

Tense/aspect and general verbal morphology:

Present Tense / Habitual Aspect:

Present tense and habitual aspect are expressed through the same morpheme that appears as a suffix to the verb stem, namely [-εt]. Present and habitual contexts often overlap, making it somewhat complex to distinguish [-εt] as one or the other. Consider the following data, which makes it tempting to simply classify [-εt] as a simple present tense.

- (1) k^ho-s kuri namo-la rg-εt
3SG.M-ERG 3SG.M.POSS wife-DAT love-PRS
'He loves his (own) wife'

- (2) kos zaxdaŋ d̄zulu z-εt
3SG.M everyday apricot eat-PRS
'He eats apricots every day.'

However, [-εt] does appear in contexts that are decidedly habitual, indicating that the morpheme serves as both present and habitual morphology. In the following example, [-εt] combines with the past marker [pa] to indicate repeated (or habitual) past action.

- (3) ʌi api-s ŋa-la muri balbis-i waχ-si rzoŋ
My grandmother-ERG me-DAT her child-GEN time-GEN story
iʃin taŋ-εt pa
very tell-HAB PST
'My grandmother would always tell me stories from her childhood.'

Negated verbs in the present tense seem to suggest that historically *-εt* was *jut*, as the negative particle *ma* intercedes between the verb stem and the present tense ending, resulting in VERB VERB + *m* + *εt*. *met* is the negated form of *jut*.

- (4) ŋa-s skarma-t̄ʃi t̄sa toŋ-m-εt
1SG-ERG star-INDEF only see-NEG-PRS
'I don't see any stars.'

Past Tense:

Balti displays two past tense morphemes, [-s] and [pa]. Both appear after the verb, with [-s] always attached directly to the verb stem and [pa] always appearing after interjecting aspectual markers or in copular constructions. In meaning, [-s] appears to be specifically a *perfective* past marker, as it corresponds only to perfective contexts and is similarly identified in languages closely related to Balti. [pa], by contrast, appears with imperfective contexts such that [-s] and [pa] are in complementary distribution.

- (5) bil-o-i t̄ʃu ton-s
cat-DEF-ERG water drink-PST
'The cat drank the water.'

- (6) ʌa zer-εn jot pa
1SG read-PROG AUX_[prog] PST
'I was reading.'

According to Zemp (2018, 416), the *-s* suffix is used in past-tense verb stems for transitive verbs only in Purik, a closely related Western Tibetan dialect. In Balti, *-s* is used on both intransitive verbs and transitive verbs to denote a single completed action in the past, and seems to have expanded past a transitive past tense marker to a perfective past tense marker, regardless of transitivity.

(7) tʃo-ŋ p^hur-s
 eagle.DEF-PL fly-PST
 ‘The eagles flew.’

(8) bilo-ŋ rgjuk-s
 cat.DEF-PL run-PST
 ‘The cats ran.’

Future Tense:

Future tense is expressed by suffixing *-i* to the verb stem and adding the auxiliary [in]. Verb stems that end in a consonant display this simple [-i in] construction while verb stems that end in vowels undergo a slightly more complex phonological process. The only vowel we have seen ending a verb stem in [a] (as in [za] ‘to eat’ and [ŋwa] ‘to cry.’ When [-i] is affixed to this [a] sound, they assimilate in place to [ɛ] and the vowel cluster resolved to a single sound. Consider the following examples:

(9) ŋa kufu tʃik z-ɛ in
 1SG apple INDF eat-FUT AUX_[fut]
 ‘I will eat an apple.’

(10) ŋa ʃokmo nit taŋm-i in
 1SG soon sleep-FUT AUX_[fut]
 I will sleep soon.

The present tense and progressive aspect morphemes may also be used to express future actions especially when future actions are relatively certain and relatively near in time. When a set time expression is used, such as ‘tomorrow’, the verb is far more likely to me given in present tense as the time relation has been disambiguated.

(11) ŋa-s xaske baŋ-po-la zɛ tʃɛs daŋ-ət
 1SG-ERG tomorrow cow-DEF-DAT food thing give-PRES
 ‘Tomorrow I will feed the cow.’

Note also that the verb ‘to go’ is grammaticalized in essentially the same way that it is in English as a future tense marker. So rather than marking future tense on the main verb, it may be marked on ‘to go’ as in an English ‘going to verb’ construction.

(12) Ōŋilza *New York* dug-ɛn ŋala lo ŋis
 next.month New York live-PROG 1SG -DAT year two
 gw-e in
 go-FUT AUX_[fut]
 ‘Next month I will have lived in New York for two years.’

Progressive Aspect:

Progressive aspect in Balti is marked with the participial ending *-en* on the verb and the progressive auxiliary [jot]. The [-en jot] construction may appear in any tense and may be combined with various other TAM morphemes.

- (13) Da drul-en jot
 1SG walk-PROG AUX_[prog]
 ‘I am walking.’

Perfect Aspect:

Balti has two distinct perfect morphemes, namely [set] and [pi in]. The distinction between them is one of remoteness and telicity. [set] is used when the action was performed relatively recently in the past or when emphasizing that an action was just carried out. [set] can also be used to emphasize the telicity of a verb such that it is clearly portrayed as a goal-oriented action. [pi in] on the other hand is used for actions that took place in the relatively distant past and implies nothing of the telicity of an event. Note that the remoteness distinction here is in relative rather than absolute terms, so there is no set time [set] versus [pi in] and context is necessary to make a judgement. As a historical note, our consultant intuits that [set] is formed from [-s + jot], which for symmetry’s sake could suggest that [pi in] is similarly formed of [pa + in]. Both assertions seem reasonable but are unconfirmed by historical data. The following example conveniently illustrates the distinction between [set] and [pi in]. The action that took place yesterday takes [set] and the action referenced from twenty years ago takes [pi in].

- (14) gonde ŋi api *New York* oŋ-set pa
 yesterday my grandmother New York come-PRF PST
 pa dju dɔn-la mo lo nisu dɔn-la
 this.DEF COMPR before-DAT she year twenty before-DAT
 New York oŋ fi in pa
 New York come PRF AUX PST
 ‘Yesterday my grandmother came to New York but before that she hadn’t come for 20 years.’

Durative Aspect

Durative aspect is formed with the same participle as the progressive aspect (*-en*) but with a different auxiliary. The durative aspect uses the auxiliary *duk* in the present tense, a grammaticalized version of the verb *dukpa* ‘to live’, ‘to sit’, ‘to stay,’ which can additionally act as a copula. *duk* can combine with the progressive participle to express the meaning of ‘to keep on doing something’.

- (15) ŋi ata na amo-s t̪ɪk t̪ɪk-po-la ɕ^wutu
 1SG.POSS father and mother-ERG each.other-DEF-DAT fight
 taŋ-en duget
 make/do-PROG AUX_[DUR]-PRS
 ‘My parents are always fighting.’ / ‘My parents keep on fighting.’

As in Balti’s close relative Purik (Zemp, 2018, 433) this verbal construction can also result in a durative and iterative interpretation, depending on the nature of the participialized verb. For example, in (16), *x̄tsuba* means ‘to cut/to chop’, and so () refers less to a singular durative event but rather a series of discrete actions.

- (16) grɛta-s ʃa x̄tsub-ɛn dug-ɛt
 Greta-ERG meat chop-PROG AUX_[DUR]-PRS
 ‘Greta keeps chopping meat.’

As with the present/habitual tense, the negated form of durative aspect suggests that *duget* as an auxiliary is actually *duk* + *jut*. When negating the durative, the negating morpheme *ma* intercedes between *duk* and the present-tense morpheme.

- (17) grɛta-s k^hara.taŋ-ɛn dug-m-ɛt
 Greta-ERG speak-PROG AUX_[DUR]-NEG-PRS
 ‘Greta never talks to me.’ / ‘Greta refuses to talk to me.’

Additionally, when we asked if () was acceptable, our consultant objected to the additional use of *jut* because *jut* was “already there” in the phrase.

- (18) *k^hara.taŋ-ɛn duk-ɛt jut
 speak-PROG AUX_[DUR]-PRS AUX_[PROG]
 (‘keeps on speaking.’)

T-A-M Combinations. All tense-aspect and aspect-aspect combinations that we have encountered in Balti are listed in the subsequent sections.

Progressive aspect + past tense.

- (19) ɲa zer-ɛn jət pa
 1SG read-PROG AUX_[prog] PST
 ‘I was reading.’

Perfect aspect + past tense.

- (20) ɲa gəŋmə t̄ʃɛn paju taŋ-set pa
 1SG all tea.in salt put-PRF PST
 ‘I had put salt in all the tea.’

Progressive aspect + perfect aspect.

- (21) ɲa lo bʒi-na New York dug-ɛn jət pi in
 1SG four years-since New York live-PROG AUX_[prog] PRF AUX_[prf]
 ‘I have lived in New York for four years.’

Habitual aspect + past tense.

- (22) ɲi api-s ɲa-la muri balbis-i waχ-si rzəŋ iʃin
 my grandmother-ERG me-DAT her child-GEN time-GEN story very

 taŋ-ɛt pa
 tell-HAB PST
 ‘My grandmother would always tell me stories from her childhood.’

Progressive aspect + perfect aspect + past tense.

- (23) bəlbis-po gəntə nis na ŋw-en jət pi in pa
 child-DEF hour 2 since cry-PROG AUX_[prog] PRF AUX_[prf] PST
 ‘The child had been crying for 2 hours.’

Irregular Past Tense Verb Forms

Balti seems to have several verbs that change forms when suffixed with the past-tense morpheme *-s*. For example, *za*, rather than becoming *za-s* in the past tense becomes *zo-s*. In fact, *zos* remains the verb stem for all past-tense forms, not just the perfective (in this case telic) past-tense verb constructions, but also with both types of past perfect. This is consistent with Purik (Zemp, 2018, 417).

- (24) ŋa-s zos pi in
 1SG-ERG eat.PST PRF AUX_[PERFECT]
 ‘I have eaten.’

- (25) ŋa-s zos pi in pa
 1SG-ERG eat.PST PRF AUX_[PERFECT] PST
 ‘I had eaten.’

- (26) ŋa-s zo-set
 1SG-ERG eat-PRF
 ‘I have (just) eaten.’

- (27) ŋa-s zo-set pa
 1SG-ERG eat-PRF PST
 ‘I had (just) eaten.’

Adverbializer *-se*

Balti has a particular dispreference towards two conjugated verbs in a sentence. One way of navigating this dispreference is to turn one of the verbs into an adverb using *-se* to indicate simultaneous action.

- (28) ðŋ-se zo
 come-ADV Eat.IMPERATIVE
 ‘Come and eat!’ lit. ‘come eating-ly.’

In (29), ‘to kick someone out of a place’ is expressed by two verbs occurring simultaneously, ‘bring out’ *p^{hi}uŋ* and ‘put’ *taŋ*. One of them becomes an adverb, and the rough literal translation becomes something like ‘to put someone bringing-outing-ly’ *p^{hi}uŋse taŋs*.

- (29) ŋa-si pitər klæs-I na p^{hi}uŋ-se taŋ-s
 I-ERG Peter class-GEN from bring.out-ADV put-PST
 ‘I kicked Pete out of class.’

Zero Derivation: Genitive Verbs

There is additionally some evidence that Balti verbs can take the genitive case *-i* without any additional morphology to nominalize the verb. In phrases with the postposition *mən* ‘until’, verbs can occur suffixed with *-i* ((30) and (31)) as the object of the postpositional phrase. Nouns in the genitive case (()) can also occur in this construction as the object of the postpositional phrase.

- (30) gaŋma-s draŋs-i mən zo-s-a
all-ERG get.full-GEN until eat-PST-Q
‘Did everyone eat until they were full?’

- (31) sukul-iŋ-na loqse ŋaŋ-uŋ oŋ-se zan ze-i
school-LOC-ABL house-LOC go-ADV food eat-GEN

mən na ŋa-s ʃoŋbu zεε tsəŋ-tʃuk-s
until and 1SG-ERG book COMP be.complete-TRNS-PST
‘Between coming home from school and eating, I finished a book.’

Lit: After coming home from school and until eating dinner, I finished a book.

- (32) sukul-iŋ-na loqse ŋaŋ-uŋ oŋ-se klas-i
school-LOC-ABL house-LOC go-ADV class-GEN

mən na ŋa-s ʃoŋbu zεε tsəŋ-tʃuk-s
until and 1SG-ERG book COMP be.complete-TRNS-PST

Context: I am a teacher who teaches some classes from home during the pandemic and some at school.

‘Between coming home from school and (online) class, I finished a book.’

This construction, which in () and () is identical except that in () the object of the postpositional phrase is a verb and in () it is a noun, seems to suggest that the *-i* suffix on both the noun and the verb is the same suffix, likely the genitive case required by most of Balti’s other postpositions. This would suggest that the verbs in this constructions nominalize via zero-derivation:

$$\text{zan za} + \emptyset_{[\text{NOM}]} + \text{GEN} = \text{zan zei}$$

Dependent Clause Nominalization:

We have identified a particular form of nominalization found only in dependent clauses. Nominalized verbs appear in their infinitival forms but with the final [a] raised and backed to [o]. Hence, [oŋma] becomes [oŋmo], [drolba] becomes [drolbo], etc. The morphology that enables this process remains somewhat opaque, but the [o] that appears is reminiscent of two things. It is identical to definite morphology seen on vowel-final nouns, and it is identical to the morphology of the factive complementizer [zerbo]. At risk of raising an overly vague and unconventional theory, all three of these morphological processes are united by a certain dependency on other linguistic information: definiteness demands prior establishment of the noun in question, factive verbs/complementizers require the presence of a true complement, and dependent clauses require their corresponding independent clause. To say these are all simply instances of definiteness would be a gross mischaracterization, but there is enough phonological and conceptual similarity to suggest a possible link in morphology. Consider the following examples of dependent clause nominalization:

(33) *America-in* oŋmo pa don-la ŋa *Baltistan-in* dug-et pa
 America-LOC come COMPR before-DAT I Baltistan-LOC live-HAB PST
 ‘Before coming to New York, I lived in Baltistan.’

(34) zan zo pa zuk-la ŋa-s naŋ-po-la pjaxma
 food eat COMPR after-DAT I-ERG room-DEF-DAT clean

tan mi in
 do FUT AUX
 ‘After eating dinner I will clean my room.’

Reflexives and Reciprocals:

Reflexive actions may be expressed through two expressions in Balti. The subject may be repeated with the dative case as the object, or the object may simply be omitted, making the verb effectively intransitive. Consider the following examples, which show reflexive versus non-reflexive alterations for each structure:

(3) Here we see that the subject is repeated as the object with the dative marker for the reflexive construction in (b).

a. Non-reflexive construction:
 ŋa-s habu-la tjaŋ-s
 1SG-ERG spider-DAT throw-PST
 ‘I threw the spider to the floor.’

b. Reflexive construction:
 ŋa-s ŋa-la tjaŋ-s
 1SG-ERG 1SG-DAT throw-PST
 ‘I threw myself to the floor’

(36) Here we see that the object is simply omitted for the reflexive construction.

1. Non-reflexive construction
 amo-s fru-la rkjel taŋ-s
 mother-ERG son-DAT bathe-PST
 ‘The mother bathed her son’

b. Reflexive construction
 amo rkjel-s
 mother-ERG bathe-PST
 ‘The mother bathed herself’

Reciprocal constructions in Balti are strongly characterized by reduplication. This reduplicative aspect may be captured by the expression $\widehat{tj}ik\widehat{tj}ik-po-la$ ‘each other’ or by repeating the verb stem. When the reduplication of the verb stem is used, all verbs become phrasal. Consider the following examples:

(37)
 1. nimo-na strimo-s $\widehat{tj}ik\widehat{tj}ik-po-la$ tjaŋ-en jot
 brother-and sister-ERG each.other-DEF-DAT hit-PROG AUX
 ‘The brother and sister hit each other.’

b. nimo-na strimo-s tjan tjan $\widehat{ts-en}$ jot
 brother-and sister-ERG hit hit play-PROG AUX

‘The brother and sister hit each other.’

(38)

- c. koŋ niska-s tʃik tʃik-po-la rdap-ɛn jət
3.PL both-ERG each.other-DEF-DAT kill-PROG AUX
‘They killed each other.’
- d. koŋ niska-s rdap rdap b-ɛn jət
3.PL both-ERG kill kill do-PROG AUX
‘They killed each other.’