u) ∨ Time(e_{sub}) ⊆ Day(r)</td>
</tr>
</tbody>
</table>

Table 14: Summary of the interpretation of relatively interpreted tenses within the three types of dependent clauses
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 -laug 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 -jiuul, and the distant past encoded by -lauqsimma, 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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