

Tense and Aspect in Lohorung: A Functional-Typological Perspective

Tara Mani Rai¹

Email: tara.raai@cdl.tu.edu.np

Diwas Rai²

Email: dayrai@gmail.com

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Abstract

This study examines tense and aspect in Lohorung, a Rai Kirati language belonging to the Tibeto-Burman language family, from a functional typological perspective. The analysis is based on a corpus of naturally occurring texts and elicitation collected from native Lohorung speakers. These data are analyzed to identify how tense and aspect are structurally and functionally realized in the language. The findings indicate that tense and aspect in Lohorung are primarily expressed through morphological marking. At the same time, they exhibit systematic syntactic and semantic contrasts. The realization of tense and aspect morphemes varies according to syntactic environments. Similar marking strategies are attested in neighboring Kirati languages. The study further demonstrates that the tense system in Lohorung is organized around a binary distinction between past and non-past categories. Past tense is marked by the morpheme <a>, whereas nonpast, or present, tense is marked by <k>. The aspectual system is morphologically rich and includes multiple markers: perfective <∅> for completed actions, progressive <-me / mim> for ongoing events, durative <-q^haŋ> for extended actions, perfect <-t/d> for actions with present relevance, completive <-hi> for brought-to-completion events, and habitual <-juŋs> for repeated or customary actions.

Keywords

Lohorung, Tense, Aspect, Mood, Modality, Functional-Typological Grammar

Introduction

Tense and aspect are grammatical categories inherent in the verb. Tense indicates temporal reference, signifying whether an action occurs in the past or present, while aspect relates to the internal temporal structure of an event, differentiating between completed and ongoing stages. Aspect refers to several perspectives on the internal temporal structure of a situation (Holt, 1943, as cited in Comrie, 1976). The study of tense and aspect is crucial for comprehending how languages build temporal information and express subtleties of event configuration.

¹ Dr. Rai is an Assistant Professor at the Central Department of Linguistics, Tribhuvan University.

² Mr. Rai is a MPhil student at the Central Department of Linguistics, Tribhuvan University.

This article discusses the tense and aspect system in Lohorung, a Rai Kirati language spoken in eastern Nepal. The Lohorung people are regarded as some of the earliest indigenous residents of the Arun Valley in Sankhuwasabha District, contributing their distinct culture and language (Rai, 2080, p. 49). They predominantly inhabit the Arun Valley in the historical area of Pallo Kirat (Hardman, 2002). The community persists in conducting rituals in accordance with the oral tradition of Mundhum, overseen by proficient ritual specialists referred to as Yatangpa. The Lohorung Rai consider themselves members of the Kirati ethnic group originating from eastern Nepal (Rai, 2021; Rai, 2025; Rai, 2023).

Lohorung is classified among the Sino-Tibetan, Tibeto-Burman, Himalayish, Kirati, and Rai language families (Epele et al., 2012). It is intricately connected to adjacent languages, including Yamphu, Southern Yamphu, Eastern and Western Mewahang, and Yakkha (Rutgers, 1998). Hanson (1991) identifies a poorly documented variant termed 'biksit,' spoken in the vicinity of the upper Sabhakhola region. Research on lexical similarity reveals that the Pangma and Dhupu varieties possess over 90% of their vocabulary in common, whereas Pangma and Angla, as well as Dhupu and Angla, exhibit approximately 88% lexical overlap (Mitchell & Hilty, 2012, p. 21).

The term 'Lohorung' originates from the historical form Lololung. The phonological shift from Lololung to Lohorung entailed the elimination of lateral consonants and the introduction of the phonemes /h/ and /r/, culminating in the contemporary three-syllable pronunciation (Rai & Rai, 2076 BS). The language is referred to by various names, such as Lohorong, Lohurung, Lorung, Northern Lorung, and Lhorung (Hanson, 1991). The ISO 639-3 code for the language is LBR.

Notwithstanding its sociolinguistic importance, the tense and aspect system of Lohorung is inadequately documented. Prior research on associated Kirati languages, including Bantawa and Koyee, demonstrates that tense and aspect morphemes interact with syntactic contexts, revealing both semantic and structural distinctions (Rai, 2014, Rai 2015). A comprehensive examination of Lohorung is essential to record its verbal structure and enhance the typological comprehension of Tibeto-Burman languages. The objectives of this article are:

- a) To ascertain and delineate the morphological indicators of tense and aspect in Lohorung.
- b) To examine the role of tense and aspect markers in conveying temporal reference and event structure.

This study seeks to elucidate the tense and aspect system in Lohorung while contributing to the documentation and typological analysis of underrepresented Tibeto-Burman languages.

Theoretical Framework and Methodology

This study employed the functional typological approach to analyze the tense and aspect system of the Lohorung language. It was designed to explain and illustrate how tense and aspect are structurally realized and functionally used in Lohorung. Functional typological perspectives proposed by Givón (2001a, 2001b), Comrie (1976, 1985), and Bybee et al. (1994) were adopted as the theoretical framework. These perspectives emphasize that tense and aspect are central grammatical categories that are systematically

marked in relation to temporal reference and the internal structure of events. Cross-linguistic comparisons, as suggested by these frameworks, provided insights into universal and language-specific patterns of tense and aspect marking, particularly in morphologically rich languages such as those of the Tibeto-Burman family. In addition, the models developed by Rai (2014, 2025) on TAM systems in related Kirati languages were employed to guide the analysis of Lohorung. These models provided tools for examining the structural patterns of tense and aspect morphemes and their functional interpretations in natural discourse. Previous studies on related languages, such as Koyee (Rai, 2014) and Bantawa (Rai, 2025), indicated that tense and aspect morphemes interacted with syntactic contexts and exhibited both semantic and structural contrasts. This evidence supported the use of a functional typological approach for the present study. The study adopted a qualitative research design. Primary data were collected through structured elicitation sessions with native speakers of Lohorung, including the pseudonyms Harka (age 66), Lal Bahadur (age 70), Katak Bahadur (age 86), Indu Mati (age 73), and Kul Bahadur (age 88). These participants were from Pangma, Khartuwa, and Simle of Khandbari Municipality, Sankhuwasabha District. Also, the elicitation method was entertained through the native speaker where necessary.

Paradigm construction was used as the primary data collection method to systematically document tense and aspect markers across different persons, numbers, and temporal configurations. Data analysis is based on identifying tense and aspect morphemes, describing their forms and functions, and interpreting their usage within a functional typological framework. Comparative evidence from neighboring Tibeto-Burman languages was also considered to highlight typological patterns and language-specific features in the marking of tense and aspect.

Context of the Study

Tense is the grammatical representation of the temporal relationship between an occurrence and a certain reference point in time, typically the instant the clause is spoken. It typically signifies the temporal estimation concerning a specific moment. This moment generally refers to the act of speaking or writing (Katamba, 1993). Furthermore, defining the tense, Givón (2001) states:

"Tense is fundamentally a pragmatic—rather than propositional semantic—phenomenon, anchoring the proposition to a temporal point outside itself. In the case of absolute tense, the clause, as it is uttered, is anchored to the current speech act, performed by a particular speaker at the very time the clause is uttered (p. 286)."

There exist two tenses in Lohorung: past and non-past in Lohorung, as given in Fig. 1. There are morphological distinctions between past and non-past tenses. Lohorung verbs are inflected to indicate these two tenses by means of different tense-marking morphemes. Tense involves the systematic coding of the relation between two points along the ordered linear dimension of time: a) reference time and b) event time (Givón 2001a, p. 285).

Figure 1
Tenses in Lohorung

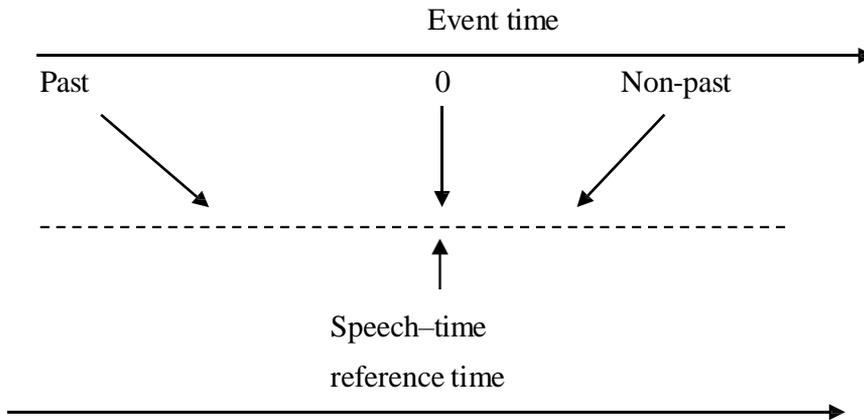


Figure 1 illustrates that points preceding the reference period are in the past. The past tense situates an occurrence before the present time. The past tense, referred to as "preterite" in Lohorung, is indicated variously based on person and number.

Past

In the Lohorung language, the past tense is morphologically marked by a specific past tense marker. The morpheme <a> functions as a tense marker in Lohorung. In Lohorung there are different inversions of past tense markers on the basis of environment: <u> and <i> where the event/state precedes the time of speech. However, based on the frequency of occurrence in the corpus, /a/ is the most consistently used and dominant past tense marker in the Lohorung language.

(1)

- a. *miugebaŋ pe:ɖaba haŋke ɡɔbi nɔ popɖinta*
 miu - ge - baŋ pe: - ɖap - a
 far away - ABL - ABL fly-come -3SG.PST
 haŋke ɡɔ -bi nɔ pop-ɖint-a
 and 3SG.PROX -LOC EMPH saddle-DEX.OBL-3SG.PST
 ‘He landed here flying from that side.’ (LBrMH 206)

- b. *ε: mɔrɔknɔ ku:bɔkutsi*
 ε: mɔrɔk - nɔ ku: - bɔk - u - tsi
 PRT like that - EMPH care - come - 3SG.PST.TOP - DU.
ɡaŋpɔkutsi baɖale:pɔkutsi
 ɡaŋpɔk - u - tsi baɖale:pɔk - u - tsi
 roll. come out-3SG.PST.TOP - DU grow.do.come out - 3SG.PST.TOP - DU.
 ‘They both got their two sons bigger (LBrMH 288)

- c. *satturmi huksi sikk^hariŋ irɔnɔ pik^ha riŋ*
 sattur - mi huks -bi sikk^har -i - ŋ
 enemy - GEN hand -LOC fall.go.OBL -3SG.PST. - 1SG

iro - nɔ pik^har -i - ŋ
 such - EMPH be.GO.OBL - PST - 1SG.NPT
 ‘I was in tricked by enemy so it happened.’ (LBrMH 261)

- d. *k^ho jaŋta:pa aŋletu pena*
 k^ho jaŋta: pa aŋle - tu pen-a
 3SG Yangtapa Angla – up.LOClive - 3SG.PST
tsomteha: ŋ maŋtewabi pena
 Chomtehang maŋtewa-bi pen-a
 Chomtehang Mangtewa-LOC live-3SG.PST
 ‘Yangtapa, he settled at Angla. Chomtehang settled at Mangtewa.’ (LBrMH 024)

Non-past

Lohourung exhibits a non-past category that comprises both *present* and *future* tense. In Lohorung, the present tense is marked by the morpheme <k> that tends to appear in both transitive and intransitive verbs. There are not any other morphemes to refer to the non-past present except <k>, which is solely used. Lohorung does not have a distinct morphological marker to indicate the future tense, as can be seen in other Kirati languages (Rai, 2015; Rai, 2023). Instead, the present tense itself conveys the future reference; only the future is observed by the adverbs like 'tomorrow,' 'next year,' or 'next week' in the certain context or pragmatics by lexical items. Some of the examples are given in (2a-c).

(2)

- a. *ekkəsɛɛ mə la:mə k^ha:lɛ lo:su*
 ek - kɔ - sɛɛ mə la:mə k^ha:lɛ lo:s -u
 one - CLF - 3SG.OBL ERG 3SG.MED long type tell.OBL- 3SG.PST
ɓɔnɛ ɬoikɔ ts^ho:tɔ ka:bɔk
 ɓɔnɛ ɬoikɔ ts^ho:tɔ ka:bɔ -k
 if next short cry.burst out - 3SG.NPT
 ‘If one starts to cry with short sound another synchronizes producing a long sound.’ (DErDG 052)

- b. *ekkɔ tsai si:k^hara ɓɔnɛ ɬoikɔsuŋ*
 ek - kɔ tsai si:k^har -a ɓɔnɛ ɬoikɔ suŋ
 one - CLF IND die.go.OBL- 3SG.PST if next- also
si:k^hɛma nɔ pɔ:rjɔ
 si:k^hɛ - ma nɔ pɔ:rjɔ
 die.go - INF IMPH OBL
 ‘If one died, the next one also has to die.’ (DErDG 102)

- c. *ekkɔ su si:k^hɛ:k*
 ek - kɔ su si:kɛ: -k
 one - CLF also die.go -NPT
 ‘The next one also dies.’ (DErDG 103)

Example (2a) functions as a present tense marker and portmanteau, indicating both 3SG and tense, whereas (2c) serves as a future tense marker in a specific context. Alternatively, it serves as a marker for the future tense.

Aspects

Aspect is a form of verb that indicates the way in which an action is regarded. Aspect indicates whether an event, state, process, or action that is denoted by a verb is completed or in progress (Katamba 1993, p.221).

There exist two categories of aspects: lexical and grammatical. The lexical aspect, known as Aktionsart, is an intrinsic characteristic that speakers expect the verb to express unless stated otherwise; languages seem to categorize similar Aktionsart classes within their lexicons (Givón 2001a, p. 286).

Lexical aspects

There are four basic classes of the lexical aspect of verbs: states, achievements, accomplishments, and activities. They were proposed originally in Vendler (1967 p.21). Givón (2001) also classified the verbs in terms of their inherent temporal properties as stative verbs, compact verbs, accomplishment verbs, and activity verbs. The states of the lexical aspects are presented in Table 1.

Table 1

State affairs of the lexical aspects

State of the Affairs	Position of the Lexical aspects
State	[+static], [-telic] and [-punctual]
Activity	[-static], [-telic] and [-punctual]
Accomplishment	[-static], [+telic} and [-punctual]
Achievement	[-static], [+telic} and [+punctual]

Source: Vendler (1967, p. 21)

The lexical aspects inherent in Lohorong are tested, as can be seen in (3-6).

- (3) States
- | | | | |
|---------------------------------|------------|-------------------------------|---------------|
| a. <i>mimma</i> | 'to wish' | b. <i>b^hεpɔkma</i> | 'be tall/big' |
| c. <i>som k^hεɔma</i> | 'be angry' | d. <i>harapali:ma</i> | 'be red' |
- (4) Achievements
- | | | | |
|------------------------------|------------|------------------|---------------|
| a. <i>aɔma</i> | 'to shoot' | b. <i>tse:ma</i> | 'to jump' |
| c. <i>p^hε:kma</i> | 'to slap' | d. <i>rɔ:kma</i> | 'to beat/hit' |
- (5) Accomplishments
- | | | | |
|-----------------|-------------|-----------------------------|---------------|
| a. <i>jeɔma</i> | 'to finish' | b. <i>k^hεɔma</i> | 'to go' |
| c. <i>jeɔma</i> | 'to stand' | d. <i>pemma</i> | 'to lay down' |
- (6) Activities
- | | | | |
|-------------------|------------|-------------------|-----------------|
| a. <i>lakluma</i> | 'to dance' | b. <i>lamɔuma</i> | 'to walk' |
| c. <i>tsa:ma</i> | 'to eat' | d. <i>pɔkma</i> | 'to break down' |

As illustrated above (3-6), lexical elements, as an intrinsic characteristic, seem to integrate with many grammatical characteristics. The primary role of lexical elements is to enhance

the communicative dimension of grammatical components. The stative verbs in Lohorong do not fulfill the perfective interpretation due to the absence of a terminal boundary.

Grammatical aspects

In numerous languages, encompassing all language families, including Tibeto-Burman, there exist two primary aspectual distinctions: perfective and imperfective (Givón 2001, p. 345). Grammatically, the languages may have the aspects like a) perfective: past, perfect, past-progressive b) Imperfective: non-past-progressive, habitual.

Perfective (PFV)

- *Past perfective (PST PFV)*

The perfective aspect denotes an occurrence in its entirety. The perfective aspect is appropriate for conveying a terminative, punctual, or inceptive dimension of the situation described by the verb, as it presents the situation as a complete whole. Additionally, the aspectual form of the verb can incorporate an Aktionart through the use of an aspectivizer (van Driem, 1993). It may denote a scenario (i.e., events, processes, and changes of status) that was concluded and delineated before a definitive reference point, namely, the moment of speech. The perfective aspect in Lohorong signifies an activity completed before the moment of utterance, as illustrated in (7a-b).

(7)

- a. *akkɔbaŋ harelo potti k^harami hemu*
akkɔ-baŋ harelo-potti k^har-a-mi hemu
That-ABL Harelo-ALL go-PST-3PL HS
'They then went to Harelo.'
- b. *mɔhaŋ kaŋasun akkɔnuŋnɔ k^hariŋ*
akkɔ-baŋ kaŋa-sun akkɔ-nun-ɔ k^ha-r-i-ŋ
That-CONJ 1SG-also that-COM-EMPH go-INS-PST-1SG HS
'Thereafter, I also went with him, too.'

The events (7a-b) occurred in sequence and completed proceeding only one absolute reference time.

- *Perfect (PRF)*

In Lohorong, the perfect aspect appears to be analogous between the past-perfective aspect and the present perfect. Both characteristics encode events that either transpired or were at least initiated before the temporal reference point. These occurrences are expected to have concluded and been confined before the reference period.

- *Non-past perfect (NPST PRF)*

The non-past perfect might indicate the resultant state. This is referred to as the resultative stage or perfect of result. In Lohorong, the perfect aspect is morphologically indicated by a distinct suffix. The verb root is denoted by the suffix <-*d*>, as illustrated in (8a-c).

(8)

- a. *kaŋaε sok^hik la:q^hindun̄tsi*
 kaŋa-ε sok^hik la:q^hin-d-u-ŋ
 1SG-ERG grasshopper bring. down-PFV-NPST.3SG-1SG
 ‘I have brought down some grasshopper.’
- b. *kaŋaε tsam tsa:qun̄*
 kaŋa-ε tsam tsa:-d-u-ŋ
 1SG-ERG rice eat-PFVNPST-3SG-1SG
 ‘I have eaten rice.’

In (8a-b) the events occurred are supposed to have happened prior to the reference time the resultants can be perceived in the present time.

• **Past perfect (PST PRF)**

The past perfect is referred to as the "resultative condition or perfect of result. In Lohorung, the perfect aspect is morphologically indicated by a distinct suffix <-t> attached to the verb root. The principal verb is succeeded by the 'be' verb, as illustrated in (9a-b).

(9)

- a. *kaŋaε oirɔ laŋkamtsi tsi:ktepale:tun̄tsi*
 kaŋa-ε oirɔ laŋkam-tsi tsi:kte-pa le:-t-u-ŋ-tsi
 1SG-ERG many friend-pl string-bring-NMLZ do-INS-PST.3SG-1SG-PL 1SG
 ‘I had brought many friends with me.’
- b. *k^ho:tsiε kaŋa siŋi piʔmimpa le:tiŋmi*
 k^ho:tsi-ε kaŋa siŋi piʔmimpa le:-t-i-ŋ-m-i
 3SG-ERG 1SG loan give-NMLZ do-INS-PST.3SG-1SG-PL 1SG
 ‘I had brought many friends with me.’

• **(COMPL)**

The marker <-fi> functions as the completive aspect in Lohorung. There exist two categories of completive aspects: non-past completive and past completive. The following points are addressed: The completive aspect in Lohorung might be perceived as events that are concluded at the appropriate time. The examples (10a-b) may elucidate this issue.

(10)

- a. *kaŋa siŋ t^haŋma hekun̄*
 kaŋa siŋ t^haŋ-fi-k-ŋ-a
 1sg tree climb-COML-1SG.NPST
 ‘I am able to climb the tree.’
- b. *k^ho:sε ki:wa lap^hiku*
 k^ho:sε ki:wa lap-fi-ku
 3SG tiger catch. climb-COML-1SG.NPST
 ‘He is able to catch the tiger.’

As can be seen in (10a-b), *ts^hΛ²-ŋir-a-m* 'become-COMPL-PST-NMLZ' and *mits-a-ŋir-a* 'die-PAST-COMPL-PST' indicate the completive aspect in Lohorong, which may be viewed as events completed in the right moment.

Imperfective

Imperfective examines the problem from within, focusing on its inherent structure. The imperfective aspect is marked both semantically and formally in Lohorong. The imperfective aspect can be categorized into three types: habitual, perfective, and progressive.

- **Durative (DUR)**

The durative marker <-*q^haŋ*> is applicable to all tense categories: past and non-past. This marker is utilized in both transitive and intransitive verbs in Lohorong. The durative aspect denotes occurrences that do not conclude within a specified temporal framework, as seen in (11a-b).

(11)

- a. *kaŋa gɔ imtsa^qh^aŋpa lɛ:tiŋ*
 kaŋa gɔ imtsa-^qh^aŋ-pa lɛ:t-i-ŋ
 1SG TOP sleep-DUR-NMLZ be-ins-pst-1sg
 'I was sleeping.'
- b. *kaŋa tse intsaⁱŋ tɔɔ irɔklɔ maŋsuŋ*
 kaŋa tse intsa-i-ŋ tɔɔ irɔklɔ maŋsuŋ
 1SG cloth sell-PST-1SG but nowadays anything
 'I was sleeping.'
- lɛ:mepaiŋani*
 lɛ:-me-pai-ŋ-a-ni
 do-DUR-move-1SG-PST-NEG
 'I sold clothes but nowadays I am not dong anything.'

The examples (11a-c) indicate the durative marker <-*q^haŋ*> is used in non-past and past.

- **Progressive (PROG)**

Progressive denotes an action perceived as currently ongoing. Progressiveness resembles continuousness, defined as an imperfective aspect not arising from habitual actions (Comrie 1997, p. 33). The progressive aspect in Lohorong, indicated by the suffix <-*me* or <-*mim*> attached to the verb root, is succeeded by the word 'be,' as demonstrated in (12a-b).

(12)

- a. *petseŋwaε kɔjeŋ mittuge uŋmesimimpa*
petseŋwa-ε bu:bu gɔ mittu-ge-baŋ uŋm-e-si:-q-ε
 petseŋwa-erg brother above-ABL come down-DUR-PFV-NMLZ-3SG

k^haŋmimpa lɛ:tu
 k^haŋ-mim-pa lɛ:t-u
 look-DUR-NMLZ be-PST-3SG

'Petse?wa had seen his brother coming down from above.'

- b. *atsela gɔ tanpami kʰapmi kitapa*
atsela gɔ tanpa-mi kʰap-mikitapa
 nowadays TOP RFLX-GEN Language-GEN book
sapme si:kŋa
sap-me si:-k-ŋa
 write-DUR cop-NPST-1SG

'Nowadays, I am writing a text book in my own language.'

In (12a-b), the suffix <-me~mim> in the verb root is found to have been followed by the verb 'be' verb.

• **Habitual (HBT)**

Habituality denotes a scenario that is emblematic of a prolonged duration, such that the referenced circumstance is perceived not as a transient attribute of the present, but rather as a defining trait of an entire era (Comrie 1976, p.28). In Lohorong language the habitual past is morphologically marked by a marker <juŋs> as can be seen in (13a-b).

(13)

- a. *kaŋka tsai mimmu fiellua bɛ: sibi ro:pa li:si kʰe? marɔ*
 kaŋka tsai mimmu fiellua bɛ:si - bi ro:pa li: - si
 1PL.EXCL IND below Heluwa Besi- LOC paddy field plant-NMLZ

kʰe? marɔ futitjaũ nuŋ tʰɛ:wa li:juŋsami
 kʰe? ma - rɔ futitjaũ nuŋ tʰɛ:wa li: - juŋs-a - mi
 go-INF - PRT Hutityau and Indian roller be - HBT - 3SG.PST - 3PL

'When we went down at Besi to plant peddy at that time they used to be appeared there.' (DErDG 157)

- b. *bɛ: sibi lo:marɔ paŋmabisu*
 bɛ:si - bi lo: - ma - rɔ paŋma - bi su
 hot place - LOC tell-INF-OBL Pangma - LOC also

li:juŋsami
 li: - juŋs -a - mi
 be - HBT - PST - 3PL

'They used to be in Pangma as well.' (DErDG 156)

In examples (13a-b), the marker <juŋs> indicates habitual in the Lohorong language. The habitual marker <juŋs> is a past event, so the morpheme always occurs with the past tense marker <a>.

Discussion

This section deals with the tense and aspect in Lohourug and compares it with Kirati languages in the typological framework.

Insights of the tense and aspect systems in Lohorong

The past tense marker <a> in Lohorong is realized across various person and number configurations, encompassing first, second, and third persons in singular, dual, and

plural forms. The past tense marker <a> appears when third person singular, dual, and plural (3SG, 3DU, 3PL) subjects engage with first person dual inclusive (1DU.INC) subjects. It is also documented in contexts where second person singular, dual, and plural (2SG, 2DU, 2PL) and third person singular, dual, and plural (3SG, 3DU, 3PL) participants exert influence on first person dual exclusive (1DU.EXC) participants.

Moreover, the marker <a > is present when second person singular and dual (2SG, 2DU) participants engage with first person plural (1PL) participants. It is similarly employed in contexts where first person singular (1SG), first person dual exclusive (1DU.EXC), first person plural exclusive (1PL.EXC), and third person singular, dual, and plural (3SG, 3DU, 3PL) agents interact with second person singular, dual, and plural (2SG, 2DU, 2PL) participants. Furthermore, <a> is utilized when first person dual (1DU), first person dual exclusive (1DU.EXC), second person dual (2DU), second person plural (2PL), and third person dual (3DU) subjects engage with third person singular, dual, and plural (3SG, 3DU, 3PL) subjects.

The extensive occurrence of <a> in these configurations illustrates that past tense marking in Lohorung is not contingent upon person hierarchy and serves as a universal past tense marker, relevant to both speech-act participants and non-speech-act participants, as can be seen in Table 2.

Table 2

The morpheme <a> as the past tense marker and the environment

Participants of the person	Form of the past tense
3SG, 3DU, 3PL > 1 ST DU.INC	<a>
2SG, 2DU, 2PL, 3SG, 3DU, 3PL > 1DU.EXC	
2SG, 2DU > 1PL	
1SG, 1DU.EXC, 1PL.EXC, 3SG,3DU,3PL>2SG	
1SG, 1DU.EXC, 1PL.EXC, 3SG,3DU,3PL>2DU	
1SG, 1DU.EXC, 1PL.EXC, 3SG,3DU,3PL>2PL	
1DU, 1DU.EXC, 2DU, 2PL, 3DU >3SG	
1DU, 1DU.EXC, 2DU, 2PL, 3DU > 3DU,	
1DU, 1DU.EXC, 2DU, 2PL, 3DU > 3PL	

The frequency distribution of the past tense marker <i> in Lohorung is shown in Table 3 for different person-based participant configurations. The table demonstrates that the marker <i> is not evenly distributed; rather, it appears in distinct interactional contexts associated with specific grammatical persons and numbers. The data show that the morpheme <i> is often present when first-person plural inclusive (1PL.INC) participants act on third-person singular, dual, and plural (3SG, 3DU, 3PL) participants. This indicates that the morpheme <i> is preferred in contexts where inclusive speech-act participants serve as actors and third-person entities act as undergoers. Furthermore, the marker <i> appears in contexts where second person singular, dual, and plural (2SG, 2DU, 2PL) participants engage with first person singular (1SG) participants. It is also seen when third person singular, dual, and plural (3SG, 3DU, 3PL) participants act on first person singular (1SG) as well as first person plural inclusive (1PL.INC) and first person plural exclusive (1PL.EXC)

participants. Table 3 shows that the past tense marker <i> is affected by the roles of the participants and the way they are set up.

Table 3

<i> past tense marker frequency

Person acting	Frequency of past tense marker
1PL.INC, > 3SG, 3DU, 3PL	<i>
2SG, 2DU, 2PL > 1SG	
3SG, 3DU, 3PL > 1SG, 1PL.INC, 1PL.EXCL	

The past tense marker <u> appears in Lohorung for different person and number combinations. The marker <u> is specifically observed when first person singular (1SG), first person plural exclusive (1PL.EXC), first person plural (1PL), and third person singular and plural (3SG, 3PL) participants interact with third person singular (3SG) participants. The same group of actors also allows the use of <u> when the undergoer is in the third person dual (3DU) or third person plural (3PL). This distribution suggests that the morpheme <u> is linked to third-person-oriented contexts, especially when the undergoer remains consistently in the third person, irrespective of number. The marker <u> appears less frequently and in a more structured way than the default past tense marker <a>. This suggests that it works as a context-sensitive allomorph of the past tense marker. Its utilization seems to be influenced by participant alignment rather than solely by tense, indicating an interplay between tense marking and person-based agreement in Lohorung. Table 4 shows the morpheme <u> is used as the past tense marker.

Table 4

The morpheme <u> past tense marker frequency

Person acting	Frequency of past tense marker
1SG, 1PL.EXC, 1PL, 3SG, 3PL > 3SG	<u>
1SG, 1PL.EXC, 1PL, 3SG, 3PL > 3DU	
1SG, 1PL.EXC, 1PL, 3SG, 3PL > 3PL	

Lohorung has various aspectual distinctions that represent different temporal viewpoints on events. The perfective aspect is denoted by the zero marker <-∅>, signifying that completed occurrences may lack morphological marking. The progressive aspect is indicated by the suffixes <-me> and <-mim>, signifying acts that are ongoing. The durative element is expressed by the marker <-q^han>, emphasizing the prolonged or continuous nature of an occurrence. The ideal aspect is denoted by the marker <-t/q>, indicating a condition arising from a preceding event. The completive aspect is indicated by a marker <-hi>, implying that completion can be deduced from context rather than explicit morphology. The habitual aspect is denoted by <-juŋs>, signifying activities or events that transpire often or typically. Table 5 illustrates that Lohorung utilizes both overt suffixes and zero marking to convey aspectual distinctions, exemplifying a typologically prevalent pattern in Tibeto-Burman languages where aspectual meanings are allocated across morphological and contextual realms.

Table 5*Aspects and their markers in Lohorung*

Markers	Gloss
<- ϕ >	Perefective (PFV)
<- <i>me</i> > <i>mim</i> >	Progressive (PROG)
<- <i>d^han</i> >	Durative (DUR)
<- <i>t</i> > <i>d</i> >	Perfect (PER)
<- <i>hi</i> >	Completive (COMPL)
<- <i>juns</i> >	Habitual (HABT)

Typological implications of the tense and aspect

Languages exhibit typological variations in the quantity and characteristics of tense distinctions encoded within their verbal morphology (Timberlake 2008, p. 305). From a typological standpoint, Kirati languages typically demonstrate a binary tense opposition, differentiating between past and non-past forms. In contrast, English and Lithuanian have three tenses: past, present, and future.

In Kirati languages, tense closely interacts with aspect and modality, often to the point where these categories are not always clearly distinguishable. Many people have written about how closely tense, aspect, and modality are related, and this is also clear in Koyee and Lohorung. In these systems, temporal reference is often deduced from aspectual or modal morphology instead of from a standalone tense marker.

Some Kirati languages do not have a clear marker for the non-past tense. These are Limbu (van Driem 1987, p. 90), Bantawa (Doornenbal 2009, p. 160), Kulung (Tolsma 1999, p. 56), and Chhathare Limbu (Tumbahang 2011, p. 191). Conversely, Dumi (van Driem 1993, p. 35) and Athpare (Ebert 1997, pp. 42–44) utilize the identical marker <-t> to denote non-past tense.

Most Kirati languages use the morpheme <-a> or one of its allomorphs to mark the past tense. This pattern is documented in Yamphu (Rutgers 1998, pp. 217–218), Athpare (Ebert 1997, pp. 42–44), Bantawa (Doornenbal 2009, p. 160), Chhathare Limbu (Tumbahang 2011, p. 191), Kulung (Tolsma 1999, p. 56), and Koyee (Rai and Budhathoki, 2008; Rai 2011; Rai 2015, pp. 125–129), and it mirrors the situation noted in Lohorung. In contrast, Dumi (van Driem 1993, p. 35) and Chamling (Rai 2011, p. 130) do not morphologically mark the past tense; instead, it is inferred through aspectual or modal constructions. Table 6 provides a summary of the tense-marking strategies observed in various Kirati languages and positions Lohorung within this comprehensive typological framework.

Table 6*Tense markers in the Kirati languages*

<i>non-past</i>	<i>Past</i>	<i>language</i>
< -ʔind ~ʔin~ʔi>	< a~ϕ>	Yamphu (Rutgers 1998, pp. 217-218)
< -ϕ>	< -ε>	Limbu (van Driem 1987p.90)
< -t ~yuk>	< stem+ a~ e>	Athpare (Ebert 199, pp. 42-44)
< -t>	< ϕ>	Dumi (van Driem 1993, p. 35)
< ϕ>	< a~ϕ>	Bantawa (Doornenbal 2009, p.160)
< e>	< a>	Koyee (Rai and Budhathoki, 2008); (Rai, 2010; 2015, Rai (2024)
< ϕ>	< -a>	ChhathareLimbu (Tumbahang 2011, p.191)
< -ei>	< ϕ>	Chamling (Rai 2012, p.130)
< ϕ>	< -a>	Kulung (Tolsma 1999, p.56)
< k>	< -a>	Lohorung (Rai, 2023)

From a typological standpoint, Lohorung closely resembles the prevalent tense structure found in Kirati languages, especially in its framework of a binary past versus non-past classification. Lohorung has an overt past tense marker, <a>, just like many other Kirati languages. This is similar to how languages like Yamphu, Bantawa, Kulung, and Chhathare Limbu use <-a> or its allomorphs. The non-past domain in Lohorung is indicated by a single marker <k>, whereas future reference is deduced from present tense constructions alongside temporal adverbials, a method that mirrors the lack or insufficient specification of future tense morphology in various Kirati languages. Also, the way tense and aspect work together in Lohorung shows that Kirati languages tend to combine tense and aspectual marking instead of treating them as separate grammatical categories. In this regard, Lohorung aligns with the overarching Kirati typological framework while simultaneously providing language-specific evidence for the comprehension of tense and aspect systems within the Eastern Himalayan Tibeto-Burman languages.

Conclusion

This study examined the tense and aspect system of Lohorung, a Kirati Tibeto-Burman language, focusing on their morphological realization and functional use. Lohorung exhibits a binary tense distinction, with <a> marking past events and <k> marking non-past or present. The aspectual system is morphologically rich and includes multiple markers: perfective <∅> for completed actions, progressive <-me / mim> for ongoing events, durative <-d^han> for extended actions, perfect <-t/d> for actions with present relevance, completive <-hi> for brought-to-completion events, and habitual <-juns> for repeated or customary actions. These markers demonstrate that tense and aspect in Lohorung are closely integrated, with portmanteau morphemes often encoding multiple grammatical meanings simultaneously. Past tense markers vary across participant configurations, with <a> as the dominant marker and restricted allomorphs <i> and <u> appearing in specific environments. Non-past reference is underspecified for future tense, relying on present tense morphology combined with temporal adverbs. Typologically, Lohorung aligns with

other Kirati languages in exhibiting two-way tense marking and a strong interaction between tense and aspect. Its complex aspectual system, with multiple morphological markers, positions Lohorung as a representative and typologically significant Kirati language, contributing valuable insights into temporal and aspectual patterns in the Eastern Himalayan Tibeto-Burman languages.

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Abbreviations

1	First person	INS	Insertion
2	Second person	NPST	Non preterit
3	Third person	NS	Non-singular
COPL	Completive	PRF	Perfective
DUR	Durative	PROG	Progressive
EX	exclusive	PL	Plural
HAB	Habitual	PP	Passive participle
I	inclusive	PST	Past tense
MPF	Imperfective		

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