

THE STATUS OF TENSE WITHIN INFLECTION

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One of the most frequently cited examples of a prototypical inflectional category is tense. Yet the motivation for classifying tense as inflectional varies according to the criteria proposed to delineate inflection from derivation. Inflection has often been taken as a cluster concept composed of characteristics such as those detailed in Bauer 1983, Scalise 1988 and Plank 1994. Categories may thus be inflectional to varying degrees, depending on the number of pertinent characteristics they exhibit. Sometimes a single characteristic has been seen as criterial, such as obligatoriness or relevance to the syntax. The definition of syntactic relevance depends in turn on the particular view of syntax assumed.

The status accorded tense within the domain of inflection has varied as well. Anderson (1992: 82-3) distinguishes four types of inflection:

- a) configurational (case)
- b) agreement (number concord on English verbs)
- c) phrasal (genitive on English noun phrases, tense on verbs)
- d) inherent (gender on Latin nouns).

Booij (1994, 1996) distinguishes just two:

- a) contextual (number agreement on Dutch verbs)
- b) inherent (number on Dutch nouns, tense on verbs)

Anderson's first three types, configurational, agreement, and phrasal (a-c), are subsumed under Booij's contextual type (a). The types they label inherent are essentially the same (Booij 1994: 28). Tense occupies different positions within the two schemas, however. Anderson classifies tense as phrasal (c) because it is a property that is 'assigned to a larger constituent within a structure' (the clause) but 'realized on individual words' (verbs). Booij concurs that tense has scope over a whole clause, but classifies it as inherent, because 'the tense of the verb is not determined by syntactic structure' (1994: 30).

A significant feature of inherent inflection noted by Booij is the fact that it can interact with derivation, an observation that argues against split models of morphology. Booij's model also allows a more specific formulation of the nature of the boundary between inflection and derivation. Contextual inflection, defined as 'that kind of inflection that is dictated by syntax' (1996: 2), differs cleanly from derivation, while inherent inflection may differ from derivation to varying degrees.

For many languages, the various criteria for inflection yield the same categorization of tense markers. For some, however, they do not, providing us a better vantage point from which to compare their utility. Such a situation will be illustrated here with material from Central Alaskan Yup'ik, a language of the Eskimo-Aleut family. It will be shown that Booij's schema accounts well for the sometimes surprising patterning of tense markers synchronically and diachronically in the language.

1. Tense in Central Alaskan Yup'ik

At first glance, Yup'ik appears to exhibit a regular paradigmatic inflectional tense system similar to those of many European languages. Examples are drawn here from the speech of the Charles family of Bethel Alaska, particularly Nick Charles, Elena Charles, George Charles, Elizabeth Charles Ali, and John Charles. (Additional descriptions of the system are in Mithun 1995, 1998, 1999, and Snyder 1996.) I am especially grateful to Elizabeth Ali and George Charles for their help in transcribing and discussing the material.*

(1) Basic tense suffixes

ayagtua

ayag-tu-a

go-INDICATIVE.INTRANSITIVE-1SG

'I'm going'

ayallruunga

ayag-llru-u-nga

go-PAST-INDICATIVE.INTRANSITIVE-1SG

'I went'

ayakatartua

ayag-qatar-tu-a

go-IMMINENT.FUTURE-INDICATIVE.INTRANSITIVE-1SG

'I'm going to go'

ayaciqua

ayag-ciqe-u-a

go-FUTURE-INDICATIVE.INTRANSITIVE-1SG

'I'll go'

In much spontaneous speech, the use of the suffixes appears quite straightforward, essentially matching tense distinctions in English. Present tense verbs are unmarked for tense, while those referring to past events carry the past suffix *-llru-* and those referring to future events carry the imminent future *-qatar-* 'going to' or the general future *-ciqe-* 'will'.

(2) Use of tense suffixes in conversation: Elizabeth Ali, speaker

Wiinga tang kaikapailrianga.

wiinga tang kaig-qapiar-lria-nga

I see be.hungry-very-PARTICIPIAL-1SG

'You see, I'm very hungry.'

Atsalurpaineik kiimek tuai nere~~llru~~unga.

atsar-lugpiar-nek kii-mek tuai nere-~~llru~~-u-nga

berry-authentic-ABL.PL only-ABL that.is eat-PAST-IND.INTR-1SG

I only ate salmonberries.

Paluqatartua.

palu-qatar-tu-a

starve-IMMINENT.FUTURE-IND.INTR-1SG

I'm going to starve.

Carrakuinermek

tauggaam

cikiquvnga

tuai

carrar-kuiner-mek

tauggaam

cikir-ku-vnga

tuai

little.bit-small.amount-ABL

but

give-COND-2SG/1SG

well

But if you give me just a little bit,

quyapairciqua.

quya-pair-ciqe-u-a.

be.thankful-very-FUTURE-IND.INTR-1SG

I will be most grateful.'

While Yup'ik tense marking often seems quite systematic, on many occasions it might seem haphazard at best. Verbs relating past events, for example, often lack past tense suffixes. The passage in (3) below came from a family breakfast table conversation. Mrs. Charles, the mother of the family, is an excellent, gifted Yup'ik speaker.

(3) Apparent optionality: Elena Charles, speaker

Last fall-gguq

maaten-gguq

last fall=gguq

maaten=gguq

last fall=HEARSAY

when=HEARSAY

'Last fall when

Frankinguk

tekituk

Franki-ngu-k

tekite-u-k

Frankie-ASSOC-DU

arrive-IND.INTR-3.DU

Franky and his companion arrived (no tense)

campaput

yungqellruyaaqelliniuq

campaq-apat

yuk-ngqerr-llru-yaaqe-llini-u-q

camp-1PL/3SG

person-have-PAST-actually-apparently-IND.INTR-3SG

they realized that there had been (PAST) people at our camp.

upallrulliniliteng

upag-llru-llini-lu-teng

change.residence-PAST-apparently-SUB-3PL

They had moved (PAST)

carayiim piateng.

carayag-m pi-a-ateng

bear-ERG

do-CONSEQUENTIAL-3SG/R.PL

because a bear was bothering them (no tense).

Franki-gguq *bother-neritellinilutek.*
Franki=gguq *bother-nrite-llini-lu-tek*
 Frankie=HEARSAY bother-not-apparently-SUB-3DU

But Frankie said that they (he and his companion) were not bothered (no tense).

Kiimek *Franki-nkuk* *ayallruuk.*
kii-mek *Franki-nku-k* *ayag-llru-u-k.*
 alone-ABL Frankie-ASSOC-DU go-PAST-IND.INTR-3DU

Frankie and his companion had gone (PAST) up there by themselves.'

There is no tense marking on the verbs 'arrive' or 'bother', even though both the arrival and the bothering took place in the past.

The Yup'ik tense markers are not absolute, as in English, but relative. In languages like English, the deictic center of the tense system is generally the moment of speech. Past tense markers indicate a time before the moment of speech, and future tense markers a time after it. In Yup'ik the deictic center may be the moment of speech, as in (2) above, but within narrative, even short anecdotes, the deictic center is the narrative time. Events happening along the timeline of the narrative are unmarked for tense. A past tense marker specifies a time before the current narrative moment, and a future tense marker a time after it. The reference time in (3) is Franky's arrival at the camp and his subsequent stay. The past tense suffixes on 'there had been people' and 'they had moved' specify a time before Franky's visit, before the narrative moment. The clause stating that Franky and his friend were not bothered by a bear is unmarked for tense, because it is simultaneous with narrative time, the visit to the camp. A past tense suffix appears in the last line to specify a time preceding the visit, namely the trip up.

An example of a relative future can be seen in (4). Most of the events related in the narrative took place along the narrative timeline, so they are unmarked for tense. The final line, however, 'I would be squashed', projects an event after the narrative moment.

(4) Relative future: Elena Charles, speaker

Tuntuviik *taukuk* *wavet*
tuntuvag-ek *tauku-k* *wavet*
 moose-DU those.visible.stationary-DU to.here

'Those two moose here,

tangerraqlua *angyam* *caniani*
tangerr-aqe-lu-a *angyar-m* *cani-ani*
 watch-repeatedly-SUB-R/1SG boat-ERG area.beside-3SG/3SG.LOC

were looking at me (no tense) near the boat.

Wiinga-gg *tangvagkegka*
wiinga=gga *tangvag-ke-gka*
 I=as.for watch-PARTICIPIAL-1SG/3DU

As for me, I was watching them (no tense).

Tuai *tuntuviik* *ukuk* *taingareskagnek*
tuai *tuntivag-ek* *uku-k* *tai-ngarte-ku-agnek*
 and moose-DU these.approaching-DU come-suddenly-CONDITIONAL-3.DU

And if these two moose came suddenly (no tense)...

tuai yaavet qerciqua
tuai yaavet qerte-cige-u-a
 so to.yonder squashed-FUTURE-IND.INTR
 then I would be squashed (FUTURE).’

The pattern is reminiscent of the historical present in English. In Yup’ik however, narrative time must be assumed as the point of reference, because the tense system is a relative one. It is a matter of grammar. In English, the historical present is simply a stylistic option, a possible exploitation of an absolute tense system for stylistic effect. Of course one may evolve into the other diachronically.

A shift in the point of reference to narrative time is not necessarily signalled by any formal means in Yup’ik. There need not be an overt past tense marker to shift the point of reference away from the speech time. Often, of course, time is established at the beginning of a narrative in one way or another, with adverbials or lengthier explanations. The passage in (4) above, for example, opened with ‘Last fall’. In the same way, shifts in the point of reference back to the moment of speech are not necessarily marked.

Even in the course of telling narratives, however, speakers do not always maintain a single point of temporal reference. Speakers often step out of the narrative world for a moment to add comments from their present vantage point. Such a shift can be seen in (5). Mrs. Charles was telling of a time when a large moose had been shot and four people had to bring it a long distance to the boat. As long as events followed the narrative timeline, there was no tense marking. In the last line however, Mrs. Charles stepped outside of the narrative to provide an evaluative comment from her current standpoint.

(5) Shift in perspective: Elena Charles, speaker

Kapeluku menuitqapairluku.
kape-lu-ku menuite-qapiar-lu-ku
 cut-SUB-R/3SG be.tidy-very-SUB-R/3S
 We cut it very cleanly (no tense).

Atraugurluku nangeluku
atarar-ute-gur-lu-ku nange-lu-ku
 go.down-with-repeatedly-SUB-R/3SG use.up-SUB-R/3SG
 We kept bringing down pieces (no tense) until it was finished (no tense)

tuntuvacugpuk ...
tuntuvag-cug-puk
 moose-ugly.old-3D/3SG
 our big old moose

Anglanitullruunga caknek
anglani-tu-llru-u-nga caknek
 enjoy-customarily-PAST-IND.INTR-1SG very.much
 I used to enjoy myself (PAST) very much.’

Mrs. Charles opened an account of another excursion by describing the scenery. As the narrative unfolded, there was no past tense marking. After a pause and a murmur from the audience,

she made the statement in (6), this time with a past tense suffix.

(6) Shift in perspective: Elena Charles, speaker

‘We went again (no tense) to see (no tense) Qitenguq. You see, we could not catch game (no tense). And those two accompanied us (no tense), those two from up there, Peter Aluska and another, travelling (no tense) with their own boat ... and Bob Qilang.’ (Mmm).

Yunerillruuq tauna.
yunerir-llru-u-q tauna
 die-PAST-IND.INTR-3SG that
 ‘He died (PAST TENSE), that one.

Ayiimek tuai mululutek. ...
ayag-a-mek tuai mulu-lu-tek
 go-CONSEQUENTIAL-3R.DU so be.late-SUB-3.DU
 The two left late [but at least they arrived, and the weather was good ...]’

The dying clearly did not take place prior to the narrative time, when the two men were coming along in their boat. Mrs. Charles left the narrative time to mention the death of Mr. Qilang; the past tense on ‘he died’ situates his death prior to the moment of speaking, not the narrative. She then resumed her narrative with no special signal and no tense marking.

Discussions of past habitual events, unlike narratives, generally exhibit systematic past tense marking on each clause. This is because there is no narrative timeline, no sequence of events.

(7) Past habituals: Elena Charles, speaker

Ayagllermegni nunanirqelallruuq.
ayag-ller-megni nunanirqe-la-llru-u-q.
 go-CONTEMPORATIVE.PAST-1DU be.pleasant-HABITUAL-PAST-IND.INTR-3SG
 ‘When we travelled, it used to be beautiful (past habitual).

Ayakarrarlemegni qamani
ayag-qarraar-ller-megni qama-ni
 go-at.first-CONTEMPORATIVE.PAST-1DU upriver-LOC
 When we first travelled in there

uitallruukuk qaivani Ituliggegmi.
uita-la-llru-u-kuk qaiva-ni Ituliggeg-mi
 stay-HABITUAL-PAST-IND.INTR-1PL upriver-LOC Iituli-LOC
 we would stay (PAST HABITUAL) far in there at Iituli.

Allaneq-am ikanitengnaqlallruuq qikertarraremi
allaner=am ikani-te-ngnaqe-la-llru-uq qikertar-rrar-mi
 stranger=EMPH across.there-go.to-try-HAB-PAST-IND.INTR island-little-LOC
 A stranger used to try to stay over there (PAST HABITUAL) on a little island.

sequence of events that occurred along the narrative timeline, appropriately unmarked for tense: getting up, drinking coffee, going down, stopping, shooting. But when Ayaginar spoke, we might have expected a past tense within his utterance: ‘They must have caught a moose.’

(8) Unmarked tense: Elena Charles, speaker

‘In the morning we woke up and it was raining. We had coffee and those two men, our companions, came up to have coffee too. Then your daddy said to them, "Now over there, to the side of us, dock at the edge of the lake and look to see if there is game". The two left and after some time they suddenly stopped, and they shot their guns. Ayaginar [the father] said:

<i>Cakma</i>	<i>tuai</i>	<i>tuntuturtuk</i>
<i>cakma</i>	<i>tuai</i>	<i>tuntu-tur-tu-k</i>
down.there.obscured	so	moose-catch-IND.INTR-3DU

"They must have caught a moose down there (unmarked tense)."

He himself was not telling a narrative, but rather making a simple observation, so we would anticipate that the deictic center for him would be the moment of speech. The sounds of the shots had already faded by the time he spoke. Yet his comment carried no tense marking.

An investigation of the use of such verbs without tense suffixes might suggest that the Yup’ik point of temporal reference covers a larger span of time than its English counterpart. The different tense forms of the verb *nalkute-* ‘find’ can be compared in (9).

(9) Tense on *nalkute-* ‘find’: George Charles, speaker

<i>nalkutaqa</i>	‘I’m finding it’	(unmarked)
<i>nalkutellruaqa</i>	‘I found it’	(-llru- PAST)
<i>nalkkutqatarqa</i>	‘I’m about to find it’	(-qatar- IMMINENT FUTURE)
<i>nalkuciiqaqa</i>	‘I’ll find it’	(-ciiqe- FUTURE)

Mr. Charles reports that if he and a friend were out looking for a lost knife, and he suddenly spied it, he could use the unmarked (present) tense as he was bending over to pick it up: *nalkutaqa* ‘I’m finding it’. If he and his friend were some distance apart, so that after picking up the knife he had to make his way over to where the friend was searching, he could still use the same verb several minutes later to announce his good luck. If the two men were far from home and then spent most of the day returning, he could use the same unmarked verb to announce his success to his wife that evening. If his mother had been asleep when he returned, he could even use the unmarked verb to tell her the news the following morning. Mrs. Ali concurred, commenting, "To her, it’s still lost until you tell her". Immediately after the announcement, the mother could turn to her own husband and use the past tense: *nalkutellruullinia* ‘he apparently found it’. The Yup’ik unmarked present tense thus seems appropriate for a span of time encompassing not only the moment of speech, but as the preceding day and night as well.

But the difference is more interesting. Scurrying around the kitchen preparing dinner, I might realize that I have mislaid my knife. Discovering it a few moments later, Mrs. Ali notes that I could use the unmarked *nalkutaqa* just as I caught sight of it. Now if my husband had been on his way out when I began searching for the knife, but he returned 15 minutes later to find me engrossed

kuvyacuarniartuku
kuvya-yuar-niar-tu-kuk
 fish.with.net-in.case-UNCERTAIN.FUTURE-IND.INTR-1DU
 we two will go dipnetting.’

Another future marker *-ki-* is used only with the optative mood to yield a delayed imperative: *tai-ki-na!* ‘Come (later)!’. The existence of a slightly larger inventory is of course not problematic in itself for the classification of tense as inflectional.

The Yup’ik tense suffixes constitute a relatively closed class, immune to borrowing, but it is not impervious. New tense markers have come into the language in an interesting way, through suffix compounding. There is, for example, a negative future *-ngaite-*, formed from the compounding of a now unidentifiable element plus the negative *-ngite-*.

- (11) Negative future: Elena Charles, speaker
Pingaitaagten!
pi-ngaite-a-agten
 do-NEGATIVE.FUTURE-IND.TR-3DU/2SG
 ‘They will not attack you!’

Another compound negative future suffix *-nrilki-*, composed of the negative *-nrite-* and delayed future *-ki-*, is used with the optative mood. A suffix *-niarar-*, which contains the future *-niar-* is translated ‘to be going to soon’. The fact that new markers may enter the system should not be problematic for a classification of tense as inflectional. All grammatical systems evolve over time. What is interesting is the extent to which the creation of a new category affects the system as a whole, since it is purportedly paradigmatic and markers should be mutually exclusive. The creation of new markers by suffix compounding is not in fact disruptive, since reanalyzed verbs still have just one tense marker.

The tense markers are not, however, clearly mutually exclusive. Past and future suffixes can cooccur within the same verb, as in (12) and (13).

- (12) Imminent future + past: George Charles, speaker
ayakatalruunga
ayag-qatar-llru-u-nga
 go-IMMINENT.FUTURE-PAST-IND.INTR-1SG
 ‘I was going to go’

- (13) Past + future: George Charles, speaker
ayallruciqua
ayag-llru-ciqe-u-a
 go-PAST-FUTURE-IND.INTR-1SG
 ‘I will have gone’

Semantic scope relations are reflected in the order of the suffixes. The first verb *ayaqatallruunga* ‘I was going to go’ represents an imminent event (inner formation ‘about to go’), the whole set in past time (outer past suffix *-llru-*). The second verb *ayallruciqua* ‘I will have gone’ represents a past event (inner formation ‘went’) viewed from the future (outer future suffix *-ciqe-*). The existence of such forms does not necessarily constitute evidence against the paradigmaticity of the tense

markers, however, if the complexes are analyzed as additional members of the system in their own right: *-qatallru-* and *-llruciqe-*. It is significant that the alternative orders are not possible: there is no **ayaciqellruunga* (go-FUTURE-PAST-IND.INTR-1SG) and no **ayallruqatartua* (go-PAST-IMM.FUTURE-IND.INTR-1SG).

4. Relevance to the syntax: agreement

A number of authors have cited a different feature as criterial for inflection: relevance to the syntax. This criterion has important implications for models of linguistic structure such as that of Anderson, in which inflection is accomplished by syntactic rules rather than by processes localized within a separate morphological component. Booij (1994, 1996) has proposed that not all categories that would be considered inflectional by other criteria are relevant to syntax, and that the distinction can be captured by recognizing two types of inflection, contextual inflection, ‘that kind of inflection that is dictated by syntax, such as person and number markers on verbs that agree with subjects and/or objects, agreement markers for adjectives, and structural case markers on nouns’, and inherent inflection, ‘the kind of inflection that is not required by the syntactic context, although it may have syntactic relevance’ (1996: 2). He notes that ‘inherent inflection is more similar to derivation, and it may feed word formation, unlike contextual inflection, which is peripheral to inherent inflection. Language acquisition and language change also appear to reflect this distinction’ (1996: 3). As noted earlier, Anderson and Booij differ on how they categorize tense. For Anderson, tense is relevant to the syntax because it is a property ‘assigned to a larger constituent within a structure’ (the clause) but ‘realized on individual words’. Booij concurs that tense has scope over a whole clause, but classifies it as inherent, because ‘the tense of the verb is not determined by syntactic structure’ (1994: 30).

If we were to find a system with tense agreement, we would have a clear case of contextual inflection. Yup’ik appears to offer just such a system. Tense can be marked on Yup’ik nouns as well as verbs.

(14) Tense on nouns

uillra

ui-ller-a

husband-PAST-3SG/3SG

‘her former husband’

akutarkat

akutar-kar-t

Eskimo.ice.cream-FUTURE-PL

‘future Eskimo ice-cream’

Tense suffixes on nouns and verbs can cooccur within a sentence, suggesting the possibility of agreement.

(15) Cooccurrence of noun and verb tense

uillra

ui-ller-a

husband-PAST-3SG/3SG

‘Her husband was tall.’

sugtullruuq

sugtu-llru-u-q

tall-PAST-INDICATIVE-3SG

A closer look soon reveals, however, that the noun and verb suffixes operate in different domains. The verb suffixes situate events in time, while the noun suffixes situate referents. They need not match within a clause.

- (16) No agreement: past tense Elizabeth Ali, speaker

Uillra *sugtuuq*
ui-ller-a *sugtu-u-q*
 husband-PAST-3SG/3SG tall-INDICATIVE-3SG
 ‘Her former husband is tall.’

- (17) No agreement: future tense: Elena Charles, speaker

Qallalluki *piuratuaput* *akutarkat*
qallate-lu-ki *piurar-tu-a-put* *akutar-kar-t*
 boil-SUB-R/3PL continue-customarily-IND.TR-1PL/3PL mixture-FUTURE-PL
 ‘We bring them a boil, those (fish) that will be made into Eskimo ice cream.’

There is of course frequent correspondence between sentence adverbials and tense.

- (18) Adverbials of past time with past tense: Elizabeth Ali, speaker

unuag *ak’a* *ayagnillruunga*
unuag *ak’a* *ayagnir-llru-u-nga*
 this.past.morning past begin-PAST-IND.INTR-1SG
 ‘This morning I started

erinan *niilluku*
erina-n *niite-lu-ku*
 voice-2SG/3SG hear-SUB-R/3SG
 hearing your voice ...’

- (19) Adverbial of future time with future tense: Elena Charles, speaker

waniku *taugaam* *dockaq ikna* *paqciigaqa*
waniku *taugaam* *dockaq ikna* *paqete-ciiqe-gar-ka*
 after. awhile however dock one.across.there check-FUT-IND.INTR-1SG/3SG
 ‘But after awhile I’ll go check out the dock across there.’

The cooccurrence could be taken as the result of either grammatical mechanisms or simply the fact that speakers tend to say things that make sense. In any case, there is little formal evidence that Yup’ik tense should be considered contextual in the stronger sense of Booij.

5. Interaction with derivation

Booij has proposed that inherent inflection, unlike contextual inflection, can interact with derivation. It is here that the Yup’ik case becomes especially interesting.

Yup’ik contains an unusually large inventory of suffixes, among them a set that can affect argument structure by adding an agent. They include not only causatives, but also suffixes like *-ni-* ‘claim that’, *-yuke-* ‘think that’, and *-nayuke-* ‘think that maybe’. They are in some ways like evidentials, except that they are not simply adverbial, like typical hearsay or inferential evidentials (Yup’ik = *gguq* and *-llini-*). They actually introduce a claimer or thinker. If the derived verb is inflected intransitively, it specifies that the person cast as the absolutive thinks something about himself or herself. If it is inflected transitively, it specifies that the person cast as the ergative thinks something about another, cast as the absolutive.

- (20) Derivational suffix *-ni-* ‘say that’: Elizabeth Ali, speaker

Ayagtuq
ayag-tu-q
leave-IND.INTR-3SG
‘He’s leaving’

Ayagniuq
ayag-ni-u-q
leave-say-IND.INTR-3SG
‘He says he (himself) is leaving’

Ayagniat
ayag-ni-a-at
leave-say-IND.TR-3PL/3SG
‘They say he’s leaving.’

Tense markers can appear with derived verbs of claiming and thinking. A past tense suffix, for example, may follow the derivational suffix of saying to put the entire claiming event expressed by the derived verb stem in the past, as in (21).

- (21) Past claim: Elizabeth Ali, speaker

Ayagnillruat
ayag-ni-llru-u-at
leave-say-PAST-IND.TR-3PL/3SG
‘They said he was leaving.’

Tense markers may also precede the derivational suffix of saying. The past tense suffix in (22) puts the event claimed in the past.

- (22) Claim about the past: Elizabeth Ali, speaker

Ayallruniat
ayag-llru-ni-a-at
leave-PAST-say-IND.TR-3PL/3SG
‘They say he left.’

Tense suffixes may even occur both before and after the derivational suffix of saying.

- (23) Past claim about previous event: Elizabeth Ali, speaker

Ayallrunillruat
ayag-llru-ni-llru-a-at
leave-PAST-say-PAST-IND.TR-3PL/3SG
‘They said he had left.’

The tense markers can and do interact with the derivational morphology.

The capacity of tensed verbs to serve as the input to derivational processes has consequences for related features considered characteristic of inflection. The tense markers are not always ‘outer’ affixes, occurring at the margins of words. As we can see from examples (22) and (23), tense affixes can appear inside of derivational affixes, closer to the root. The tense suffixes

could also be said not to have an invariant order with respect to other suffixes: as seen above, they occur sometimes before and sometimes after the derivational suffix *-ni-*. They could even be said to apply recursively, that is, to their own output, with the mediation of suffixes like *-ni-*.

The situation is actually just what would be predicted by Booij's scenario. Yup'ik tense would be classified as inherent derivation.

Inherent inflection is the kind of inflection that is not required by the syntactic context, although it may have syntactic relevance. Examples are the category number for nouns, comparative and superlative degree of the adjective, and tense and aspect for verbs ... Inherent inflection is more similar to derivation, and it may feed word formation, unlike contextual inflection, which is peripheral to inherent inflection. Language acquisition and language change also appear to reflect this distinction. (Booij 1996: 2-3)

Booij notes further that 'contextual inflection tends to be peripheral with respect to inherent inflection' (1996: 11). The morphology of nouns and verbs in Yup'ik and other Eskimoan languages is traditionally presented as consisting of three parts:

BASE	(POSTBASES)	ENDING
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The language is uniquely suffixing. All nouns and verbs consist of one base (root), any number of optional postbases, and one and only one obligatory ending. On nouns, the ending specifies number and case. (Singular, dual, and plural number are distinguished, and ergative, absolutive, ablative, allative, locative, vialis, and aequalis cases.) If the noun is possessed, the ending encodes the possessor and possessed in a transitive pronominal suffix. On verbs, the ending consists of two parts: a mood marker and a pronominal suffix complex. The moods are indicative, interrogative, optative, participial, subordinative, and a set of 'connective' moods: contemporative 1 ('when in the past'), contemporative 2 ('while'), precessive ('before'), concessive ('although'), contingent ('whenever'), consequential ('because'), and conditional ('if, when in the future'). The pronominal suffix complex specifies the core arguments of the clause, one for intransitives and two for transitives.

The endings would qualify as inflectional suffixes by any criteria. They are obligatory and paradigmatic, they comprise a closed set, they are fully productive and applicable to all stems, they show only phonologically conditioned allomorphy, and they contribute predictable meanings. Their order is invariant, and they are not recursive. They do not feed derivation. They would generally be considered contextual inflection. On nouns they specify case and number in portmanteau forms, and case is obviously highly contextual syntactically. On verbs, the mood suffixes function relate clauses to the larger discourse event (indicative, interrogative, optative) or to each other (participial, subordinative, connectives). The pronominal suffixes specify the core argument of the clause. To a great extent, Yup'ik morphology thus shows a structure in accord with Booij's division of inflection into inherent and contextual types. Those categories that would be classified as contextual inflection are always word-final, while others that would be classified as inherent, particularly tense, are word-internal.

6. The shifting of categories over time

Yup'ik also shows us that morphological categories do not necessarily occupy fixed positions between derivation and inflection. They may slide along the continuum over time, in various directions. The past tense suffix *-llru-* is not reconstructed for Proto-Eskimo (Fortescue, Jacobson,

and Kaplan 1995). Jacobson 1984 derives it from a compounding of the nominal past tense suffix *-ller-* plus the verbalizing suffix *-u-* ‘be’. The suffix *-ller-* can be attached to either noun stems or verb stems, but it always derives a noun stem: ‘former N’, ‘the one that Ved’. It is thus a past nominalizer, always including a specification of past tense. (The uvular fricative *r* automatically appears as a uvular stop *q* word-finally.)

(24) Historic elements of past *-llru-*: *-ller-* + *-u-* Jacobson 1984: 491, 488,

<i>angyaq</i>	‘boat’
<i>angyalleg</i>	‘former boat, that which was a boat’
<i>angyara</i>	‘his boat’
<i>angyallra</i>	‘his former boat’
	‘that which was his boat but is either no longer a boat, or no longer his’
<i>ayag-</i>	‘to leave, go’
<i>ayalleg</i>	‘the one who left’
<i>angyaq</i>	‘boat’
<i>angyaugug</i>	‘it is a boat’

The derivational leanings of the modern past tense suffix *-llru-* might be explicable in part as relics of its earlier source, literally ‘to be the one that V-ed’.

Markers may apparently slide along the continuum between derivation and inflection in either direction. The suffix *-ller-* also appears as an etymological element in a number of other suffixes, some highly derivational. It has been compounded with the suffix *-(ng)un-* ‘supply of’, for example, to yield a new suffix *-nguteller-* ‘empty container which held N’.

(25) Element of new derivation: Jacobson 1984: 583

<i>ciku</i>	‘ice’
<i>cikuutelleq</i>	‘empty container which held ice’
<i>kayanguq</i>	‘egg’
<i>kayangutelleq</i>	‘empty egg carton’
<i>kaassaq</i>	‘gasoline’
<i>kaassautelleq</i>	‘empty gas can’

Of special interest is the separate evolution of the past tense nominalizer *-ller-* into a modern inflectional suffix (ending), the past contemporative mood *-ller-* ‘when (in the past)’. Its use can be seen in example (7), repeated here in part.

(7) Past contemporative *-ller-* ‘when (in the past)’: Elena Charles, speaker

<i>Ayagllermegni</i>	<i>nunanirqelallruuq.</i>
<i>ayag-ller-megni</i>	<i>nunanirqe-la-llru-u-q.</i>
go-CONTEMPORATIVE.PAST-1DU	be.pleasant-HABITUAL-PAST-IND.INTR-3SG
‘ <u>When</u> we travelled, it used to be beautiful.’	

7. Conclusion

Yup'ik tense marking provides us with an example of a system that would be perplexing for traditional accounts of inflection, but that is predicted by the proposal by Booij (1994, 1996) for separating contextual from inherent inflection. Once the relative nature of the system is understood, and it is seen that speakers exploit the unmarked present to convey a sense of immediacy, the system shows most marks of prototypical inflection. Tense suffixes do not create new lexemes: verbs remain verbs with essentially the same meanings, and syntactic category, conjugation class, subcategorization features, and selectional features remain intact. The markers are fully productive, and their semantic contributions are transparent and predictable. They are obligatory and paradigmatic. On the other hand, the tense suffixes can interact with derivation. This is just the constellation of features proposed by Booij to characterize inherent inflection. At the same time, a closer look at the shallow history of the suffixes themselves reminds us that the position of markers along a continuum from derivation to inflection is not necessarily fixed for all time. A single suffix *-ller-* has been seen to evolve in a variety of directions, from derivational to more derivational, to inherent inflection, and to contextual inflection.

Note

*Mark Aronoff and Paul Kiparsky made helpful comments on several points discussed here. Work on Yup'ik was made possible by grants from the Academic Senate, University of California, Santa Barbara. The transcription used here is in the practical orthography developed by the Alaska Native Language Center in Fairbanks. Stops are plain: *p, t, c=[č], k, q*. There is a series of voiced fricatives *v, s=[z], l, y, g=[ɣ], ug=[ɣʷ], r=[ʁ], ur=[ʁʷ]*, and a series of voiceless fricatives *vv=[f], ss=[s], ll=[ʃ], gg=[x], w=[xʷ], rr=[χ], urr=[χʷ]*. Nasals are *m, n, ng=[ŋ]*. There are three prime vowels *i, a, u* and schwa, spelled *e*. The following abbreviations are used for glosses:

Cases		Moods		Person
ERG	ERGATIVE	IND.INTR	INDICATIVE.INTRANSITIVE	1 FIRST PERSON
ABS	ABSOLUTIVE	IND.TR	INDICATIVE.TRANSITIVE	2 SECOND PERSON
ALL	ALLATIVE	INTERR	INTERROGATIVE	3 THIRD PERSON
ABL	ABLATIVE	OPT	OPTATIVE	R CO-REFERENTIAL
LOC	LOCATIVE	SUB	SUBORDINATIVE	
VIA	VIALIS	PRT	PARTICIPIAL	
AEQ	AEQUALIS	CNTP	CONTEMPORATIVE	
		PRE	PRECESSIVE	
		CNC	CONCESSIVE	
		CNTG	CONTINGENT	
		CNSQ	CONSEQUENTIAL	
		COND	CONDITIONAL	

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