

Future Discourse in a Tenseless Language

MARIA BITTNER
Rutgers University

Abstract

The Eskimo language Kalaallisut (*alias* West Greenlandic) has traditionally been described as having a rich tense system, with three future tenses (Kleinschmidt 1851, Bergsland 1955, Fortescue 1984) and possibly four past tenses (Fortescue 1984). Recently however, Shaer (2003) has challenged these traditional claims, arguing that Kalaallisut is in fact tenseless.

This paper settles the debate, in favor of Shaer, based on text studies examining how the English future auxiliaries *will/would* and *is/was going to* are rendered in Kalaallisut translations of five books: *Harry Potter*, *The Old Man and the Sea*, *Pippi Longstocking* (translated from the Swedish), *The Blind Colt*, and *Black Star, Bright Dawn*. The results of these five text studies are reported here in detail and in theory-neutral terms. They conclusively show that Kalaallisut is truly tenseless, but has an alternative system that conveys temporal information, even about the future, as precisely as the English tenses.

Is it possible for a language to have no tense marking at all? And if so, how would one talk about the past, present and future? Typological surveys of tense systems generally report some languages as tenseless—for instance, Lakhota and Chamorro (Chung and Timberlake 1985), or Burmese and Dyirbal (Comrie 1985). But surveys do not offer any detailed evidence and until recently, neither did model-theoretic semantic literature. By now, however, we have a substantial body of evidence that the following languages may be tenseless: Yukatek Maya (Bohnenmeyer 2002), West Greenlandic (Shaer 2003), and possibly Mohawk (Baker and Travis 1997). In addition, the syntactic work of Ritter and Wiltschko (2004) suggests that Blackfoot (Algonquian) and Halkomelem (Salish) may be tenseless as well.

At this point, a skeptic may still consider this evidence inconclusive. In this report I aim to provide conclusive evidence for West Greenlandic, which reference grammars describe as tensed, unlike Shaer (2003). I prefer to call this language by its official name, *Kalaallisut*, to highlight its political status as the language of a country, *Kalaallit Nunaat*, which includes all of Greenland, not just the west coast. The true name Kalaallisut also highlights the linguistic relation to Inuktitut and other Eskimo languages.

My goal here is to report the relevant facts of Kalaallisut in theory-neutral terms and in enough detail to demonstrate two claims. One, that Kalaallisut is truly tenseless. And two, that nonetheless, it conveys temporal information as precisely as the English tenses, but by means of a very different system. This demonstration will include a detailed description of the Kalaallisut alternative to a tense system. I devote special attention to discourses about the future, because it is particularly difficult to imagine how one could talk about the future without any tense.

The paper is organized as follows. The claim that Kalaallisut is tenseless is of most theoretical interest if we adopt maximally liberal criteria for what counts as a tense marker. The criteria I adopt are spelled out in section 1. By these criteria, the English tense system includes not just tense inflections, but also two future auxiliaries: *will/would* and *is/was going to*. Though otherwise very different, Kalaallisut is also an inflecting language. Its full inflectional system is described in section 2. This system is clearly tenseless, but it still predictably locates non-future eventualities in time based on aspect and context. Section 3 then turns to a long-standing controversy whether certain pre-inflectional suffixes in Kalaallisut are semantically equivalent to Germanic future auxiliaries. In section 4 I give a negative answer based on the results of five text studies examining how the English future auxiliaries are rendered in the Kalaallisut translations of five books: *Harry Potter*, *The Old Man and the Sea*, *Pippi Longstocking* (translated from the Swedish), *Blind Colt*, and *Black Star, Bright Dawn*. It transpires that the Kalaallisut translations of *will/would* and *is/was going to* comprise some thirty morphemes. While morphologically diverse, they form a natural semantic class which I characterize by means of a PROSPECTIVITY THESIS. The claims of this thesis are then supported, point for point, with detailed text-based evidence in section 5. Finally, section 6 presents my conclusions.

1 LIBERAL CRITERIA FOR TENSE

Claims of tenselessness are of most theoretical interest if they assume maximally inclusive criteria for what counts as a tense marker. But to be meaningful, the criteria must also reflect the actual use of the term *tense* in descriptive work. The following quotes from a typological survey of tense, aspect, and mood systems, and from a monograph on tense in English, offer intuitively clear and consistent criteria, which I shall endeavor to apply:

- Tense, aspect, and mood are all categories that further specify [...] the basic predication, which can be referred to as the event. Tense locates the event in time. Aspect characterizes the internal temporal structure of the event. Mood describes the actuality of the event in terms such as possibility, necessity, or desirability. [...] an event occurs on an interval of time, the event frame [MB: *reference time*]. Tense locates the event in time by comparing the position of the frame with respect to the tense locus [MB: *now* or *then*]. (Chung & Timberlake 1985:202–3)
- There are essentially two kinds of linguistic devices that allow the speaker to express temporal reference. The first one is TENSE, that is, a systematic grammatical marking of the verb (by affixes, vowel alternations, auxiliaries, sometimes particles);...The other devices are adverbials of different types (*yesterday, next week, when the saints go marching in*, etc) (Klein 1994:16)

By these criteria, all of the italicized elements in English (1) and ChiBemba (2) arguably qualify as tense markers—that is, grammatical markers that locate eventualities in time.

- (1) English
Past TENSE inflections
 He *was* asleep.
 He *slept* until noon.
- Present TENSE.ASPECT inflections
 He *is* asleep.
 He *sleeps* until noon. (*habit*)
- Future TENSE.ASPECT.MOOD auxiliaries
 He *will* sleep until noon.
 He *would* sleep until noon. (*habit* or *hypothesis*)
- Immediate future TENSE.ASPECT auxiliaries
 He *is going to* sleep until noon.
 He *was going to* sleep until noon.
- (2) ChiBemba (Givon 1972, Chung & Timberlake 1985:208, 227–28)
Past TENSE.ASPECT inflections
 ba-àlí-bomb-*ele* ‘they worked (before yesterday)’
 ba-àléé-bomba ‘they were working/kept on working/worked
 repeatedly (before yesterday)’
 ba-àlíí-bomba ‘they worked (yesterday)’
 ba-àcí-bomba ‘they worked (today)’
 ba-à-bomba ‘they worked (within the last three hours)’
- Present TENSE.ASPECT inflections
 ba-léé-bomba ‘they are working’
 ba-lâ-bomba ‘they work’
- Future TENSE.ASPECT inflections
 ba-àláá-bomba ‘they’ll work (soon, within three hours)’
 ba-léé-bomba ‘they’ll work (later today)’
 ba-kà-bomba ‘they’ll work (tomorrow)’
 ba-ká-bomba ‘they’ll work (after tomorrow)’

It is not required that a tense marker *only* mark temporal location: it may also mark, e.g., aspect or mood. As (1) and (2) suggest, and Chung and Timberlake (1985) confirm, such fusion is common. A tense marker may also be morphologically complex—like the auxiliary *is going to*, which Klein (1994:19) counts as a future tense auxiliary, along with *will*.¹

A *tense system* is a grammatical paradigm such that exactly one term of this paradigm—one *tense marker*—is required to form a grammatical finite clause. This distinguishes, e.g., the metrical tense system of ChiBemba from the temporal adverbs of English. The grammar of ChiBemba requires

¹ I am not committed to Klein’s view: arguably, *is/was going to* is better analyzed as an instance of the present/past tense plus an aspectual auxiliary *be going to*. My point is that even if one allows tense auxiliaries to be complex, one still will not find any in Kalaallisut.

the tense affixes italicized in (2). In contrast, the grammar of English does not require *yesterday* or any other adverb to form a finite clause. What it requires is a present or past tense inflection or a future tense auxiliary.

2 KALAALLISUT INFLECTIONS

Kalaallisut is a polysynthetic language (in the sense of Sapir 1922) with rich inflection. There are two classes of inflected words: nouns and verbs. Most nouns and verbs are built according to parallel templates: ²

- (3) Noun template: root-(derivational suffix*)-NAGR-CASE(=clitic*)
 (4) Verb template: root-(derivational suffix*)-MOOD-VAGR(=clitic*)

That is, a root may combine with any number of derivational suffixes. The result is a base. The last morpheme of the base selects the form of the inflection, nominal or verbal. Nouns inflect for nominal agreement and case, as in (5), whereas verbs inflect for mood and verbal agreement, as in (6).³ Finally, either inflection can be followed by any number of clitics.

(5) Direct N inflection: NAGR-CASE (rn-paradigm)

<i>Nominative</i> (iv subject, tv object)	<i>Ergative</i> (tv subject, possessor)
qimmi- <i>kka</i>	qimmi- <i>ma</i>
dog-1s.pl	dog-1s.pl.ERG
‘my dogs’	‘(of) my dogs’

Oblique N inflection: NAGR-CASE (rn-paradigm)

<i>Dative</i> (goal)	<i>Ablative</i> (source)
qimmi- <i>n-nut</i>	qimmi- <i>n-nit</i>
dog-1s.pl-DAT	dog-1s.pl-ABL
‘to my dogs’	‘from my dogs’

<i>Locative</i> (location)	<i>Vialis</i> (path)
qimmi- <i>n-ni</i>	qimmi- <i>k-kut</i>
dog-1s.pl-LOC	dog-1s.pl-VIA
‘among my dogs’	‘via my dogs’

<i>Modalis</i> (modifier)	<i>Equative</i> (standard)
qimmi- <i>n-nik</i>	qimmi- <i>t-tut</i>
dog-1s.pl-MOD	dog-1s.pl-EQU
e.g. ‘with my dogs’	‘as my dogs’

² In addition to nouns and verbs, there are particles (e.g., *irniinnaq* ‘soon’ in (7’)), which do not inflect but can combine with clitics. There are also a few derivational clitics, which attach to fully inflected words or particles and derive new bases (e.g., =*it-* ‘be’ in (27’), =*kar-* ‘go’ in (33’)).

³ I use the standard Kalaallisut orthography, minus the allophones (*e, o, f*) of *i, u, v*.

(6) <u>Matrix V inflection: MOOD.CENTERING-VAGR (iv-paradigm)</u>	
<i>Indicative</i> (assertion)	<i>Interrogative</i> (question)
Sinip- <i>pu-q</i> .	Sinip- <i>pa?</i>
sleep-IND.IV-3s	sleep-QUE.3s
‘He is/was asleep.’	‘Is/was he asleep?’
<i>Irrealis</i> (negation)	
Sini-nngi- <i>la-q</i> .	Sini-nngi- <i>la?</i>
sleep-not-IRR-3s	sleep-not-IRR.3s
‘He is/was not asleep.’	‘Is/was he not asleep?’
<i>Optative</i> (wish)	<i>Imperative</i> (request)
Sinig-(<i>niar</i>)- <i>li</i> .	Sinig-(<i>niar</i>)- <i>it!</i>
sleep-(please)-OPT.3s	sleep-(please)-IMP.2s
‘(Please) let him sleep.’	‘(Please) go to sleep!’
<u>Dependent V inflection: MOOD.ASP.CENTERING-VAGR (iv-paradigm)</u>	
<i>Topic factive</i>	<i>Background factive</i>
sinik- <i>ka-mi</i>	sini- <i>mm-at</i>
sleep-FCT _T -3s _T	sleep-FCT _⊥ -3s _⊥
‘because/when he _T is/was asleep’	‘because/when he _⊥ is/was asleep’
<i>Topic non-factual</i>	(‘-not’ + <i>Background elab.</i>)
sinin- <i>na-ni</i>	sini-nngit- <i>su-q</i>
sleep-NON _T -3s _T	sleep-not-ELA _⊥ .IV-3s _⊥
‘not/without sleeping’	‘while he _⊥ is/was not asleep’
<i>Topic hypothetical</i>	<i>Background hypothetical</i>
sinik- <i>ku-ni</i>	sini- <i>pp-at</i>
sleep-HYP _T -3s _T	sini-HYP _⊥ -3s _⊥
‘if/when he _T is/was asleep’	‘if/when he _⊥ is/was asleep’
<i>Topic habitual</i>	<i>Background habitual</i>
sinik- <i>kaanga-mi</i>	sinik- <i>kaang-at</i>
sleep-HAB _T -3s _T	sleep-HAB _⊥ -3s _⊥
‘whenever he _T is/was asleep’	‘whenever he _⊥ is/was asleep’
<i>Topic elaborating</i>	<i>Background elaborating</i>
sinil- <i>lu-ni</i>	sinit- <i>tu-q</i>
sleep-ELA _T -3s _T	sleep-ELA _⊥ .IV-3s _⊥
‘being asleep’	‘while he _⊥ is/was asleep’

The proper analysis of the system of verbal inflection in Kalaallisut is a matter of some controversy, summarized in Table 1. In several cases, what I analyze as a difference in meaning—mood, aspect, or centering—has traditionally been viewed as morphological suppletion. But all analyses agree that this inflectional system does not include any tense markers.

Table 1. Three analyses of Kalaallisut verbal inflections

Form(s)	Kleinschmidt 1851	Bergsland 1955	This work
-vu	Indicativ	Indicative iv form	IND.IV
-va	Indicativ	Indicative tv form	IND.TV
-va/-vi	Interrogativ	Interrogative	QUE
-la		Indicative neg. form	IRR
-la/-li		Interrogative neg. form	IRR
-la/-li	Optativ/Imperativ	Optative	OPT
-gi/Ø	Optativ/Imperativ	Imperative	IMP
-ga	Conjunctiv	Causative 4th person form	FCT _T
-mm		Causative 3rd person form	FCT _⊥
-na		Contemporative neg. form	NON _T
-gu	Subjunctiv	Conditional 4th person form	HYP _T
-pp		Conditional 3rd person form	HYP _⊥
-gaanga		Caus. habitual 4th pers. form	HAB _T
-gaang		Caus. habitual 3rd pers. form	HAB _⊥
-llu	Infinitiv	Contemporative	ELA _T
-su	Particip	Participial iv form	ELA _⊥ .IV
-ga/gi	Particip	Participial tv form	ELA _⊥ .TV

Unlike the English or ChiBemba tenses, verb inflections in Kalaallisut do not mark temporal location. For instance, consider the factual moods, which introduce (IND), presuppose (FCT), or inquire (QUE) about facts. All of these moods in Kalaallisut allow eventualities to be either past or present, as the discourses in (7') through (10') illustrate. But as these discourses also illustrate, no temporal ambiguity arises in actual use, because the relevant temporal interpretation is predictable based on the aspect and the context.

Example (7') illustrates these points for event-predicates. The base of each verb ends in an event-predicate: *-si* 'become', *angirlar-* 'come home', or *-lir* 'begin'. Since the mood is factual (FCT or IND), all of these events are reported as facts. In Kalaallisut an event can be reported as a fact only if it has already happened. So (7') is equivalent to the English past tense (7).

(7) I came home when it got dark. Juuna soon fell asleep.

(7') Taar-si-mm-at angirlar-pu-nga.
 be.dark-become-FCT_⊥-3s_⊥ come.home-IND.IV-1s
 Juuna irniinnaq sini-lir-pu-q.
 Juuna soon sleep-begin-IND.IV-3s

Other aspectual classes are understood to be current at the *topic time*—i.e., *now*, the discourse-initial default, or the explicitly determined *then*. This is illustrated in (8')–(10'), for states, processes, and habits.

Future discourse in Kalaallisut is exemplified in (11'). In a nutshell, what I will argue is that this is just another instance of the same temporal pattern—more precisely, of the stative variant (8').

- *Current states (now or then) of attitudes to future prospects*

- (11) a. I *will* come home at dusk. Juuna *will* soon fall soundly asleep.
 b. (That morning I made a plan.) I *would* come home at dusk.
 Juuna *would* soon fall soundly asleep.

- (11') (Ullaaq taanna pilirsaaru-siur-pu-nga.)
 (morning that plan-make-IND.IV-1s)

Taar-si-lir-p-at angirlar-niar-pu-nga.
 be.dark-become-begin-HYP_⊥-3s_⊥ come.home-intend-IND.IV-1s

Juuna irniinnaq iti-ssa-na-ni
 Juuna soon wake.up-be.expected-NON_⊥-3s_⊥

sini-lir-umaar-pu-q.
 sleep-begin-be.hoped-IND.IV-3s

For now, I just draw the two conclusions boxed below. The first conclusion is negative and generally agreed on (by Kleinschmidt 1851, Bergsland 1955, and Fortescue 1984, who on this point follows Bergsland):

Kalaallisut inflectional system is *tenseless*. Even by liberal criteria, it does not contain any tense inflection, be it pure or fused, simple or complex.

The second conclusion depends on more controversial details of my analysis of the Kalaallisut mood system. By the end of this report, the reader may have enough evidence to evaluate this proposal:

Kalaallisut verbal inflections form a mood system, fused with aspect and centering, which contrasts *facts*, *nonfacts*, *prospects*, and *circumstances*:

- *Factual moods*: indicative (IND), interrogative (QUE), factive (FCT)
- *Nonfactual moods*: irrealis (IRR), non-factual (NON)
- *Prospective moods*: optative (OPT), imperative (IMP), hypothetical (HYP)
- *Circumstantial moods*: elaborating (ELA), habitual (HAB)

3 CONTROVERSY ABOUT KALAALLISUT 'TENSES'

3.1 Reference grammars

I propose to subsume future discourse of type (11') under stative discourse of type (8') by analyzing *-niar*, *-ssa* and *-jumaar* as state-predicates that

refer to mental states of future-oriented attitudes—intent, expectation/desire, or hope/dread. This analysis constitutes a major departure from the traditional view of these suffixes—as bound future tense auxiliaries.

Kleinschmidt (1851:148) lists *-jumaar* and *-ssa* as v\ v suffixes ‘mit hülfsverben-bedeutung’. According to him, *-jumaar* ‘entspricht ... unserm Futurum’, while *-ssa* ‘drückt ebenfalls häufig das Futurum aus, schliesst aber immer zugleich den begriff des sollens in sich.’ Bergsland (1955:115) agrees, adding that *-jumaar* indicates ‘especially non-immediate future’. Fortescue (1984:274–5) has more to add:

- “2.1.3.2.1.4. Future.
There are three common affixes indicating future tense *ssa*, *niar*, and *jumaar*. The first of these also has the modal value ‘should/shall’, covering in fact most of the senses of Danish ‘skal’; as a future marker it is the nearest to an absolute or pure future, as in: *tuqu-ssa-atit*, die-future-2s.indic, ‘You will die’ (e.g. if you drink the poison) [...]
niar is more common as a pure future in north-west Greenland, but is used especially in an intended or inevitable future sense in the central dialect area, as in *atuarniarpara* ‘I’m going to read it/will try reading it’ and *siallirniarpug* ‘it’s going to rain’. As a verb-extending affix it means ‘try to’[...]
jumaar indicates vague indefinite future (cf. related affix *-juma* ‘want to’) as in the parting formula *takuqqikkumaarpugut* ‘we’ll see each other again’.

According to Fortescue (1984:272–3), Kalaallisut also distinguishes four ‘past tenses’: *-sima*, *-nikuu*, *-qqamir*, *-riikatag*. The language would thus appear to have a rich tense system. However, older grammars list *-sima* not as a past tense, but as a perfect aspect (Kleinschmidt 1851:148, Bergsland 1955:116). That is also how all of Fortescue’s ‘past tenses’ are glossed in the dictionaries: *-sima* ‘have...ed’, *-nikuu* ‘have once...ed’, *-qqamir* ‘have just...ed’, *-riikatag* ‘have...ed long ago’. One may therefore begin to wonder about the accuracy of Fortescue’s claims.

3.2 Shaer (2003)

Fortescue’s (1984) claim that Kalaallisut has three future and four past tenses has recently been challenged by Shaer (2003), who conjectures that Kalaallisut is in fact tenseless.

Shaer speculates that all of Fortescue’s ‘tenses’ should be analyzed as ‘bound adverbs’. But he does not offer any evidence in favor of this idea over the traditional view of these suffixes as bound auxiliaries. So I shall only address the evidence that Shaer does present—that whatever these suffixes might be, they are not tenses.

Shaer argues at length that Fortescue’s ‘tense’ suffixes precede the inflection. That is correct—and uncontroversial. It is also irrelevant, according to the more liberal criteria for tense adopted here (pace Klein 1994). Tenses are often morphologically realized as inflections. But they can also be auxiliary verbs, so pre-inflectional affixes do not seem inconceivable.

In my view, Shaer's strongest argument is that the putative 'past' and 'future' suffixes can cooccur—as *-sima* and *-ssa* in (12):

- (12) *Atur-sima-ssa-va-a.*
 use-*sima-ssa*-IND.TV-3s.3s
 'He must have used it.' (Fortescue 1980:267)

According to Fortescue (1980), *-sima-ssa* is a 'semilexicalization'. But its use in Kalaallisut is similar to epistemic *will have* in English, e.g., in (*He stole this, but we can't return it.*) *He will have used it already.* The English *will have* is not lexicalized, so perhaps the Kalaallisut *-sima-ssa* is not lexicalized either. Assuming that, *-sima* and *-ssa* cannot both be tenses.

But note that one of them still could be. In fact, if we accept what the dictionaries and the older grammars say—that *-sima* marks perfect aspect—then we might even take (12) to support the traditional view that the Kalaallisut *-ssa* corresponds to the English future auxiliary *will/would*.

Unfortunately, most of Shaer's examples are similarly inconclusive. This is fatal for his argument that Kalaallisut is tenseless. For given Shaer's evidence, a skeptic could still maintain that *-ssa*, at least, looks like a future tense. So Kalaallisut would still have a tense system, albeit less rich than Fortescue's and of a different type. It would be the type that distinguishes future (*-ssa*, *-niar*, *-jumaar*) from non-future (unmarked)—like, for example, Hua (Haiman 1980, Comrie 1985:46).

The key examples of apparently non-future *-ssa* in Shaer's paper are attributed to 'Bittner (2002)'—my 2002 text study posted online (now at <http://www.rci.rutgers.edu/~mbittner/kal.html>) and formally reported in Bittner (2003). But since that text study was not specifically designed to determine the status of the Kalaallisut 'future tenses', I shall not rehearse this—in my view, still inconclusive—evidence here. Instead, I shall report on five other text studies that, to my mind, leave no room for doubt.

4 EVIDENCE FROM TEXTS: PROSPECTIVITY THESIS

According to the grammarians, the Kalaallisut suffixes *-ssa*, *-niar*, and *-jumaar* are used like Germanic future auxiliaries. That is a testable claim. To test it, I took the following five pairs of English and Kalaallisut texts (see Appendix A for full references) and systematically examined the Kalaallisut equivalents of the English future auxiliaries *will/would* and *is/was going to*.

- [D] O'Dell, S. 1988. *Black Star, Bright Dawn.*
 [D'] O'Dell, S. 1994. *Milalinnguaq Sikkersortu.*
 [H] Hemingway, E. 1952. *The Old Man and the Sea.*
 [H'] Hemingway, E. 1991. *Angutitoqqaq imarlu.*
 [L] Lindgren, A. 1997. *Pippi Longstocking.*
 [L'] Lindgren, A. 2000. *Pippi Langstrømpe—ikinngutaalu.*

- [P] Rounds, G. 1941. *The Blind Colt*.
 [P'] Rounds, G. 1988. *Hesti piaraq tappiitsoq*.
 [R] Rowling, J. K. 1997. *Harry Potter and the Philosopher's Stone*.
 [R'] Rowling, J. K. 2002. *Harry Potter ujaraallu inuunartoq*.

I considered only clearly future uses (relative to the current topic time, *now* or *then*). Any habitual or counterfactual uses of *will/would* were ignored. For the future uses of both *will/would* and *is/was going to*, I found essentially the same list of Kalaallisut translations. The combined list is presented in Table 2.

Table 2. Kalaallisut translations of English future auxiliaries

	<u>Kalaallisut item</u>	<u>Proposed English gloss</u>
A1.	<i>ilimagi-</i> (tv)	expect
A2.	<i>ilimanar-</i> (iv)	be likely
A3.	<i>-gunar</i> (v\v)	be likely to
A4.	<i>-juma</i> (v\v)	want to, be willing to
A5.	<i>-jumaar</i> (v\v)	(be) hope(d), (be) dread(ed)
A6.	<i>-navianningi</i> (v\v)	be very unlikely to
A7.	<i>-niar</i> (v\v)	(be) intend(ed), be about to, (<i>process</i> use: try)
A8.	<i>-qina</i> (v\v)	be liable to
A9.	<i>-qqajaa</i> (v\v)	be just about to, be ready to
A10.	<i>-qqu</i> (v\ tv)	want \perp to, enable \perp to, (<i>event</i> use: order)
A11.	<i>-riaannaa</i> (v\v)	be well able to, be easily possible for \top to
A12.	<i>-rusuk</i> (v\v)	wish to, feel like
A13.	<i>sapir-</i> (v)	be unable to, not dare to
A14.	<i>sapirnar-</i> (iv)	be impossible, be hard to do
A15.	<i>-sariaqar</i> (v\v)	need to, be necessary for \top to
A16.	<i>-sinnaa</i> (v\v)	be able to, be possible for \top to
A17.	<i>-ssa</i> (v\v)	(be) expect(ed), (be) desire(d)
A18.	<i>-ssaq</i> (n\ n)	expected, desired
A19.	<i>-ssamaar</i> (v\v)	plan to, be about to
A20.	<i>-ssanga</i> (v\v)	expect to
A21.	<i>-ssangatip</i> (v\ tv)	expect \perp to
A22.	<i>-ssaqqaar</i> (v\v)	be confidently expected
A23.	<i>-ssaqqip</i> (n\ iv)	be suitable for
A24.	<i>-tsir, -tsii</i> (v\ tv)	wait for \perp to
	⋮	⋮
B1.	<i>-lir</i> (v\v)	begin
	⋮	⋮
C1.	<i>-li/-la</i> (OPT)	let \top ...
C2.	<i>-niar-li</i> (please-OPT)	please let \top ...
C3.	<i>-niar</i> (please-IMP)	please do..., please let us...

It transpires that the ‘future tense auxiliaries’ in Kalaallisut comprise not just *-ssa*, *-niar*, and *-jumaar*, but nearly thirty morphemes: nineteen verb-extending suffixes (sixteen transitivity preserving $v \setminus v$, three transitive-deriving $v \setminus tv$), four verbal roots (*tv*, *iv*, one complex predicate forming *v*), one noun-extending suffix ($n \setminus n$), one de-nominal verb-forming suffix ($n \setminus iv$), and three mood inflections. That is not a natural morphological class.

Semantically, on the other hand, this is clearly a natural class. It falls into three subclasses—A, B, and C—exemplified below. The examples are presented as follows: first the English version (e.g. (13)), usually with some context; then the published Kalaallisut translation (13’); and finally my own attempt to render the Kalaallisut, as literally as possible, back into English (13’'). To get a sense of the strictly literal English translation—usually intelligible, albeit not fully grammatical—the reader is advised to read the Kalaallisut glosses from the end, adding each suffix to the entire base.

A. Prospective statives

(13) They’ll all forget this in a few weeks. [R: 265]

(13’) Sapaati-t akunnir-i marlussuit qaangu-pp-ata
 Sunday-pl.ERG space-3p₁.pl a.few pass-HYP₁-3p₁
 puigur-*unar*-pa-at.
 forget-be.likely-IND.TV-3p.3s [R’: 302]

(13’’) They’re *likely to* forget this in a few weeks.

(14) [Muggles] don’t know we’re not allowed to use magic at home.
 I’m *going to* have a lot of fun with Dudley this summer. [R: 332]

(14’) *Ilimaga*-a-ra aasaq manna Dudley
 expect-IND.TV-1s.3s summer this Dudley
 quianar-tur-si-vvigi-*ssa*-llu-gu.
 be.fun-iv\cn-get-from-expect-ELA₊-3s₁ [R’: 380]

(14’’) I *expect to* get some fun out of Dudley this summer.

B. Prospective inchoatives

(15) Yessir! I’ll bring him *right over*! [P: VIII]

(15’) Aap, akkaa. Aggiuti-*lir*-pa-ra!
 yes uncle bring-begin-IND.TV-1s.3s [P’: 53]

(15’’) Yes, Uncle. I’m *coming* with him!

C. Prospective matrix moods

(16) We were running twenty-first and twenty-second in the race. Oteg said,
 ‘We *will* feed the dogs now and rest until night comes.’ [D: 44]

(16') Qimmi-t nirukkar-niar-tigik.
 dog-pl feed-please-IMP.1p.3p [D': 55]

(16'') *Let us feed the dogs, ok?*

The English glosses in Table 2 are justified in Appendix B, by examples from the same five texts, plus three dictionaries (examples (a)). Based on this evidence, I take the English glosses in Table 2 to be correct.

Assuming that, the main translation strategy involves class A items, which I dub *prospective statives*. These are glossed as stative predicates that evoke future-oriented mental states—expectation (e.g., (14')), desire, hope, dread, intent, plan, considering a prospect likely (e.g., (13')), unlikely, liable to happen, or the like. If the predicate is impersonal (e.g., -*gunar* in (13')) then the experiencer of the mental state is grammatically unspecified (as in the English gloss ‘be likely’). But the context often suggests a plausible experiencer—usually, the speaker (here, Ron) or the topic. This translation strategy involves paraphrasing the English future auxiliary away in favor of a contextually plausible prospective stative. The mental state—here, considering a certain mishap likely to be forgotten in a few weeks, or expecting to have fun with Dudley this summer—holds at the current topic time. In (13') and (14') this means now, the discourse-initial default. The current mental state is reported as a fact, in a factual mood (IND). For indeed, the current state of expectation is a fact, even if the expected prospect should fail to become a reality.

Intuitively, (15) is a plan for the immediate future—equivalent to the present progressive paraphrase in (15''). In Kalaallisut such plans can be rendered by class B items, which I dub *prospective inchoatives*. In (15') *aggiut-* ‘bring-’ is interpreted as an expected process. The prospective inchoative *-lir* ‘begin’ evokes the first stage, and the factual mood (IND) reports this start event as a done deed. Normally, events are understood to occur during the topical period. But when the topic time is an instant—such as the default now in (15')—then events are instead required have a current result state. So (15') literally means: *I have (already) started to bring him.*

The remaining future auxiliaries in the studied texts express requests or wishes for the future—e.g., (16). These translate into *prospective moods*—class C—here, the imperative (16'),⁴ with the literal meaning (16'').

⁴ Kalallisut translators often disregard sentence boundaries, as in (16'). But they respect paragraph boundaries. I take it that the *paragraph* is the intuitive *unit of equivalence*.

Table 2 probably lists most, but not all of the translation options for the English future auxiliaries. Further text studies may add, e.g., *-junnar(si)* ‘be likely, be hoped for’ and *-lirsaar* ‘plan to’ to class A, *-jartur* ‘go to’ to class B, and *-gi/Ø* ‘IMP’ to class C. But the proposed descriptive generalizations should hold. In other words, I propose the following thesis:

PROSPECTIVITY THESIS

Kalallisut translations of future auxiliaries comprise three related classes:

A. *prospective statives* evoking (current) attitude states to *de se* prospects,

B. *prospective inchoatives* evoking (realized) starts of expected processes,

C. *prospective matrix moods* marking the speech act as a request or wish.

Class B and C items are clearly not tenses, so I focus on class A. The remaining task is to clarify and support my description of this class.

5 PROSPECTIVE STATIVES: EVIDENCE IN DETAIL

5.1 *Prospective statives are not tenses*

Before I elaborate on what prospective statives are, let me elaborate on what they are not. Reference grammars list three of these items, *-ssa*, *-niar*, and *-jumaar*, as ‘future tenses’ (section 3.1). But already a glance at Table 2 makes this dubious. For the putative ‘future tenses’ are listed in Table 2 along with over twenty similar items. A tense system with three future tenses is typologically plausible—ChiBemba has four, English, arguably two. But twenty four future tenses, and still counting?! That is unheard of.

Turning doubt into certainty, prospective statives in Kalaallisut do not form a grammatical paradigm. Shaer (2003:10) claims that ‘*-ssa* appears to be (virtually) obligatory in sentences that refer to the future’, but this claim is misleading. Consider English: if one wants to talk about dogs, one has to use the item *dog* or equivalent. But the grammar of English does not require any such item to form a finite clause. What it requires is a tense inflection or auxiliary. Similarly in Kalaallisut, if one wants to talk about the future, one has to use *-ssa* or equivalent. But the grammar of Kalaallisut does not require any such item to form a finite clause. What it requires is a mood inflection and verbal agreement. It is the grammar that is relevant for tenses and, as far as the grammar goes, prospective statives are optional.

Further evidence that prospective statives in Kalaallisut do not form a grammatical paradigm comes from co-occurrence tests: in any finite clause there cannot be more than one tense marker. If we apply this test to the English *will/would* and *is/was/be going to*, they behave like true tense auxiliaries. That is, they cannot cooccur, as (17) attests:

- (17) a. John {*will, is going to*} be going to Paris soon.
 b.*John *will be going to* be going to Paris soon.

In contrast, prospective statives in Kalaallisut commonly co-occur. Thus, in (18') *-niar* and *-(g)unar* combine in a clearly compositional way to yield the meaning predicted by their glosses, 'intend' and 'be likely':

(18) When she heard the dogs bark, the cow [moose] took to the stream and disappeared. But the bull stood sideways on the bridge and did not move. [D: 53]

(18') ...nikin-*niar-unar*-a-ni=lu
...budge-intend-be.likely-NON_τ-3s_τ=and [D': 65]

(18'') ... and was not *likely to intend* to budge.

In (19') two of the putative 'future affixes', *-niar* and *-ssa*, combine via eventuality anaphora: *-niar* evokes a state of intent, and *-ssa* adds that it is also a desire (19''). This compositional strategy instantiates a very general anaphoric phenomenon, which I dub *verb doubling* (see section 5.2).

(19) Eat [the bait] so that the point of the hook goes into your heart and kills you, he thought. [H: 44]

(19') ...qarsursaq uummati-n-nut apissigul-lu-gu
...hook heart-2s.sg-DAT have.⊥.go.all.way.in-ELA_τ-3s_⊥
tuqcutigi-*nia-ssa*-va-t
die.from-be.intended-be.desired-IND.TV-2s.3s [H': 29]

(19'') ...[I] *intend* and *desire* that you die from having the hook go all the way into your heart.

Fortescue (1984:64) is aware that *-nia-ssa* is a possible sequence. But he still maintains that *-niar* and *-ssa* are 'tenses' because for him, *-niassa* is lexicalized as a single 'affix' (like *-sima-ssa* in (12)). But his lexical account lacks empirical support: the dictionaries do not list any 'affix' *-niassa*, only *-niar* and *-ssa*. I take it that native speakers view the sequence *-nia-ssa* as compositional. Also, the putative 'affix' *-niasssa* is supposed to mean 'in order to'. But that is not what *-nia-ssa* means in (19'). The indicative mood marks (19') as a main clause and a factual report. Fortescue's gloss 'in order to' does not fit the bill; the compositional paraphrase in (19'') does.

Finally, consider evidence from nominalization. Recall that tense markers are not part of the main predicate, but only locate it in time (section 1). Accordingly, tense markers—including tense auxiliaries—are lost under nominalization, whereas otherwise similar raising and control predicates survive. The minimal pairs in (20) illustrate this diagnostic test for English. Like the co-occurrence test, it distinguishes tenses from predicates.

- (20) a. He {is willing to, intends to, *will*, *is going to*} help me.
 b. His {being willing to, intent to, **willing*, **being going to*} help me pleased her.

In Kalaallisut the nominalization test confirms the diagnosis of the co-occurrence test: prospective statives are predicates, not tenses. In particular, this is the diagnosis for the putative ‘future tenses’ *-ssa*, *-niar*, and *-jumaar*. All three survive nominalization, as (21’), (22’), and (23’) attest.

- (21) [Whitey] pictured himself riding up in front of the store where all the loafers were gathered, and guessed he’d teach the colt to kneel to let him get off like he’d heard the Arabs or some such fellers did. [P: VII]

- (21’) ...isuma-liur-pu-r=lu
 ...idea-make-IND.IV-3s=and
 histi piaraq ilinniar-tin-niar-lu-gu
 horse young learn-cause-intend-ELA_T-3s_⊥
 aqqa-lir-aanga-mi aqupit-tar-ni-ssa-a-nik.
 get.down-begin-HAB_T-3s_T kneel-habit-*v*n-desired-3s_⊥.sg-MOD
 [P’: 47]

- (21’’) ...and he_T had an idea: he_T intended to teach the colt a *nice* trick of kneeling whenever he_T started to get down.

- (22) The whole crowd were on their feet, watching, terrified, as the Weasleys flew up to try and pull Harry safely on to one of their brooms, but it was no good—every time they got near him, the broom would jump higher still. They dropped lower and circled beneath him... [R: 207]

- (22’) ... qatannguti-gii-t Weasley-kku-t
 brother-rcp.group-pl.ERG Weasley-group-pl.ERG
 Harry-p tunga-a-nut timmi-nir-at
 Harry-ERG direction-3s_⊥.sg-DAT fly-*v*n-3p_⊥.sg
 Harry saniguti-min-nut nuu-tin-niar-lu-gu.
 Harry broom-3p_T.pl-DAT move-cause-intend-ELA_T-3s_⊥
 ...Annaa-ssi-nia-t apparsar-pu-t...
 ...rescue-apass-intending-pl drop.lower-IND.IV-3p [R’: 236]

- (22’’) ...and they watched in horror the Weasley brothers’ flight toward Harry, with the *intent to* move Harry on to one of their brooms. [...] The *would-be* rescuers dropped lower...

(23) I had heard about the Iditarod for years...but...I had never dreamed in my wildest dreams that someday I would march in a band playing my silver horn ... and welcome racers of the famous Iditarod. [D: 21]

(23') Sinnatturi-sima-nngisaannar-pa-ra=li
 dream.of-prf-never-IND.TV-1s.3s=but
 sukka-niut-tu-nik
 go.fast-compete-iv\cn-pl.MOD
 tikilluaqqu-si-qata-u-*jumaar*-ni-*ssa*-ra
 welcome-apass-fellow-be-hope-v\ndesired-1s.sg
 nipilirsu-qatigiin-ni
 make.music-coll.group-pl.LOC
 trumpiti-mik qarlurtaati-qar-lu-nga
 trumpet-MOD wind.instr.-have-ELAT-1s [D': 30]

(23'') But I had never dreamed of realizing my *wish* to *have a chance* to participate in welcoming these racers, as a trumpet player in a band of musicians...

In summary, the Kalaallisut suffixes *-ssa*, *-niar*, and *-jumaar* are grammatically optional, they can co-occur, and they survive nominalization. On every diagnostic test these putative 'future tenses', as well as other prospective statives in Kalaallisut, behave like predicates, not tenses.

That is correctly predicted by the Prospectivity Thesis, which thus receives initial empirical support. I now proceed to demonstrate this thesis point for point. Specifically, I show that prospective statives refer to *states* (section 5.2); that these states are *current* (section 5.3); that they are *attitude* states (section 5.4); and finally, that the attitudes concern the experiencer's future prospects viewed from his own perspective (section 5.5).

5.2 Prospective statives evoke states

In Kalaallisut basic verbal meanings fall into four aspectual classes:

(24) State-predicates: *sinig*- 'sleep', *-sima* 'prf', *=it*- 'be', ...
 Event-predicates: *tikit*- 'come', *-lir* 'begin', *=guuq* 'x say', ...
 Process-predicates: *aggir*- 'approach', *-liur* 'make', *-tur* 'use', ...
 Habit-predicates: *iliqqur*- 'habit.of', *-tar* 'habit', *-gajut* 'do.often', ...

Reliable diagnostic tests include temporal anaphora (discussed in section 2 and further in section 5.3; see also Bittner 2005) and a species of eventuality anaphora I dub *verb doubling* (recall (19')).

In verb doubling a *discourse referent* (Karttunen 1976) for an eventuality is introduced and then referred to in a manner analogous to *A doctor came in. I immediately trusted this lady*. Anaphorically linked verbs constrain the same eventuality (modulo bridging anaphora), and therefore must be of the same aspectual class. That is the basis of this aspectual test.

Before using it as a test, let me elaborate on my characterization of verb doubling as a verbal analogue of nominal anaphora. In Kalaallisut verb doubling may involve any combination of verbal roots, suffixes, or clitics. Anaphoric chains may be of any length and may span several sentences in discourse. Elaborating verbs (ELA) are anaphorically linked to verbs they elaborate, unless this default is defeated, e.g., by an explicit connective.

For instance, in (25') there is a three-membered chain of event-predicates introducing and then constraining a single event—a gesture:

- (25) I called to my father [waiting by a seal's breathing hole] to give up the hunt...
I called again. Slowly he raised a hand to quiet me. [D: 8]

- (25') Ataata-ma=li *arriillillar*-lu-ni
father-1s.sg.ERG=but move.slowly-ELA_T-3s_T

talli-mi aappa-a-nik *ussirar*-pa-anga
arm-3s_T.sg.ERG pairmate-3s₁.sg-MOD signal-IND.TV-3s.1s

nipaar-saa-*qqu*-llu-nga.
yell-stop-order-ELA_T-1s [D': 15]

- (25'') But my father, *moving slowly*, *signaled* to me with one arm,
ordering me to stop yelling.

Eventuality anaphora may serve in lieu of nominal anaphora. For instance, the evidential clitic =*guuq* 'x say' is an impersonal event-predicate. That is, it only evokes a discourse referent for a speech event, without specifying its agent. But in (26') this speech event, where the narrator heard what she reports here, is anaphorically linked to the event introduced by the root *uqar*- 'say'. Since *uqar*- does specify the agent (mother), the event-level anaphoric link in effect identifies the unspecified agent of =*guuq*.

- (26) My mother ...was crying with happiness. Tears ran down her red cheeks.
She had been cooking for a long time, getting food ready for me.

[D: 75]

- (26') Qulli-ngiariar-lu-ni *uqar*-pu-q
tear(s)-shed-ELA_T-3s_T say-IND.IV-3s

qangali=li nirisas-siu-uti-lir-sima-*nirar*-lu-nga,
long.ago=since food_{pl}-make-for-begin-prf-say-ELA_T-1s

taaka=*guuq* piariir-aluar-pu-t
 there=*x*.say be.prepared-unrealized-IND.IV-3p [D': 89]

(26'') Crying, she *spoke*: she *reported* having started to cook food_{pl} for me long ago; here, [she] *said*, it_{pl}'s ready (if you want it).

Turning now to canonical state-predicates, in (8') *-sima* 'prf' evokes the result state of calming down, which is then elaborated by *sinig-* 'sleep'. Likewise in (27'), *kisimiit-* and *=it-* co-specify an undesirable state concept:

(27) That car's new, he's not sitting in it alone. [R: 30]

(27') *Kisimiil-lu-ni* biili-mi=*i-ssa-nngi-la-q*
 be.alone-ELA_τ-3s_τ car-sg.LOC=be-be.desired-not-IRR-3s [R': 30]

(27'') [I] don't want him to *be alone* in the car.

Crucially, prospective statives can form anaphoric chains with canonical state-predicates. Thus, in (28') the same state (wait) is referred to by the canonical state-predicate *utaqqi-* and the prospective stative *-(t)sii*:

(28) [Two tramps want to rob Pippi.] The tramps waited quite a while until they were sure Mr. Nilsson would have gone to sleep. [L: 107]

(28') *Angala-innar-tu-t* *utaqqi-laa-qqaar-pu-t*
 wander-just-iv\cn-pl wait-a.bit-first-IND.IV-3p
 hr. Nilsson *sini-lir-sii-llu-gu*.
 Mr. Nilsson sleep-begin-wait.for.L.to-ELA_τ-3s_⊥ [L': 95]

(28'') The tramps first *waited* a bit: they *waited for* Mr. N. to fall asleep.

Similarly, in (29') the same mental state is referred to by the prospective stative *-ssangatip* and the canonical stative *-suri*. These two *v\tv* suffixes simply form a series, without the aid of the elaborating mood.

(29) [Ron wants to see Hagrid's dragon egg hatch; Hermione won't skip Herbology.] 'Hermione, how many times in our lives are we going to see a dragon hatching?' [R: 253]

(29') *inuuni-tsin-ni* *qassi-riar-lu-ta*
 life-1p.pl-LOC what.number(s).n-do.n.times-ELA_τ-1p
uumasurujum-mik *tukir-tu-mik*
 dragon-sg.MOD hatch-iv\cn-sg.MOD

taku-*ssangatis-suri-vi-sigut*?
 see-expect.1.to-believe.1.to-QUE-2s.1p [R': 289]

(29'') Hermione, what do you *believe* to be our prospects? For what *n*, do you *expect* us to see a dragon hatching *n* times in our lives?

Anaphoric chains may also consist entirely of prospective statives. We have already seen several examples: *ilimagi-* ‘expect’... *-ssa* ‘expect’ in (14’); *-nia-ssa* ‘be.intended-be.desired’ in (19’); *-niar* ‘intend’... *-ssaq* ‘desired’ in (21’); and *-niar* ‘intend’...*-niaq* ‘intending’ in (22’).

In summary, verb doubling confirms that prospective statives are indeed verbal predicates. In addition, since they can form anaphoric chains with canonical state-predicates, they too must belong to this aspectual class.

5.3 Prospective statives evoke current states

If prospective statives are state-predicates, then temporal anaphora should treat them like canonical members of this class. And indeed it does—down to the most intricate details—as I now proceed to demonstrate.

We have already seen one example of the predicted parallel—to wit, (8’) and (11’). These examples, as well as (30’) below, illustrate the basic temporal pattern: a (mental) state evoked by a (prospective) stative is understood to be *current* at the topic time—i.e., *now*, or the contextually relevant *then*. Thus in (30’), the mother’s (mental) state evoked by *-nir* ‘wonder’ holds at the topic time which includes the event of her inquiry.

(30) Later when we went back to the hotel, she asked me how I {was going to spend, had spent} all the money I had won. { [D: 101], MB }

(30') *apir-a-anga*
 ask-IND.TV-3s.1s

angingaasar-pa-ssui-t aki-ssar-sia-kka
 money-sum-big-pl payment-expected-received-1s.pl

su-mut {atu-ssamaar-, atur-sima}-nir-i-kka.
 what-sg.DAT {use-plan-, use-prf}-wonder-ELA₁.TV-1s.3p
 { [D': 116], MB }

(30'') she asked me a question: how {did I plan to use, had I used} the large sum of money I had received to spend, she wondered.

Relative to the mental state of *-nir*, the base ‘use-plan-’ or ‘use-prf-’ is temporally *de se* in the sense of Lewis (1979): the mother wonders about the realization of a concurrent state concept (plan or result). Likewise for

other report suffixes, e.g., *-suri* ‘believe’ in (31’) and *-nirar* ‘say’ in (32’). Instead of ‘current at the *topic time*’, we get ‘current at the *report time*’.

But the temporal parallel between prospective statives and canonical state-predicates persists. As illustrated in (30’)-(32’), the mental states of prospective statives (*-ssamaar* ‘plan’, *-ssa* ‘expect’, and *-gunar* ‘be likely’) are located in time exactly like the states of canonical state-predicates (*-sima* ‘prf’, *-siur* ‘experience’, and *ilumuur-* ‘be right’).

(31) The fire engine came clanging down the street, and the little children
...cried from fright because they were sure their own houses
{would catch fire, were in danger} too. { [L: 135], MB }

(31’) ...aamma namminniq illu-rtik
...also self.pl.ERG house-3p_T.sg
{ikuallassa-, navianartur-siu-}-sura-lu-gu.
{catch.fire-expect-, danger-experience-}-believe-ELAT-3s_⊥
{ [L’: 115], MB }

(31’’) ...believing their own house, too, to
{*be about to catch fire, be in danger*}.

(32) [In a Quidditch dispute between Ron and Dean] Hagrid
{declared Dean likely to win, was on Dean’s side}. {MB, [R: 204]}

(32’) Hagridi-p Dean
Hagrid-sg.ERG Dean
{ajugaa-gunar-, ilumuur-}-nirar-pa-a.
{win-be.likely-, be.right-}-say-IND.TV-3s.3s {MB, [R’: 233]}

(32’’) Hagrid declared Dean to {*be likely to win, be right*}.⁵

Temporal *de se* is most clearly shown—by temporal co-variation—in habitual reports such as (33’). The temporal parallel between prospective and canonical statives (here, *-rusug* ‘feel like’ and *qasu-* ‘be tired’) persists.

(33) Everyone wanted to take us into their homes, but my mother
{refused, kept claiming to be tired}. { [D: 9], MB }

(33’) ...anaana-ga=li quja-innar-tar-pu-q
...mother-1s.sg=but thank-just-habit-IND.IV-3s

⁵ To capture temporal *de se* I use non-finite reports in my back-to-English translations, even if this means misrepresenting *-nirar*, which is neutral like ‘say’, as emotionally charged ‘declare ⊥ to...’, ‘report ⊥ to...’, or ‘claim ⊥ to...’.

{uagutsin-nu=ka-rusun-niru-, qasu-}-nirar-lu-ni.
 {our.home-DAT=go-feel.like-more-, be.tired-}-say-ELA_T-3s_T
 {[D': 17], MB}

(33'') ...but my mother kept just saying (no) thank you, claiming to
 {*feel* more *like* going home, *be tired*}.

Examples (30')–(33') show that the exact sense of *current state* varies. If the next suffix is a mood inflection, then it means *current at the topic time*; if it is a report suffix (e.g., -*nir* 'wonder', -*suri* 'believe', or -*nirar* 'say'), then it means *current at the report time*. Further variation is illustrated in (34')–(37'). But crucially, whatever the exact sense of *current*, temporal anaphora treats prospective and canonical statives on a par.

The parallel continues to hold, e.g., for nominalized dependents of habitual verbs (prospective stative in (34'), canonical stative in (35')).

(34) John Evans was the only doctor between Womengo and Nome. He traveled around, making regular calls at fishing villages along the Sound. Dr. Evans had saved many lives. [D: 14]

(34') Nakursa-p taassuma inup-pa-ssui-t
 doctor-sg.ERG that.ERG person(s)-group-big-pl
 tuqu-ni-ssa-ralu-an-nit annaat-tar-sima-va-i.
 die-v\n-expected-unrealized-3p_⊥.sg-ABL rescue-habit-prf-IND.TV-3s.3p
 [D': 22]⁶

(34'') That doctor had been saving a lot of people from an otherwise *expected* death.

(35) As much money and life as you could want! The two things most human beings would choose above all—the trouble is, humans do have a knack of choosing precisely those things which are worst for them. [R: 320]

(35') ...inui-t ajurnar-tur-siut-aat
 ...person-pl.ERG be.difficult-iv\cn-experienced-3p_⊥.sg
 una-u-vu-q namminir-min-nut ajur-nirpaa-q
 this-be-IND.IV-3s self-3p_T.sg-DAT be.bad-what's.most-sg
 qinir-niar-tar-a-mikku.
 choose-try-habit-FCT_T-3p_T.3s [R': 365]

(35'') ...but the difficulty of the human experience is that [people] keep trying to choose *what is worst* for their own selves.

⁶ I have corrected [D': 22], which has an ungrammatical nominative: *nakursaq taanna*.

The temporal parallel also continues to persist for habitual states systematically following in the wake of habitual events (two prospective statives in (36'), two canonical statives in (37')).

(36) The trail wound through steep hills, straight up and straight down. Going up, I had to get off and push hard on the sled to help the dogs. Going down, I had to press hard on the brake and the rubber mat. [D: 64]

(36') ...am-mul=li aallar-aanga-tta nakkakattar-*uma*-na-nga
 ...down-DAT=but set.off-HAB_T-1p roll.down-want-NON_T-1s
 qamuti-t nuqi-ngaatsiar-*tariaqar*-tar-pa-kka
 sled-pl hold.back-a.fair.bit-be.necessary-habit-IND.TV-1s.3p
 [D': 77]

(36'') ... but *whenever* we set off downhill, I was *forced* to hold the sled back a fair bit, not *wanting* to roll down the hill.

(37) Wood was working the team harder than ever...The Weasleys complained..., but Harry was on Wood's side....[he] found that he had fewer nightmares when he was tired out after training. [R: 234]

(37') ...paasi-sima-va-a
 ...find.out-prf-IND.TV-3s.3s
 qasu-ni-ssa-mi tunga-a-nut
 be.tired-*v*n-expected-3s_T.sg.ERG direction-3s_L.sg-DAT
 tamaviaar-lu-ni sungiusar-aanga-mi
 use.all.strength-ELA_T-3s_T train-HAB_T-3s_T
sinnattu-pilun-na-ni *sini*-lluar-tar-lu-ni.
 dream-badly-NON_T-3s_T sleep-well-habit-ELA_T-3s_T [R': 267]

(37'') ... he had discovered that *whenever* he trained with all his might until the state of exhaustion, he *slept* well, without bad *dreams*.

Being both variable and predictable, temporal anaphora in Kalaallisut (30')–(37') is reminiscent of non-finite constructions in English (Stump 1985). For instance, non-finite complements of English report verbs predictably concern either the *de se* now of the experiencer or speaker (*believe her to be fair*, *be tired of losing*, *claim to know this*) or his *de se* future (*expect her to be fair*, *dread losing*, *predict her to know this*). Moreover, in Kalaallisut as in English, more complex temporal relations can be conveyed, with equal precision, by composing suitable constructions. This is illustrated by the more complex examples in (38')–(41').

The discourse in (38') mentions no fewer than three reports, which could be weeks or even months apart. It starts with a report ('said') by Erik the Red to another Greenland settler, Herjulf. Erik reports a prior report ('spoken of'...-*nirar* 'say') received from Sverre's folk. And Sverre's folk, in turn, report a yet another prior report (*uqar*- 'say'), by Erik's son Leif about his then current intentions. Temporally, (38') is interpreted like (38).

- (38) In the fall Erik the Red, while visiting Herjulf's folk for several days ..., said that his son Leif was in Wineland. Sverre's folk had spoken of him on their last trading visit in Erik's fiord. They reported him to *have said* that he *intended*, after first going trading to warmer lands, to go to his father to spend the winter. [MB]

- (38') *Uqar-sima-nirar-pa-at*
say-prf-say-IND.TV-3p.3s
nuna-nut kian-niru-su-nut
land-pl.DAT be.warm-more-iv\cn-pl.DAT
niuuvvag-iar-qaar-lu-ni
trade-go.to-first-ELA_T-3s_T
angun-ni ukii-vvig-iartur-*niar*-a-a.
father-3s_T.sg spend.winter-at-go.to-intend-ELA_I.TV-3s_I.3s [G: 10]

Another example of complex temporal relations captured by composition is the demand for clarification in (39'). Whitey has just been talking about his silly dog and his beloved blind colt in one breath, referring to both as *he*, and Uncle Torwal has trouble with nominal anaphora. The temporal anaphora in Kalaallisut (39') is similar to English (39'').

- (39) 'What in the world is eatin' on you?' Torwal wanted to know. 'You claim his brains is addled, and he sure is acting it, then you say you allus knowed he was too smart to have anything happen to him. [P: V]

- (39') *Uqa-riar-lu-tit* paatsivi-irus-*sima-nirar-lu-gu*
say-have.just-ELA_T-2s sense(s)-lose-prf-say-ELA_T-3s_I
...*uqar-pu-tit* *nalunngin-nirar-lu-gu*
...say-IND.IV-2s know-say-ELA_T-3s_I
ajuquti-*ssar-si-ssa-llu-ni*
harm-expected-find-be.expected-ELA_T-3s_T
silatu-allaar-tu-q.
be.smart-too-ELA_I.IV-3s_I [P': 37]

- (39'') *Having just said something declaring him to have lost his senses*
—and he's sure acting like it—you say something claiming to *know* that
he's too smart to *be expected* to come to harm.

Finally, (40') and (41') illustrate how this tenseless system also has the capacity to express complex temporal relations in a feared, desired, or otherwise anticipated future. Once again, temporal anaphora in Kalaallisut is similar to the corresponding back-to-English translations (40'') and (41'').

- (40) After Whitey had thrown the hay out, he hung around [the pasture] as long as he dared, admiring the colt [who had strayed in] and trying to think of a way he could keep him without Uncle Torwal finding out about it. But after a while he had to leave for fear Torwal would wonder what had happened to him and come out to look. [P: VII]

- (40') Sivitsu-nngit-su-r=li
be.long-not-iv\cn-sg=but
Whitey angirlar-tariaqa-lir-pu-q
Whitey go.home-need-begin-IND.IV-3s
annilaangagi-ga-mi-uk ajuqu-sir-sima-sura-lu-ni
be.afraid.of-FCT_T-3s_T-3s_⊥ harm-come.to-prf-believe-ELA_T-3s_T
Thorvald'i-mit taku-niar-niqar-ni-ssa-ni.
Thorvald-ABL see-try-pass-v\n-expected-3s_T.sg [P': 44]

- (40'') But before long Whitey_T began to *feel the need to* go home, *being afraid* of [*the prospect* of Torwal trying to find him_T, *believing* him_T to have come to harm].

- (41) DO NOT OPEN THE PARCEL AT THE TABLE. It contains your new Nimbus Two Thousand, but I don't want everybody knowing you've got a broomstick or they'll all want one. [R:179]

- (41') ...ila-vil=li paasi-ssa-nngi-la-at
...mate-2s.pl.ERG=but find.out-be.desired-not-IRR-3p.3s
saniguti-taar-tu-tit — paasi-gu-nikku
broomstick-get.new-ELA.IV_⊥-2s — find.out-HYP_T-3p_T.3s_⊥
pi-uma-li-qina-mm-ata.
do.so-want-begin-be.liable-FCT_⊥-3p_⊥ [R': 203]

- (41'') ...but [I] don't *want* your schoolmates to find out you got a new broomstick—if they do find out about it, they're *liable to* start *wanting* one too.

The evidence presented in this section shows that Kalaallisut has a genuinely tenseless system, which, nevertheless, is a true match for the English tense system. Although the means are very different, both systems have the capacity to convey even complex temporal information with great precision by discourses of comparable length. The Kalaallisut system systematically treats prospective statives, including the putative ‘future tenses’ (-*ssa*, -*niar*, -*jumaar*), like canonical state-predicates (*qasu*- ‘be tired’, -*sima* ‘prf’, etc). All varieties of state-predicates in Kalaallisut refer to a *state* that is understood to be *current* in a variable, but predictable, sense.

5.4 Prospective statives evoke attitude states

Having shown that prospective statives are state-predicates, I now turn to distinguish them as a natural subclass. As a first step, in this section I show that prospective statives evoke *attitude* states. More precisely, they express three-place relations between a mental attitude state—belief, expectation, fear, considering something likely, unlikely, etc—the experiencer of this mental state, and a modal concept for the object of the attitude.

In Kalaallisut the presence of a modal object can be detected by several diagnostic tests. I focus here on two reliable tests, provided by the counterfactual suffix -*galuar* and modal discourse anaphora.

The counterfactual suffix -*galuar* indicates a currently unrealized possibility. This possibility may be the modal object of the host predicate, e.g., expectation in (34’) (‘rescue from an otherwise expected death’), belief (42’), or what might be necessary if it did not conflict with a desire (43’).

(42) Pippi as a Thing-Finder:
‘Oh, dear! I was sure I saw a lump of gold.’ [L: 28]

(42’) Kuulti-minir-mik
gold-lump-sg.MOD
taku-*suri*-i-vik-kaluar-a-ma
see-believe-already-really-unrealized-FCT₊-1s [L’: 26]

(42’’) I really already *believed* myself (alas, wrongly) to have seen a lump of gold.

(43) [Snowed in at a check point, we built an igloo.] Oteg had brought a lamp with him...it glowed and made blue shadows dance against the walls. I should have felt snug but I didn’t. I wanted to be on the trail. [D: 46]

(43’) Nuannisaar-*tariaqar*-aluar-pu-nga,
enjoy.self-be.necessary-unrealized-IND.IV-1s

taama=li misigi-sima-nngi-la-nga
 thus=but feel-prf-not-IRR-1s
 — ingirla-qqik-*kusuk-kaluar*-nir-mik
 — travel-again-wish-unrealized-v\n-sg.MOD [D': 58]

(43'') I *should've* enjoyed myself, but I didn't feel that way—(just) a frustrated *wish* to be on the trail again.

But if the host predicate has no modal object, then the counterfactual *-galuar* instead targets the predicate itself. For example, in (44') *-galuar* is hosted by a predicate, 'forget', whose object is a fact—a race currently in progress. The *se* of (44') is a participant who three days ago got caught up in the break-up of the ice on the trail. Her father has just come to rescue her. What *-galuar* implies here is that the race is now no longer forgotten.

(44) "We are losing time," my father said. "You're still in the race."
 I had given up all thoughts of the race. [D: 91]

(44') Sukka-niun-niq *puigur-aluar-pa-ra*.
 go.fast-compete-v\n forget-unrealized-IND.TV-1s.3s [D': 106]

(44'') I had forgotten (but was now reminded) about the ongoing race.

Similarly, in (45') *-galuar* induces an implicature that a hunting habit is incompatible with the speaker's idea of a 'real' woman.

(45) She *is* a woman, but she goes hunting.

(45') Arna-*u-galuar*-lu-ni piniar-tar-pu-q.
 woman-be-unrealized-ELA_T-3s_T go.hunting-habit-IND.IV-3s

In general, the suffix *-galuar* provides a reliable diagnostic for modal arguments. If the host predicate has a modal argument, then that is what is currently unrealized, as in (42') and (43') (see also (34'), (49'), and (65')). Otherwise, it is the predicate itself, as in (44'), or some implicature, as in (45') (see also (26')). This diagnostic test reveals modal arguments for all prospective statives—on a par with canonical attitude states, such as *-suri* 'believe' (see (42')), *uppiri-* 'believe', or *isuma-qar-* 'idea-have'.

Another reliable diagnostic is modal anaphora, exemplified in (46')–(51'). These examples further show that the modal objects of Kalaallisut attitudes are eventuality concepts, rather than propositions.

First of all, unlike propositions, eventuality concepts are directly associated with temporal concepts, without the benefit of tense. So if the modal object of the first *-ssamaar* 'plan' in (46') is a discourse referent for

the planned reunion—a modal concept of an event—then it can directly antecede *taava* ‘then’ in the second sentence, which elaborates the plan. Also, the planned packing can be readily located just before the planned return to Womengo—the modal object of the second instance of *-ssamaar*. (See also (48’), where an analogous story can be told about *-riaannaa* ‘be (considered) easily possible’, *taava* ‘then’, and *-ssa* ‘be expected’.)

(46) My father and I harnessed up the team while my mother watched. We would meet again in Ikuma. Then we would pack two big sleds and take the trail back to Norton Sound and Womengo. [D: 102]

(46’) Ikuma-mi taku-qqi-ssamaar-pu-gut.
 Ikuma-sg.LOC see-again-plan-IND.IV-1p
 Taava=lu puurtu-i-riar-lu-ta
 then=and pack-apass-quickly-ELA_T-1p
 Womengo-mut uti-ssamaar-pu-gut
 Womengo-sg.DAT return-plan-IND.IV-1p [D’: 117]

(46’’) We *planned* to meet again in Ikuma. And then, after quickly packing up, we *planned* to return to Womengo.

Secondly, the anaphor *taama-* ‘thus’ shows that modal objects of Kalaallisut attitudes are aspectually typed—as states or habits (=it- ‘be’ in (47’)), state changes (-*ili* ‘become’ in (48’)), or actions (-*iliur* ‘do’ in (49’)). This makes sense for eventuality concepts, but not for propositions.

(47) ‘It was papa made me leave. I am a boy and I must obey him.’
 ‘I know,’ the old man said. ‘It is quite normal.’ [H: 10]

(47’) ‘Ataata-ma=mi=una niu-qqu-ga-anga;
 father-1s.sg.ERG=for=this get.off.boat-want.↓.to-ELA_↓.TV-3s_↓.1s
 Nukappiara-u-ga-ma=lu suli
 boy-be-FCT_T-1s=and still
 tassa naala-innar-tariaqar-sima-va-ra.’
 that’s.it obey-just-be.necessary-prf-IND.TV-1s.3s
 ... ‘Taama=it-tu-ssa-u-vu-r=mi.’
 ... ‘thus=be-iv\cn-expected-be-IND.IV-3s=for [H’: 6]

(47’’) ‘It’s because papa *wanted* me *to* get off [your] boat. And being a boy still, that’s it — I have been *obliged to* just obey him.’
 ‘I know,’ the old man said. ‘For it is *expected to be so.*’

- (48) [Prof. McGonagall to Hagrid sobbing loudly in a Muggle neighborhood.]
 ...get a grip on yourself, Hagrid, or we'll be found. [R: 23]
- (48') ...iqqissi-*sariaqar*-pu-tit, Hagrid.
 ...calm.down-need-IND.IV-2s Hagrid
Taama-ili-nngik-ku-it
 thus-become-not-HYP_T-2s
 takkut-tu-qa-*riaannaa*-vu-q
 show.up-iv\cn-have-be.easily.possible-IND.IV-3s
taava=lu taku-niqa-*ssa*-u-gut.
 then=and see-pass-be.expected-IND.IV-1p [R': 22]
- (48'') ...you *need to* calm down, Hagrid. If you don't calm down,
 someone *can easily* show up here and then [I] *expect* us to be seen.
- (49) [Pippi, Tommy and Annika are looking for Mr. Nilsson lost in the woods.]
 Tommy suggested they all three go in different directions and hunt.
 At first Annika didn't want to because she was a little afraid.
 [L: 83]
- (49') Tommy *siunnirsu-i-vu-q*
 Tommy suggest-apass-IND.IV-3s
 avissaar-lu-tik ujar-li-*ssa-llu-tik*.
 separate-ELA_T-3p_T seek-apass-be.desired-ELA_T-3p_T
 Annika *annilaanga-ga-mi* taama-iliu-rusu-nngik-kaluar-pu-q.
 Annika be.afraid-FCT_T-3s_T thus-do-wish-not-unrealized-IND.IV-3s
 [L': 73]
- (49'') Tommy made a suggestion: [he] *wanted* them to separate and
 search. Annika was *afraid* so she didn't *wish to do that* (but...).

Thirdly, (49') further reveals that modal objects can have discourse-transparent parts available for eventuality anaphora—here, by the implicitly anaphoric *annilaanga*- ‘be afraid (of that)’. Intuitively, Annika is afraid only of the first part of Tommy’s plan—the proposed separation—not of the proposed search. Formally, these two parts of Tommy’s plan can be individuated as two discourse referents for eventuality concepts. Tommy wants both concepts to be realized—first the proposed separation and then, during the result state, the proposed search. Annika is afraid of realizing the first part of the plan, and therefore does not wish to do that (until Tommy calls her a ‘fraidy cat).

Finally, consider modal anaphora by means of agreement. Modal subject agreement is exemplified in (50'), modal object agreement in (51'). Both sentences contain predicates that can be sensibly applied to eventuality

concepts—e.g., *being really suitable for a nice ending to a pleasant Sunday* is applicable to a desired horse ride—but not to propositions.

(50) She remembered that she hadn't been *riding* for a couple of days and decided to go at once. That would be a nice ending to a pleasant Sunday.

[L: 133]

(50') ...massakkur-lluinnar=lu
...now-absolute=and

hiistir-*uma*-llir-pu-q.
ride.horse-want-suddenly.begin-IND.IV-3s

Sapaati-siur-nir-mut nuannir-su-mut
Sunday-experience-v\n-sg.DAT be.enjoyable-iv\cn-sg.DAT

naggasiu-*ssa-ssaqqi*-vip-pu-q.
ending-desired-be.suitable.for-really-IND.IV-3s

[L': 114]

(50'') ...and she suddenly *felt like* going riding right away. That was *really suitable for* a nice ending to an enjoyable Sunday.

(51) Percy — he's a Prefect, he'd put a stop to this.

[R: 170]

(51') ...iliusiqar-*njar*-ni-rsi=lu
...do.something-intend-v\n-2p.sg=and

uni-tsi-*riaannaa*-va-a.
stop-cause-be.easily.possible-IND.TV-3s.3s

[R': 193]

(51'') ...and what you *intend* to do, he *can easily* stop that.

In summary, the counterfactual *-galuar* reveals that prospective statives have modal objects, like canonical attitude states. This is confirmed by modal anaphora, which further reveals that this object is an eventuality concept. For unlike a proposition, it participates in temporal anaphora in modal contexts directly, without the benefit of tense; it is aspectually typed, as a state/habit, state change, or action; it can have discourse transparent part-whole structure; and it can serve as an argument of a predicate that can be sensibly applied to eventuality concepts, but not to propositions.

5.5 Prospective statives evoke attitudes toward de se prospects

In the foregoing sections I have shown that prospective statives evoke current attitudes toward eventuality concepts. So far, prospective statives have patterned like canonical attitude states, e.g., *-suri* 'believe'. However, *-suri* normally evokes belief states about the experiencer's now. In contrast, prospective statives are always about the experiencer's future.

First of all, to clarify the difference, I present some minimal contrasts in English and Kalaallisut. We begin with a sample of emotional attitudes: future-oriented (52a), in contrast to now-oriented (52b).

- (52) a. Ron {*wanted, hoped for, was eager for*} Snape *to* suffer.
 b. Ron *was* {*glad, amused, pleased*} *to* watch Snape suffer.

In the future-oriented (52a) Ron feels (at a past topic time) a wish that Snape suffer. Snape may in fact suffer while Ron feels this way, but until Ron discovers this fact, he cannot feel glad about it. So for him, the joy of a wish come true is still a future prospect. In contrast, in the now-oriented (52b) Ron watches Snape suffer and, concurrently, feels glad about it.

In Kalaallisut this contrast involves the presence versus absence of a prospective stative. In addition, modal objects of future-oriented attitudes are explicitly marked as prospects—usually by *-ssa* ‘(be) expect(ed), (be) desire(d)’, *-ssaq* ‘expected, desired’, or *-niar* ‘(be) intend(ed), be about to’.

For instance, in English (53) Ron’s wish that Snape’s currently unclear state be painful is in the present tense, *is*. But in the Kalaallisut translation (53’) this is rendered by a prospective stative, *-ssa*. In contrast, the complement of *pleased to* in English (54) is rendered in Kalaallisut (54’) as a presupposed fact (FCT), without any prospective stative.

- (53) Harry muttered angrily as Snape limped away. ‘Wonder what’s wrong with his leg?’ ‘Dunno, but I hope it’s really hurting him,’ said Ron bitterly. [R: 198]

- (53’) ...*niriup*-pu-nga=li annirna-*ssa*-qi-su-q.
 ...hope-IND.IV-1s=but be.painful-be.desired-very-ELA₁.IV-3s₁ [R’: 225]

- (53’’) ...but I have a *hope*: [I] *want* it to be very painful.

- (54) ...c-can’t t-tell you how p-pleased I am to meet you. [R: 80]

- (54’) *Nuannaa*-qa-u-nga naapik-*ka*-kkit.
 be.pleased-very-IND.IV-1s meet-FCT_T-1s.2s [R’: 87]

- (54’’) I am very *pleased* I *have* met you.

Turning now to intellectual attitudes, these too can be either future-oriented (55a) or now-oriented (55b). Again, the key is the perspective of the experiencer. For the *se* of (55a), the expected verification (by DNA tests?) is still a future prospect, even if the expected state in fact holds now.

- (55) a. I {*expect, count on*} this husky *to* be a son of that wolf.
 b. I {*believe, know*} this husky *to* be a son of that wolf.

For intellectual attitudes, too, Kalaallisut marks *de se* prospects by prospective statives (in (56'), -*ssa* 'be expected'), whereas the *de se* now is unmarked (e.g., *nalunngi-* 'know' ... -*tu* 'ELA₁.IV' in (39')).

(56) [Observing the wolf closely] I saw that his body was exactly the same pure white as Black Star's. Their faces were the same too...Suddenly it struck me that Black Star was the son of this wolf. [D: 72]

(56') Tassa isuma-liu-lir-pu-nga
 that's.it idea-make-begin-IND.IV-1s
 Milalinnguaq amaqqu-p taassuma
 Black.Star [wolf-sg.ERG this.ERG]
 kinguaari-*ssa*-ga-a.
 be.sire.of-be.expected-ELA₁.TV-3s₁.3s [D': 86]

(56'') That's it! I got an idea: this wolf is Black Star's sire, [I] *reckoned*.

Impersonal attitudes can likewise be future- or now-oriented. For English, this contrast is illustrated in (57). The future-oriented *be likely* in (57a) evokes an attitude state whose experiencer considers the prospect of Snape being a fair referee unlikely. In contrast, the now-oriented *seem* in (57b) evokes a state whose experiencer considers Snape's concurrent refereeing (state or habit) to have the appearance of unfairness.

(57) a. Snape is not *likely to* be a fair referee.
 b. Snape does not *seem to* be a fair referee.

In Kalaallisut we again get the by now familiar contrast: future-oriented attitudes have their modal objects marked as *de se* prospects, as in (58'). In contrast, now-oriented attitudes do not, as (59') attests.

(58) 'Snape's refereeing?...He's not *going to* be fair if we might overtake Slytherin.' [R:234]

(58') Slytherini-mut ajugaa-lir-u-tta naapirtuilluar-tu-mik
 Slytherin-DAT win-begin-HYP_τ-1p be.fair-iv\cn-sg.MOD
 dummiri-u-ni-*ssa*-a ilimana-nngi-la-q.
 referee-be-*v*\n-expected-3s₁.sg be.likely-not-IRR-3s [R': 267]

(58'') *The prospect* of his being a fair referee *is not likely*, if we begin to overtake Slytherin. ⁷

⁷ The prospect of Snape being a referee is expected. What is unlikely is his being fair.

(59) ‘Harry—yer a wizard.’... ‘I don’t think I can be a wizard.’ [R: 67]

(59') *Uppiri-nngi-la-ra* *angakku-u-ni-ra*.
believe-not-IRR-1s.3s wizard-be-*v*\n-1s.sg [R': 72]

(59'') I don't *believe* it — my *being* a wizard.

Predicates like *forget* also exhibit this contrast. One can forget a fact—e.g., a current race in English (60b) and Kalaallisut (44'). But one can also forget to realize an expectation—e.g., the expected sign-in in English (60a) and Kalaallisut (61').

(60) a. The race participant *forgot* {*to sign-in, the expected sign-in*}.
b. While fighting for her life, the participant *forgot the race*.

(61) [Arriving at the check point in my home village] I was too tired to enjoy
the excitement. I almost forgot to check in. [D: 76]

(61') *Allaammi unammi-qata-u-su-tut*
even compete-fellow-be-*iv*\cn-sg.EQU
alla-tsin-ni-ssa-ra *piugu-ngaja-vip-pa-ra*.
write-apass-*v*\n-expected-1s.sg forget-almost-really-IND.TV-1s.3s
[D': 90]

(61'') Even my *expected* sign-in as a race participant—I really
almost *forgot* that.

The prospective *sapir-* ‘be unable, not dare’ in (62') and (63') at first blush looks like a counterexample to the generalization that nominalized modal arguments of prospective statives are explicitly marked as *de se* prospects (e.g., by *-ssaq* in (61') and (58'), or by *-niar* in (51')).

(62) And the trunk of the tree was smooth and had no branches for climbing on.
Even Pippi wouldn't be able to climb it. [L: 137]

(62') *Pippi=luunniit qallur-niq sapir-pu-q*.
Pippi=even climb.up-*v*\n be.unable-IND.IV-3s [L': 117]

(62'') Even Pippi was *unable to* climb up.

(63) I *dare not* say anything to him.

(63') *Uqar-vigi-niq sapir-pa-ra*.
say-to-*v*\n not.dare-IND.TV-1s.3s [SL: 246]

But in fact, *sapir-* is not a counterexample, because the nominalized verb is not a subject or object, but part of a complex predicate. Unlike a subject or object, it determines the transitivity inflection on *sapir-* (intransitive in (62'), transitive in (63')). Nothing can intervene between *sapir-* and the nominalized verb, and the order is fixed. All of this shows that what we have in (62') and (63') are complex predicates, not predicate-argument structures. Therefore, there is no syntactic argument to be marked as a *de se* prospect, and *sapir-* is enough to mark prospectivity.

Thus, in Kalaallisut as well as English future-oriented attitude states concern *de se* prospects—that is, future prospects of the experiencer viewed from his own perspective. It is therefore not surprising that only future-oriented attitudes give rise to *purposive readings*, e.g., in (64):

- (64) a. The Weasleys flew up, {*intending, wishing, hoping, expecting, eager, determined, ...*} to save Harry.
 b. The Weasleys flew up, *making it* {*possible, likely for Woods*} to save Harry.
 c. The Weasleys flew up, {*seeming, claiming*} to save Harry.

In (64a) the purposive reading arises because the matrix action (*flew up*) is understood to be concurrent with a mental state of the agent having a suitable attitude—intention, wish, hope, or the like—toward a *de se* prospect—by implicature, a purpose—of saving Harry. (64b) is similar, except that the attitude is impersonal. Still, the mental state of considering a prospect possible or likely must have an experiencer, so the prospect could be his purpose. In contrast, (64c), with now-oriented attitude/speech reports, has no purposive reading for lack of any element to evoke a *de se* prospect.

The same story can be told about the purposive use of prospective statives in Kalaallisut. Parallel to (64a), we have (22') (*-niar-ELA_T* ‘intending to’), and (36') (*-uma-NON_T* ‘not wanting to’). And parallel to the impersonal (64b), we have (19') (*-nia-ssa-IND.TV* ‘[I] intend and desire that...’) and the truly impersonal (65').

- (65) The mare...knew...that those extra long legs of [her newborn colt] were specially made that way so that by the time he was a day or two old he would be able to travel as fast and as far as the grown horses in case of danger.

[P: I]

- (65') ...navianartu-mik naammattuu-i-ssa-galuar-u-ni
 ...danger-sg.MOD encounter-apass-be.expected-unrealized-HYP_T-3s_T
 histi-tut inir-sima-su-tut=li
 horse-sg.EQU grow.up-prf-iv\cn-sg.EQU=but
 pangalis-sinnaa-li-riir-sima-qqu-llu-gu
 run-be.able-begin-already-prf-*enable*._L.to-ELA_T-3s_L [P': 9]

(65'') ...*enabling* him by the age of one or two days old *to* have already become able to run like an adult horse if he had what would otherwise be expected to be a dangerous encounter.

Another distinctive use of future-oriented attitudes are *scale-based predictions*. For English, this use is illustrated in (66a) and (67a). The (b) examples, with now-oriented attitudes, are included for contrast.

(66) a. The ground was *too* wet for the colt *to want* to lie down.
b. The ground was *too* wet for the colt *to be pleased* to lie down.

(67) a. He's *too* smart *to {be expected, be likely}* to die.
b.#He's *too* smart *to {be known, seem}* to die.

Analogous uses of prospective statives in Kalaallisut are illustrated in (68') and (69'). Again, one story—whatever the details might be—will hopefully generalize across English (66a)–(67a) and Kalaallisut (68')–(69').

(68) ... for [the ground] was much too wet to lie down. [P: V]

(68') ...nuna=mi nallar-vigi-ssa-llu-gu
...ground=for lie.down-on-desire-ELA_T-3s_⊥
masap-pallaa-qi-mm-at.
be.wet-too-very-FCT_⊥-3s_⊥ [P': 33]

(68') ...for the ground was much *too* wet [for him] *to want to* lie down.

(69) [Uncle Torwal says the winter is hard on wild horses and he thinks that the blind colt, Whitey's favorite, is already dead. Whitey replies:] 'I haven't seen him for quite a spell, but I don't think he's dead; he's too smart.' [P: V]

(69') ...tuqu-ssa-llu-ni=mi
...die-be.expected-ELA_T-3s_T=for
silatu-llaa-qa-u-q.
be.smart-too-very-IND.IV-3s [P': 36]

(69'') ...for he's much *too* smart *to be expected* to die.

In summary, reports of attitude states or speech acts can concern either the *de se* future prospects of the experiencer/speaker, or his *de se* now. Only future-oriented reports support purposive construal and scale-based predictions. In Kalaallisut, diagnostic tests consistently show that prospective statives report current attitude states toward *de se* prospects.

6 CONCLUSIONS

The evidence presented here conclusively demonstrates that Shaer's (2003) conjecture —that Kalaallisut is tenseless—is in fact correct. This language does not have tense, in any sense of the term *tense* found in descriptive work (e.g., Chung and Timberlake 1985, Comrie 1985, Klein 1994).

This conclusion holds even under the most liberal criteria for what counts as a tense marker. For example, by the criteria of Chung and Timberlake (1985) and Klein (1994), the English tense markers arguably include not only the past and present tense inflections, but also the future auxiliaries, *will/would* and *is/was going to*. That is, tense markers are allowed to be fused, e.g., with mood or aspect, and to be realized by various morphosyntactic categories, including complex auxiliaries. But even with all of these allowances, there is still nothing in Kalaallisut that qualifies as a tense marker—in spite of the grammarians' reports of 'future tenses', dating back to Kleinschmidt (1851) and reinforced by Fortescue (1984).

According to these reports, Kalaallisut has three 'future tense' suffixes corresponding to Germanic future auxiliaries. Out of context, these three 'future tenses' are indeed likely to be used by native consultants to translate the English future auxiliaries *will/would* and *is/was going to* (or their Danish equivalents). But a very different picture emerges from text studies examining how the same auxiliaries are rendered in published translations—that is, under optimal conditions. For professional translators have excellent command of English (or Danish). They also have full knowledge of the context and are doing their best to render the meaning.

To translate the future uses of *will/would* and *is/was going to* under these conditions, Kalaallisut translators go far beyond the three putative 'future tenses'—they use nearly thirty morphemes. Morphologically, the attested translations are diverse. But semantically, they form a natural class, with three subclasses conforming to the following Prospectivity Thesis:

PROSPECTIVITY THESIS

Kalallisut translations of future auxiliaries comprise three related classes:

- A. *prospective statives* evoking (current) attitude states to *de se* prospects,
- B. *prospective inchoatives* evoking (realized) starts of expected processes,
- C. *prospective matrix moods* marking the speech act as a request or wish.

In Bittner (2005) some of the claims of the Prospectivity Thesis are explicated by combining the logic of change of Muskens (1995) with a suitable ontology and the formal theory of centering of Bittner (2001). But here, my goal was not to argue for any particular theoretical framework, but rather to contribute to the data base for any framework aspiring to universality. Therefore, the goal was strictly descriptive—to provide a

comprehensive, in-depth, theory-neutral description⁸ of a hitherto unknown tenseless system for conveying temporal information. The data reported here show how Kalallisut does that without the benefit of tense, but still with the same precision as the tense system of English.

To give some logical structure to this mass of data—and to jump-start the debate—I have presented the raw data of Kalaallisut together with my current understanding of this linguistic system. But whereas my current understanding may be—and probably is—flawed, the raw data are facts of life. From now on they are part of the data base that any theory of temporal anaphora and quantification must account for, if it is to have any hope of universality. Hopefully, the effort of rethinking our theories to accommodate tenseless mood languages like Kalaallisut will be rewarded, not only by more more general and more representative theories, but also by new insights into tensed languages such as English.

APPENDIX A: TEXTS AND DICTIONARIES

- [B] Berthelsen, C. et al. 1990. *Oqaatsit: Kalaallisuumiit Qallunaatumut (Words: From Kalaallisut to Danish.)* Atuakkiorfik, Nuuk.
- [G] Gedionsen, I. 1980. *Qallunaatsiaq Herjulf*. Kalaallit nunaanni naqiterisitsisarfik, Nuuk.
- [H] Hemingway, E. 1952. *The Old Man and the Sea*. Scribner, New York.
- [H'] Hemingway, E. 1991. *Angutitoqaq imarlu*. Translated from the Danish translation by Thomas Efraimssen. Atuakkiorfik, Nuuk.
- [LH] Lennert Olsen, L. and Herling, B. 1988. *Grønlandsk tilhængsliste. (List of Greenlandic suffixes.)* Pilirsuiffik.
- [L] Lindgren, A. 1997. *Pippi Longstocking*. Translated by Florence Lamborn. Puffin, New York.
- [L'] Lindgren, A. 2000. *Pippi Langstrømpe—ikinngutaalu*. Translated by R. Grønvold Benjaminsen. Atuakkiorfik, Nuuk.
- [D] O'Dell, S. 1988. *Black Star, Bright Dawn*. Fawcett Books, New York.
- [D'] O'Dell, S. 1994. *Milalinnguaq Sikkersorlu*. Translated by Svend Møller. Atuakkiorfik, Nuuk.
- [P] Rounds, G. 1941. *The Blind Colt*. Holiday House, New York.
- [P'] Rounds, G. 1988. *Hesti piaraq tappiitsoq*. Translated by Mariane Petersen. Atuakkiorfik, Nuuk.

⁸ To be sure, I have used terms that have been theorized about—e.g., event, state, topic time, discourse referent, *de se* attitude, etc—but I have only used them in their dictionary sense, or in the pretheoretical sense of Klein (1994), Karttunen (1976), or Lewis (1979).

- [R] Rowling, J. K. 1997. *Harry Potter and the Philosopher's Stone*. Bloomsbury, London.
- [R'] Rowling, J. K. 2002. *Harry Potter ujaraallu inuunartoq*. Translated by Stephen Hammeken. Atuakkiorfik, Nuuk.
- [SL] Schultz-Lorentzen. 1974. *Den grønlandske ordbog: Grønlandsk-Dansk*. Sydgrønlands Bogtrykkeri, Nuuk.

APPENDIX B:
KALAALLISUT TRANSLATIONS OF FUTURE AUXILIARIES

Examples (a) justify the glosses; examples (b) illustrate the translations of English future auxiliaries.

A1. *ilimagi-* (tv) 'expect'

- (a) *Ilimag-a-a.* [SL: 68]
(expect-IND.TV-3s.3s)
Han forventer det. ('He expects it.')
- (b) See (14').

A2. *ilimananar-* (iv) 'be likely'

- (a) *Ilimananar-pu-q.* [B: 103]
(be.likely-IND.IV-3s)
Det er sandsynligt. ('It's probable.')
- (b) See (58').

A3. *-gunar* (v\v) 'be likely to'

- (a) See (18').
- (b) See (13').

A4. *-juma* (v\v) 'want to, be willing to'

- (a) See (36'), (41'), (50'), A6(a).
- (b) '...won't you ...put the ladder back so that we can get down?'
'Of course I *will*,' said Pippi. [L: 44]
- (b') Aap, suurunami taama-iliur-*uma*-vu-nga.
yes of.course thus-do-be.willing-IND.IV-1s [L': 41]
- (b'') Yes, of course I am *willing to* do that.

A5. *-jumaar* (v\v) '(be) hope(d), (be) dread(ed)'

- (a) See (23').
- (b) He'll turn up. [R: 116]

(b') Takkuti-qqik-*kumaar*-pu-q.
show.up-again-be.hoped/dreaded-IND.IV-3s [R': 130]

(b'') There is a *hope/risk* of his showing up again.

A6. -navianngi (v\v) 'be very unlikely to'

(a) Pi-uma-*navianngi*-la-q. [B: 217]
(do.so-want-be.very.unlikely-IRR-3s)
Han vil sikkert ikke. ('He certainly will not want to do this.')

(b) At the checkpoint, the race judge advised me not to leave.
'You'll not get far,' he said. [D: 78]

(b') Ungasilli-ngaar-*navianngi*-la-tit.
get.far-very-be.very.unlikely-IRR-2s [D': 93]

(b'') You're *very unlikely to* get very far.

A7. -niar (v\v) '(be) intend(ed), be about to, (process use: try)'

(a) See (18'), (19'), (22'), (38'), (51').
Process use: (35'), (40'), A9(b'), C1(b').

(b) See (21').

A8. -qina (v\v) 'be liable to'

(a) Nakka-*qina*-vu-tit. [SL: 335]
(fall.down-be.liable-IND.IV-2s)
Pas på, ellers falder du ned. ('Watch out, or you'll fall down!')

(b) See (41').

A9. -qqajaa (v\v) 'be just about to, be ready to'

(a) Pitaruti-*qqajaa*-vu-q. [B: 293]
(get.through-be.just.about.to/ready.to-IND.IV-3s)
Det kan ventes hvert øjeblik. ('It can be expected any moment.')

(b) 'You didn't steal [these baits for me]?'
'I *would*,' the boy said. 'But I bought these.' [H: 13]

(b') Pillir-vigi-sinnaa-nngit-suu-gu-kkit
offer-to-be.able-not-nonfact-HYP_T-1s.2s
tillin-nia-*qqaja*-qa-u-nga.
steal-try-be.ready-very-IND.IV-1s [H': 8]

(b'') Were I unable to offer you this, I am quite *ready to* try to steal.

- A10. -qqu (v\tv) ‘want ⊥ to, enable ⊥ to, (event use: order ⊥ to)’
- (a) Aviisi-p tunniun-nir-a-nut akili-qqu-vu-q. [R': 77]
 paper-sg.ERG give-v\N-3s_⊥.sg-DAT pay-want.⊥.to-IND.IV-3s
 He [*the owl*] wants payin' fer deliverin' the paper. [R: 72]
State or event use: (25'), (47')
- (b) See (65').
- A11. -riaannaa (v\v) ‘be well able to, be easily possible’
- (a) Asiru-riaannaa-vu-q. [LH: 65]
 (break-be.easily.possible-IND.IV-3s)
 Det kan let gå i stykker. ('It can easily break.')
- (b) See (48'), (51').
- A12. -rusug (v\v) ‘wish to, feel like’
- (a) See (33'), (43'), (49').
- (b) I still haven't got yeh a birthday present...I'll get yer animal. [R: 92]
- (b') Uumasu-mik tuni-rusup-pa-kkit.
 animal-sg.MOD give-feel.like-IND.TV-1s.2s [R': 102]
- (b'') I *feel like* giving you an animal.
- A13. sapir- (v) ‘be unable, not dare’
- (a) See (63').
- (b') See (62').
- A14. sapirnar- (iv) ‘be impossible, be hard to do’
- (a) Sapirnar-pu-q. [SL:246]
 (be.hard/impossible-IND.IV-3s)
 Det is vanskeligt/uoverkommeligt. ('It's hard/not feasible.')
- (b) That I'll *never* believe. [L: 54]
- (b') Uppiri-niq sapirna-ngajap-pu-q.
 believe-v\N be.impossible-almost-IND.IV-3s [L': 51]
- (b'') That is almost *impossible to* believe.
- A15. -sariaqar (v\v) ‘need to, be necessary for ⊤ to’
- (a) See (36'), (40'), (43'), (47'), (48').
- (b) Igloos are very good in the wind...If we stay here another day and night,
 we *will* build a porch for ourselves, a very good place to cook in.
 [D: 46]

(b') Aqagu-mut aalla-ssa-nngik-ku-tta
 next.day-sg.DAT leave-be.expected-not-HYP_T-1p
 illuiga-rput paa-liur-tariaqar-pa-rput
 igloo-1p.sg porch-make-need-IND.TV-1p.3s
 iga-vvi-ssa-tsin-nik
 cook-location-desired-1p.sg-MOD [D': 58]

(b'') If we're not expected [by the marshal] to leave tomorrow, then we *need to* add to our igloo a porch, a desirable place for us to cook in.

A16. -sinnaa (v\v) 'be able to, be possible for T to'

(a) See (65'), A9(b')

(b) 'Say you're back [from your injury] in three weeks... Your team needs to run fifty miles a day to get in shape...'
 'Bright Dawn *will* train the dogs for me.' [D: 28]

(b') Sikkirsu-p qimuttu-t sungiusar-tar-sinnaa-va-i
 B.D.-sg.ERG sled.dog-pl train-habit-be.able-IND.TV-3s.3p [D': 39]

(b'') Bright Dawn is *able to* keep (on) training the dogs for me.

A17. -ssa (v\v) '(be) expect(ed), (be) desire(d)'

(a) '(be) expect(ed)': (14'), (31'), (39'), (56'), (65'), (69'), A15(b').
 '(be) desire(d)': (19'), (27'), (41'), (49'), (53'), (68').

(b) See (48').

A18. -ssaq (n\n) 'expected, desired'

(a) 'expected': (30'), (34'), (37'), (39'), (47'), (58'), (61'), A22(b').
 'desired': (21'), (50'), A15(b').

(b) See (23'), (40').

A19. -ssamaar (v\v) 'plan to, be about to'

(a) Avi-ssamaar-pu-t. [LH: 76]
 (split-plan-IND.IV-3p)

De har planer om at blive skilt. ('They plan to get divorced.')

(b) See (30'), (46') (two instances).

A20. -ssanga (v\v) 'expect to'

(a) Aalla-ssanga-vu-q. [LH: 77]

(set.out-expect-IND.IV-3s)

Han regner med at tage af sted. ('He expects to leave.')

- (b) One racer to another: ‘Maybe I come first.’ His eyes glittered.
‘Where *will* you be?’ [D: 36]
- (b') Illit nurmu qassi-u-ssanga-vi-t?
you number what.number.n-be-expect-QUE-2s [D': 48]
- (b'') What number do you *expect* to be?
- A21. -ssangatip (v\tv) ‘expect ⊥ to’
- (a) Aalla-ssangatip-pa-a. [LH: 77]
(set.out-expect.⊥.to-IND.TV-3s.3s)
Han regner med at hun tager af sted. (‘He expects her to leave.’)
- (b) See (29').
- A22. -ssaqqaar (v\v) ‘be confidently expected’
- (a) Sini-ssaqqaar-pu-q. [LH: 77]
(sleep-be.confidently.expected-IND.IV-3s)
Tag det roligt, han skal nok sove. (‘Relax, he’ll sleep all right.’)
- (b) ‘If you can’t see it, how will you know where you are?’
‘My lead dog *will* know,’ I said. [D: 78]
- (b') Ittuquti-ma aqquti-ssa-rput
lead.dog-1s.sg.ERG route-expected-1p.sg
nani-ssaqqaar-pa-a.
find-be.confidently.expected-IND.TV-3s.3s [D': 93]
- (b'') [I] *confidently expect* my lead dog to find our expected route.
- A23. -ssaqqip (n\iv) ‘be suitable for’
- (a) Illu-ssaqqip-pu-q. [LH: 78]
(house-be.suitable.for-IND.IV-3s)
Det er velegnet til beboelse. (‘It’s suitable to live in.’)
- (b) See (50').
- A24. -(t)sir, -(t)sii (v\tv) ‘wait for ⊥ to’
- (a) Unnus-sii-va-a. [LH:73]
(become.evening-wait.for.⊥.to-IND.TV-3s.3s)
Han venter til det bliver aften. (‘He’s waiting for the evening.’)
- (b) See (28').
- B1. -lir (v\v) ‘begin’
- (a) See (21'), (26'), (28'), (40'), (41'), (56'), (58'), (65').
- (b) See (15').

C1. -li/la (-OPT) ‘let...’

- (a) See (6).
- (b) ‘He’s taken [the bait],’ [the old man] said.
‘Now I’ll let him eat it well.’ [H: 44]
- (b’) Iqqissi-vil-lu-ni
calm.down-really-ELA_T-3s_T
ii-lluar-titaar-nia-rallar-li-uk.
swallow-well-bit.by.bit-try-for.now-OPT-3s.3s [H’: 29]
- (b'') For now *let* him really calm down and try to swallow it well bit by bit.

C2. -niar-li (please-OPT) ‘please let...’

- (a) See (6).
- (b) [Race sponsors ask an injured competitor in training what to do.]
‘My daughter *will* run the race.’ [D: 29]
- (b’) Pani-ga taarsir-lu-nga
daughter-1s.sg replace-ELA_T-1s
sukka-niuti-qata-u-niar-li
go.fast-compete-fellow-be-please-OPT.3s [D’: 40]
- (b'') *Please let* my daughter participate as a competitor instead of me.

C3. -niar- (please-IMP) ‘please,.../let’s ...ok?’

- (a) See (6).
- (b) See (16’).

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MARIA BITTNER

*Rutgers University,
Linguistics Department,
18 Seminary Place
New Brunswick,
NJ 08901-1184 USA
e-mail: mbittner@rci.rutgers.edu*

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