

IS INUKTITUT TENSELESS?*

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Inuit languages are often claimed to be tenseless (Nowak, 1994) for Baffin Island and Arctic Quebec Inuktitut, (Shaer, 2003) and (Bittner, 2005) for West Greenlandic). This claim is based on the seeming optionality of tense marking and the fact that the temporal marking does not seem to be part of the inflectional morphology. In this paper, we show evidence that that tense marking is in fact not optional and therefore cannot be grounds for the claim of tenselessness. We show additional syntactic and semantic evidence for tense in Inuktitut. We conclude that Inuktitut has tense based on empirical evidence.

1. Introduction: Tense morphemes in Inuktitut

The Inuktitut verb is a complex with the root on the left, various suffixal morphemes following and closing with inflectional agreement morphology. Overt tense-indicating morphology can be found close to the inflectional morpheme although it can be separated from it by other morphemes, negation for example. It never precedes valency changing morphemes such as the passive or Antipassive (AP) morphemes which are attached directly to the root.

- (1) a. *kunik-tau-lauq-tunga Piita-mut*
kiss-pass-past-part.1sg Peter-abl
I was kissed by Peter (earlier today)
- b. *kunik-tau-lauq-nngit-tunga Piita-mut*
kiss-pass-past-neg-part.1sg Peter-abl
I was not kissed by Peter (earlier today)

2. Previous accounts on Tense in Inuktitut

The few discussions on tense in Inuit languages all come to the conclusion that the language has no tense (Bittner, 2005, Nowak, 1994, Shaer, 2003). These accounts are based on the properties of the tense indicating morphemes such as their optionality, position with respect to agreement morphology, or the claim that they do not necessarily contribute temporal meaning. The tense morphemes that are discussed in Shaer (2003) and Bittner (2005), and are claimed to be non-tense morphemes are questionable as tense in many languages. They discuss present perfect *-sima* (Shaer) and future morphemes (Bittner).

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2.1 Future morphology

Shaer and Bittner argue that future morphology is not tense in Inuit languages and the language has therefore no tense. Some evidence is that future morphemes do not contribute anything to future meaning.

- (2) a. tuqu-ssa-atit.
die.FUT.IND-2SG ‘
You will die (e.g., if you drink the poison).’ (Shaer, 2003)
- b. Ami-a avata-ssa-tut suliyari-ssa-va-t,
skin-3SG hunting.bladder-EXP-EQU process-EXP-IND.TV-
2SG.3SG
‘You will process the skin as for a hunting bladder,

taliru-i siqqu-i=lu ata-til-lu-git.
front.flipper-3SG.PL hind.flipper-3SG.PL=and attached-CS-
ELA.S-3PL
leaving the front flippers and the hind flippers attached.’
(Bittner, 2002): 3, §1, ex. 3)

The claim that the morpheme does not contribute to the future meaning can however also be made for German. The future form in (3a) does not contribute anything to future meaning, it conveys intention while the “present” form in (3b) conveys a statement about a regularly occurring event.

- (3) a. Ich werde morgen arbeiten.
I will tomorrow work
I will work tomorrow.
- b. Ich arbeite morgen.
I work tomorrow.
I am working tomorrow.

Neither German nor Japanese mark the difference between present and future.

- (4) a. haha-ni denwa-o su-ru.
mother-DAT telephone-ACC do-PRES
‘(I) (will) call my mother
- b. haha-ni denwa-o si-ta.
mother-DAT telephone-ACC doPAST
I called my mother
- c. Ich rufe meine Mutter an.
I call-PRES my-ACC mother particle
I (will) call my mother

- d. Ich rief meine Mutter an.
 I call-PAST my-ACC mother particle
 I called my mother.

Both languages obligatorily require overt past tense morphology to express the difference between past and non-past but not for future meanings. Future meaning is thus not necessarily expressed by an obligatory morpheme in Japanese or German. However, to the best of our knowledge; nobody has claimed that these languages have no tense based on this kind of evidence.

Languages often mark only the contrast either between past and non-past or between present and non-present morphologically. Thus, an investigation of more than just one kind of morpheme is required. All we can say based on the above is that the discussed future morphemes are probably no tense morphemes.

2.2 Optionality of tense marking

All accounts on tense in Inuit languages claim that the tense morphology is optional, not only as to their contribution to the meaning of the sentence but also with respect to their obligatory presence as inflectional morpheme. (Shaer, 2003) argues against a null tense allomorph in West Greenlandic based on the fact that there does not seem to be a predictable contrast between overt and non-overt morphology. He uses the present perfect morpheme to illustrate that point. However, the contrast in (5) shows that *-sima-* is not a tense morpheme but an aspectual morpheme, not more distinguishing past from present than the present perfect in English.

- (5) a. aullaq-sima-juq b. aullaq-sima-lauq-tunga
 leave-pres.perf.-part.3sg leave-pres.perf.-past-part.1sg
 he is away I was away. (Harper, 1979):70)

3. Properties of a tenseless language: Halkomelem

The only other language we know of that has been argued to be tenseless is Halkomelem Salish. (Ritter and Wiltschko, 2005, Wiltschko, 2003) argue that Halkomelem is tenseless in the sense that the temporal anchoring of events is spatial as opposed to temporal. If a language is truly tenseless, we would expect to find the following properties.

Locating events in time is morphologically marked on determiners in Halkomelem, which are, as we would expect, obligatory. Tense marking on verbs is on the other hand, optional. Furthermore, it is argued that tense is correlated with nominative case checking; thus, resulting in contrasts between nominative case and the presence of tense vs. the absence of nominative case and infinitive tenseless clauses. As we would expect, we do not get this contrast with a languages that anchors events spatially. The language has no infinitives. Furthermore, it shows tense markers on nouns. Comparing Inuktitut with Halkomelem with respect to these properties, we find it contrasts with Halkomelem in most of those characteristics.

We will show in section 3 that Inuktitut tense marking is by no means optional. However, Inuktitut has in common with Halkomelem that it has no

infinitives, thus a contrast between tensed and tenseless clauses may not be found. Despite this, Inuktitut shows effects of nominative case marking, which we will demonstrate in section 4. Except for the fact that Inuktitut like Halkomelem has no infinitives, Inuktitut does not seem to share many characteristics with a tenseless language like Halkomelem.

(6) Properties of Halkomelem

<i>Halkomelem</i>	<i>Inuktitut</i>
Optional tense marker on the verb	No
Tense marker on nouns	Different markers
Obligatory determiners	No determiners ¹
No infinitives	Yes
No effects of nominative case	Effects of nominative case

2.4 Characteristics of Tense

As the comparison with Halkomelem has shown, it is necessary to consider more than the morphological properties of tense but the correlation between morphology, the syntax, and the semantics of tense and their correlation together to determine whether a language has tense. We suggest that the following properties have to apply for a language to have tense.

(7) Properties of Tense

1. The morphology of tense is inflectional by which we mean paradigmatic, usually found far from the root, part of a closed class, obligatory, and marked only on the verb.
2. The syntax of tense shows a correlation to nominative case checking, it is thus a part of the agreement system.
3. With respect to semantics, tense locates events in time (Comrie, 1985).

3 Tense Marking in Inuktitut

In this section, we examine the behaviors of the past morphemes, *-qqau* and *-lauq*, in simple clauses and subordinate clauses. We demonstrate that tense marking is not optional and show what determines overt tense marking.

3.1 Tense in simple clauses

Past morphemes, *-qqau* and *-lauq*, are obligatory to express past eventualities which occur within the day of the speech time and the ones that happen earlier the day of the speech time, respectively. Furthermore, these past morphemes are complementary distribution with the default tense (represented by \emptyset , the absence of tense), which functions as present tense.

¹ Cf. (Compton, Richard. 2004. On Quantifiers and Bare Nouns in Inuktitut. *Toronto Working Papers in Linguistics* 23:1-45.)

3.1.1 Default tense (Ø)

Sentences are interpreted as expressing present eventualities with an absence of tense morpheme (Ø) for state (8), activity (9) and accomplishment (10) verbs (Hayashi, 2005).

- (8) ilinniaqti-u-Ø-juq²
 student-be-Ø-part.3sg
 ‘He is a student’
- (9) mumiq-Ø-tuq
 dance-Ø-part.3sg
 ‘He is dancing’
- (10) qimir-mut iglu-liuq-Ø-tuq
 dog-DAT house-make-Ø-part.3sg
 ‘He is building a dog house’

For achievement verbs, the default reading is past (11).

- (11) a. tikit-Ø-tuq
 arrive-Ø-part.3sg
 ‘He just arrived’
- b. imaaq-Ø-tuq
 fall.in.the.water-Ø-part.3sg
 ‘He just fell down into the water’

One might think that Inuktitut has no tense if s/he is exposed to only (11). However, (11) cannot be past. In fact, the default tense interpretation of achievement verbs has to be the very recent past; an eventuality just finished at speech time (consider especially the English translations in 11a and 11b).

- (12) *tiki-Ø-tuq ippaksaq
 arrive-Ø-part.3sg yesterday
 ‘He arrived yesterday’

In this case, the past morpheme *-lauq* must be used. *-lauq-* expresses the event that happened ‘before today’. (13).

- (13) tiki-lauq-tuq ippaksaq
 arrive-part.3sg yesterday
 ‘He arrived yesterday’

² Glosses: Erg: ergative case; abs: absolutive case, *mik*-case, often taken as accusative case (ind: indicative mood, part.: participial mood. Both moods are used as declarative moods. The terminology is misleading but is traditionally used.

The morpheme *-qqau* expresses an event that happened ‘earlier today’ (14). It is obligatory in this context as in (14b).

- (14) a. tiki-qqau-juq ulluuk
arrive-past-part.3sg this morning
‘He arrived this morning’
- b. *tiki-∅-tuq ulluuk
arrive-∅-part.3sg this morning
‘He arrived this morning’

To express past eventualities with activity (15), state (16), and accomplishment (17) verbs, past morphemes are necessary.

- (15) a. jaan mumi-lauq-tuq ippaksaq
John dance-lauq-part.3s yesterday
‘John danced yesterday’
- b. *jaan mumiq-∅-tuq ippaksaq
John dance-∅-part.3s yesterday
‘John danced yesterday’
- (16) a. jaan ilinniaqti-u-lauq-tuq 1990-mit
student-be-lauq-part.3s 1990-in
‘John was a student in 1990’
- b. *jaan ilinniaqti-u-∅-juq 1990-mit
John student-be-∅-part.3s 1990-in
‘John was a student in 1990’
- (17) a. qimir-mut iglu-liuq-lauq-tuq
dog-DAT house-make-lauq-part.3sg
‘He is building a dog house’
- b. qimir-mut iglu-liuq-∅-tuq
dog-DAT house-make-∅-part.3sg
‘He is building a dog house’

- (18) The data shows a predictable contrast between overt and non-overt tense:
- ∅: present (except for the ‘just-finished’ interpretation with ∅)
 - *-qqau*: past within the same day
 - *-lauq*: past earlier than today

3.2 Tense Marking in dependent clauses: Temporal adverbial clauses

In subordinate clauses in tensed languages, tense morphemes are often interpreted with respect to a structurally higher tense (Ogihara, 1996). This is called relative tense. We will show that ∅ and *-lauq* are in fact, relative tense in

subordinate clauses; they are interpreted relative to the matrix event time (See Hayashi 2005 for more detailed discussion).

The dependent clause that we focus on is the conjunctive clause (Johns and Smallwood, 1999). Inuktitut has no lexical element which corresponds to *before* and *after*, and they are expressed by using the conjunctive clauses.

A conjunctive clause is a type of dependent clause marked by *-tillu* in South Baffin Inuktitut. It translates roughly to *when* or *while*: two eventualities hold at the same time.³ First we consider the case where the matrix and the subordinate eventualities are simultaneous (19).

- (19) When S1, S2
- a. jaan niri-∅-tillugu miali uqalimaa-lauq-tuq
 John eat-PRES-CONT.3s Mary read-PAST-part.3sg
 ‘When John was eating Mary was reading’
- b. PAST [Mary read PRES [John read]]

(19b) shows the scope relation between the two tenses. The matrix tense has scope over the subordinate tense; therefore S1 is interpreted as present with respect to the event time of the matrix clause S2 (Mary’s reading). This yields the simultaneous interpretation which resulted in translation of *when* or *while*.

- (20) Before S1, S2
- a. miali mumi-lau-ngit-tillugu niri-qqau-juq
 Mary dance-PAST-NEG-CONT.3s eat-PAST-part.3sg
 ‘Before Mary danced, she ate.’
- b. PAST [Mary eat ¬ PAST [Mary dance]]

S1 is marked as past with *-lauq*, which is interpreted with respect to the event time of the matrix clause, Mary’s eating. This yields the interpretation that, literally: Mary’s dancing was not before Mary’s eating.

- (21) After S1, S2
- a. miali mumi-anik-∅-tillugu niri-lauq-tuq
 dance-PERF-PRES.CONT.3s eat-PAST-part.3sg
 ‘After Mary danced, she ate.’
- b. PAST [Mary eat PRES PERF [Mary dance]]

S1 is marked as present with *-∅-* with respect to the event time of the matrix clause, Mary’s eating. *-anik* is perfective, which yields the interpretation that the subordinate eventuality, Mary’s dancing, is finished at the time of the matrix eventuality, Mary’s eating.

So far we demonstrated that the temporal morphemes *-qqau* and *-lauq* are obligatory and that there is a predictable contrast between overt/non-overt

³ (See Hayashi, Midori. 2005. Tense in Inuktitut. Ms. University of Toronto. for a more detailed discussion on the semantics of *-tillu*).

tense. In the next section, we focus on voice alternation and its impact on tense interpretation.

4. Tense Morphology and Grammatical Aspect

As generally acknowledged (Wiltschko, 2003), tense is intricately linked to nominative case checking or, more generally speaking, to the head that checks nominative case, known as T or I. The absence of nominative case checking usually results in a tenseless clause such as infinitives. Inuktitut has no infinitive clauses (Wharram, 1996), a fact which either puts us in a position to assume that therefore every clause in Inuktitut has tense or we have no syntactic diagnostic to find out whether there is tense.

The previous section has shown that Aktionsart of the verb root determines tense marking in Inuktitut differently from English tense marking. This section shows that tense marking also depends on which argument gets absolutive case. The voice alternation between Antipassive (AP) and ergative construction differs in case configuration, agreement and tense morphology and can serve as a diagnostic.

- (22) a. Ergative
 anguti-**up** arnaq kunik-**taa**
 man-**ERG** woman(**abs**) kiss-part. **3sg/3sg**
 The man kissed the woman
- b. Intransitive
 anguti niri-vuq
 man(**abs**) eat-ind.3sg
 The man is eating.
- (23) a. Antipassive with overt Antipassive morphology
 anguti kunik-**si**-vuq arna-**mik**
 man(**abs**) kiss -**AP**-ind.3sg woman-**acc**
 The man is kissing a woman.
- b. “Antipassive” without Antipassive morphology
 anguti niri-vuq niqi-**mik**
 man(**abs**) eat-ind.3sg meat-**mik**
 The man is eating meat.

The ergative construction in (22a) shows ergative case marking on the agent, absolutive case on the theme argument and the verb shows agreement morphology cross-referencing both arguments. In the AP construction in (23a), the agent argument has absolutive case and the theme argument is marked with the *mik*-case, equivalent to an accusative in (23a). Aspectually, the constructions differ in that the ergative construction has perfective viewpoint aspect while the AP is interpreted as imperfective viewpoint aspect. The AP morpheme *-si-* is obligatory with punctual verbs while non-punctual transitive verbs do not allow the AP morpheme.

4.1 The Semantics of Tense in transitive sentences

In the ergative construction, the interpretation is always perfective. The AP construction changes the semantics to imperfective. This is due to the AP morpheme. The AP morpheme changes normally non-durative verbs to imperfective while durative verbs are imperfective with intransitive agreement. Although judging by the English translations, the perfective seems like past tense, the only way we can see the difference in tense marking if we consider the AP construction.

4.2 Past and Present in the Antipassive

The South Baffin dialect of Inuktitut does not allow the ergative construction with achievement verbs if the agent is third person (Spreng, 2005b). In this case, the Antipassive construction is obligatory. Therefore, the aspectual contrast between the constructions is lost.

For a present perfective interpretation in the only available Antipassive construction, a past tense morpheme is required. Tense interpretation changes while grammatical aspect is still imperfective although moved to past with respect to reference time.

- (24) a. Peter quqir-*si*-juq nanur-nit
Peter(abs) shoot-AP-part.3sg. bear-acc.pl
Peter is shooting at bears
- b. Peter quqir-*si*-qqau-juq nanur-nit
Peter(abs) shoot-AP-PAST-part.3sg bear-acc.pl
Peter shot at bears today.
- c. Peter surak-*si*-juq naalauti-mit
Peter break-AP-part.3sg radio-acc
Peter is damaging the radio.
- d. Peter surak-*si*-qqau-juq naalauti-mit
Peter(ABS) break-AP-PAST-part.3sg radio-acc
Peter damaged the radio today.

Like in most Inuit languages, the AP morpheme is determined by the Aktionsart of the verb. This means, the AP construction requires a past tense morpheme to move the event time into the past with respect to the reference time. The ergative construction requires the past tense morpheme as well; the only problem is that the translation makes it look like the perfective is already past tense. The contrast is only clear in the AP. The evidence shows clearly that tense marking is not optional in Inuktitut.

4.2 Tense morphology is inflectional

Traditionally, the morphemes between root and agreement morphology have been considered derivational (Kleinschmidt, 1852), (Nowak, 1994), (Fortescue, 1980).

What we know about the position of these morphemes is that tense morphemes occur closer to agreement morphology than the root. The AP morpheme attaches directly to the root (1). The tense morpheme attaches later. Tense morphology is thus closer to agreement morphology than to the root. It occurs between the AP morpheme and agreement morphology. Furthermore, although it is not part of the agreement morphology, it is indirectly determined by it. Overt past tense marking is obligatory for past tense interpretation if we have intransitive agreement morphology with punctual verbs, such as we have in the AP. It is thus accessible to syntax, unlike derivational morphology but similar to the Antipassive morpheme. It has more properties common with inflection than with derivation. The only difference is that it is not part of a traditional paradigm.

4.3 Nominative case effects

The view that tense is correlated with nominative case checking is based on the fact that infinitival clauses are tenseless. Since Inuktitut has no infinitival clauses, we are without a diagnostic contrast. What we can observe is that overt past marking is determined by which argument checks nominative case. Nominative case is equivalent to absolutive case in an ergative language like Inuktitut. In the Antipassive, the higher argument checks absolutive case while in the ergative construction, the lower argument checks absolutive case. In intransitive constructions, durative activity verbs, whose sole argument is usually high, past tense marking is obligatory to get a past interpretation. Achievement verbs which are usually punctual have a low argument, they are generally unaccusative verbs. These verbs do not require an overt past marker to get a past tense interpretation. Again, the low argument checks nominative case.

In conclusion, if the low argument checks absolutive (nominative) case in Inuktitut, we do not require overt past tense marking while when the high argument check absolutive case, overt past tense morphology is obligatory. We can thus observe nominative case effects with respect to which argument checks nominative case.

4.4 Towards an analysis

To illustrate the nominative case effects and the interaction of tense marking with the syntax we make the following assumptions following previous work. A) Ergative case is not a structural case in Inuktitut (Spreng, 2005a). B) The AP construction with *-si-* is a nominative-accusative construction (Bok-Bennema, 1991, Spreng, 2005a). C) Based on the relative positioning of the tense morphemes, we assume that tense is probably a separate head lower than the AGR projection. We justify this assumption with the fact that its realisation is dependent on aspect and must therefore be close and accessible to aspectual projections such as an aspectual projection (Borer, 1993). If one assumes a

framework like Distributed Morphology (Halle and Marantz, 1993), the insertion of a particular tense morpheme would be determined by the next lowest morpheme, which would be the AP morpheme. A valid assumption since it is the AP morpheme that determines the realisation of tense morphology in Inuktitut.

For complex clauses we suggest that the temporal adverbial clause is an IP adjoined to *vP*. The tense marker in the embedded clause is determined by the event time, not by the tense marker of the matrix clause. Therefore, an analysis with adjunction lower than at T should be pursued.

5. Conclusion

We could show that tense marking in Inuktitut is not, as previously assumed for other varieties, optional. Tense marking can be predicted based on Aktionsart, and grammatical aspect, both within the clause and across clauses. Although Inuktitut has no non-finite clauses, nominative case effects with respect to tense marking can be observed. Morphological, syntactic, and semantic evidence shows conclusively that Inuktitut is not a tenseless language.

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