The Shifting Sands of Time: 
Variable grammatical behaviour of time words 
in Takivatan Bunun

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Takivatan Bunun, an Austronesian language spoken in Taiwan, has a dedicated class of words expressing time, place and manner. These words are interesting because of their considerable positional and grammatical variation. This talk will focus on a number of relatively common time words: *(t)udip* 'then', *qabas* 'in the old days', *laupa(ku)* 'now', and *haip* 'today'. It gives an overview of the clausal slots in which these words occur and their associated behaviours. I will present a number of explanations for this unusual positional and associated grammatical variation. I will suggest that variation in the position and grammatical behaviour of Takivatan time words is likely connected to a number of functional and historical factors that might be common to many Austronesian languages of Taiwan.

1. Introduction

1.1. Takivatan Bunun

Bunun is an endangered Austronesian language spoken in the Central Mountain Range of Taiwan. As a result of their traditional life style, which was semi-sedentary and put great importance on hunting practices, the Bunun population is spread out across a wide geographical area. Bunun settlements can be found in the counties Kaohsiung, Taidong, Nantou and Hualien. The Bunun language has five distinct dialects: Isbukun, Takbanuað, Takivatan, Takituduh, and Takibakha. This article will concentrate on the Takivatan dialect, which is spoken by less than 1000 people, mainly in two settlements in the county Hualien (De Busser 2009).

Takivatan Bunun is a verb-initial language with a very productive verbal morphology. It has a Philippine-style focus system and distinguishes between an unmarked agent focus, an undergoer focus marked with the suffix -un, and a locative focus marked with -an. (Note that the notion of ‘focus’ in Austronesian languages has little to do with the concept of pragmatic focus as it is used in the analysis of information structure.) Zero-marking indicates that the agent is the topic of the clause.

(1)  
\[
\text{siða malŋaŋausta maduq-ta}
\]
\[
\text{take-AF shaman-DEF.REF.DIST millet-DEF.REF.DIST}
\]
\[
\text{‘The shaman took millet.’ (Adapted from TVN-012-001:69)}
\]
The suffix *UF* -un indicates that the undergoer (usually the patient) is the topic.

(2) *siðaun asik*
    *siða-un asik*
    take-*UF* shrub
    ‘The shrubs they gathered.’ (Adapted from TVN-012-001:24)

The presence of *LF* -an indicates that a locative argument is the topic.

(3) *maqtu pasiðaʔan ŋabul vanis*
    *maqtu pa-siða-an-in ŋabul vanis*
    can CAUS.DYN-take-PRV antler wild.boar
    ‘(In that place) we can catch deer and wild boar.’ (TVN-008-002:47)

Verbal morphology is considerably more complex than nominal morphology. Apart from focus suffixes, many verbs can take verbal prefixes, the most common of which are the dynamic prefix *ma-* , as in (5) *ma-ludaq* ‘beat’; the homonymous stative prefix *ma-* , as in (16) *ma-naskal* ‘happy’; and the causative dynamic prefix *pa-* , as in (3) above. These three prefixes only occur on roots in verbal slots, a property that allows us to use them as a diagnostic tool to determine whether certain time words are verbs or not. Other prefixes commonly occurring on verbs are TAM affixes, most notably the perfective suffix -in, the irrealis prefix *na-* , and the progressive suffix -aŋ (see 1.3. for examples).

Arguments in a Takivatan clause normally occur in a fixed order (with some exceptions that will not be discussed here).

**Verb - Agent - Instrument - Beneficiary - Patient - Locative - Place/Time/Manner**

Important about this constituent template is the fact that non-core constituents expressing place, time and manner (henceforth PTM phrases) typically occur in a dedicated clause-final slot. Note that this implies there is a grammatical distinction between core locative arguments and non-core place arguments in Takivatan.

There is no obvious and coherent class of words that behave like adverbs. Concepts that are often thought of as adverbials in other languages – including many temporal expressions – are expressed in Takivatan either by auxiliaries, as in (7) below, or by a dedicated class of words that is exclusively used for expressing place, time and manner (PTM). Takivatan auxiliaries behave like verbs: they can take TAM markers and some of them occur with focus suffixes and bound pronouns.

1.2. **Goal and methodology**

This article will investigate the positional variability and associated variations in grammatical behaviour of time words in Takivatan. On the basis of a classification and analysis of corpus examples, I will discuss a number of motivating factors that could lie at the basis for this variability. The present study compares the four most common time words in the Takivatan corpus, and its variant forms:
The corpus used in this study consists of transcriptions of audio recordings of narrative text that were gathered during two fieldwork sessions in Mayuan village, Hualien County, between 2005 and 2009. The textual data was entered and semi-automatically processed in Fieldworks Language Explorer (FLEx). Regular expression searches were used to extract tokens of relevant time words from the database. Table 1 shows the token absolute and relative token frequency of individual time words.

The results were then categorised by hand according to their position in the clause and certain morphological characteristics. The analysis in this article will mainly look at two grammatical surface parameters that are relatively easy to ascertain in a corpus without having to resort to semantic interpretations:

- **position**: the position in the clause and certain prosodic cues such as pauses
- **grammatical behaviour**: the word class of time words, as evidenced by their grammatical marking, such as verbal prefixes, focus marking, and TAM marking

Tokens in constructions that could not be accurately translated or that were ambiguous were disregarded in the analysis.

### 1.3. Expressing time in Takivatan

The majority of linguistic research into the expression of time focusses on tense, aspect and – to a lesser extent – lexical aspect or Aktionsart. In most languages, however, there is a much richer variety of ways to encode the temporal context or structure of an event (cf. Klein 1994: 14 & 142). In Takivatan, the grammatical and lexical mechanisms that encode the temporal features of an event are the following:

- **Properties of the verb**: The semantics of many verbs conveys information about the temporal structure of the event they describe, and this often has grammatical consequences. For instance, the stative form *halan* ‘ill’ in (4) normally occurs with a single argument and cannot encode for both an agent and a patient (except in causative constructions; see De Busser 2011).

(4) \[ \text{mi-} \text{halan} \]  
\[
\text{STAT,NEG-} \text{ill}
\]

‘be ill’ (TVN-003-xxx)
Certain dynamic verbs, on the other hand, typically encode an agent and a patient.

(5) Haiða bunun maludaq inak bidil
    haiða bunun ma-ludaq i-nak bidil
    have people DYN-beat POSS-1.S,N cheek
    ‘Some person beat me on the cheek [lit: beats my cheek.’ (TVN-xx2-001:142)

• **Auxiliaries**: A number of auxiliaries convey temporal information about the clause in which they operate. Below is a list of time auxiliaries in Takivatan.

(6) kavavaʔa ‘immediately’
    musuʔul ‘immediately’
    kinuð ‘afterwards; finally’
    qadna ‘immediately’
    maŋna ‘a moment ago’
    qaðna ‘immediately’
    kitŋa ‘begin’
    qanaqtuŋ ‘finished’
    maŋma ‘a moment ago’
    sansu ‘immediately’
    muŋa ‘soon’
    saŋan ‘a moment ago’
    muqna ‘continue; next’
    tuŋan ‘finish’

These forms really do function as auxiliary verb forms. In (7), kitŋa ‘begin’ modifies the main verb baðbað ‘tell.’ It is prefixed by IRR na- and triggers movement of the topic of the clause sak ‘I’ to immediate post-verbal position, a typical behaviour of Bunun auxiliaries.

(7) Aupa nakitŋa sak laupaku baðbað tu [...] 
    aupa na-kitŋa sak laupaku baðbað tu 
    thus IRR-begin 1.S,TOPL,AG now tell COMPL
    ‘And thus I will start now to tell [...]’ (TVN-012-001:10)

Example (8) shows a a similar construction with the form qanaqtuŋ ‘finished.’ It is followed by a perfective suffix -in and the bound first person pronoun -ʔak.

(8) Qanaqtuŋinʔak taldanav.
    qanaqtuŋ-in-ʔak taldanav
    finished-PRV-1.S,TOPL wash
    ‘I did already wash my face.’ (TVN-xxx-xx1:164)

• **Aspectual affixes**: The four most common aspectual affixes are given below. The single-word clause in (9) contains examples of the irrealis prefix na- and the perfective suffix -in. The irrealis prefix indicates relative futurity (relative to a past reference time). The first instance of PRV -in appears to encode a change-of-state reading: it indicates that a certain situation (a deer being present) has ceased to exist. The second instance encodes a completive reading.

(9) ʔukin aipa ʔita namudanin
    ʔuka-in aipa ʔita na-mu-dan-in
    NEG.have-PRV DEM.S,DIST,VIS there.DIST IRR-ALL-go-PRV
    ‘It [the deer] had gone away’ (TVN-008-002:134)

The infix -in- often has a resultative meaning in nominalisations, but when it appears in the predicate, it typically has past tense connotations, as in example (10).
The progressive suffix -aŋ typically indicates an ongoing event. An example is given in (11).

(11) Maðʔavaŋ sak tudip minliskin tu
maðʔav-aŋ sak tudip min-liskin tu
embarrassed-PROG 1S.TOP that.time INCH-believe COMPL
‘Being still embarrassed, I thought [...].’ (TVN-008-002:196)

- Reduplication: Certain reduplicative patterns encode various types of lexical aspect. Not uncommonly, such patterns are iconic and express durativity, continuativity, repetition or habituality.

(12) Maupata tu maqabasa lulusʔanaŋa
mau-pa-ta tu ma-qabas-a CV-lusʔan-aŋ-a
thus-DEF.REF.DIST COMPL DYN-in.former.times-LNK HABIT-celebrate-PROG-LNK
‘This is how people (habitually) performed celebrations in the old days.’ (TVN-012-003:27)

(13) Pakakalat asu
pa-CV-kalat asu
RECIP-REP-bite dog
‘The dogs are (repeatedly) biting each other.’ (TVN-xx2-005:68)

- Place-time-manner (PTM) words: Finally, Takivatan has a grammatical class of words that express place, time or manner. They sometimes appear to behave like auxiliaries, sometimes like noun-like entities, and sometimes like something in between. Their actual distributions are all different, but most can at least occur in the clause-initial auxiliary slot and in a dedicated clause-final slot that can only contain PTM expressions (PTM words, certain nouns expressing locations, and a small set of prepositional phrases). The remainder of this article will focus solely on time words.

2. Time words

Unlike most other word classes, time words can occur in an unusual number of different grammatical slots. In each of these positions, they exhibit distinct grammatical behaviours. Different time word can vary considerably as to their positional distribution and there is even considerable variation between individual variants of the same time word. What all time words (but not all variant forms of each time word; see e.g. laupa in Table 2) have in common is that they can occur at least in a pre-verbal auxiliary slot and in the clause-final PTM slot.

Time words can occupy twelve distinctive positions in the clause.

1. The clause-final Place-Time-Manner (PTM) slot is the final grammatical slot of the clause, with exception of complement clauses and other clausal arguments. Time words in this slot generally exhibit a noun-like or prepositional-phrase-like behaviour.
2. In pre-verbal position with a general linker -a, time words are typically invariant, and it could be argued that they modify the following verb.

3. In pre-verbal position without a linker, time words tend to be grammatically invariant, i.e. they do not take any verbal or other morphology. Attestations in this position are relatively rare, so no definitive conclusions can be drawn, but it is most likely that time words in this slot are best analysed as pre-verbal time words with a linker -a.

4. Between an auxiliary and main verb, the exact status of time words is variable. Some instances appear to behave like auxiliaries, others appear to be invariant forms.

5. Certain time words immediately following the main verb, or the main verb plus a core argument, but do not occur in not in clause-final position. These forms are always grammatically invariant and cannot be analysed as verbal forms. They could be analysed as nominal arguments (although it is not clear which constituent they would encode) or as invariant adverbal forms.

6. Many time word can function as the first or only auxiliary without a complementiser tu. Despite the absence of a complementiser, these forms are best analysed as auxiliary verbs, because they take verbal morphology.

7. Time words can occur as first or only auxiliary followed by a complementiser tu. The presence of a complementiser clearly indicates that they function as auxiliaries. However, their grammatical behaviour varies. For instance, the form dip ‘then’ never takes any verbal morphology in this position, but other time words do.

8. Certain time words can function as the main verb of a clause. Their verbal status is most obvious when they are the only word in a clause and take some sort of verbal morphology.

9. All time words except for laupa and haip have been attested in directional or locative derivations. In these positions, they are prefixed by a verbalising directional or locative prefix and the resulting form functions as a directional/locative verb.

10. Only dip tu ‘and then’ can function as a discourse marker. These forms have no grammatical function within the clause, but function at a pragmatic level.

11. Certain time words can function as an attribute of a noun phrase. They can occur in pre- or post-nominal position and are always invariant.

12. Three of the time words in this study (tudip, qabas and laupaku) can function as the head of a noun phrase.

Table 2 gives an overview of the distribution of each of these time words across these twelve positions. Note that the corpus counts are indicative only, since they exclude all instances for which the exact position or status could not be unambiguously determined. Note also that the total number of tokens sometimes deviates from the automatic counts in Table 1. Sections 2.1.-2.4. describe the positional variation and illustrate four the most common positions for each time word, with the exception of tudip, where examples for all attested positions are given.

2.1. Tudip and dip ‘then’

2.1.1. Tudip

By a considerable margin, tudip ‘then, at that time’ is the most commonly occurring time word in the Takivatan corpus. It creates an anaphoric time reference in the past, i.e. it typically indicates that its host clause occurs in a past time period that is identified in the discourse context preceding it. It has been attested in 8 of the 12 positions defined above.
Approximately 15% of all instances of *tudip* occur in the clause-final PTM slot. In this position, the attestations of *tudip* are always grammatically invariable.

(14) *Haidə mukalumaqa tudip*
*haiða* mu-ka-lumaq-a *tudip*
have ALL-Make-house-LNK that.time
‘There were people that went there to build houses at that time’ (TVN-012-001:63)

When *tudip* immediately precedes the main verb and has a suffix _LNK_ -a, it is always grammatically invariant (it does not take any other affixal forms). These instances account for approx. 11% of the corpus examples.

(15) [...] *sia Bunun tudipa pinvai.*
*sia* Bunun *tudip-a* *pinvai*
ANAPH Bunun that.time-LNK win
‘[Although the Taroko from the six villages were very dedicated,] the Bunun were the most powerful at that time and they won (the competition).’ (TVN-008-002:23)

More than a quarter of the attestations of *tudip* occur after one or more auxiliaries but before the main verb. Instances in this position are best classified relative to two extremes that clearly belong to different grammatical constructions. The first is exemplified by cases in which *tudip* follows the auxiliary, but precedes a complementiser *tu* that belongs to the auxiliary. For instance, the auxiliary *mastaʔan* ‘most, exceedingly’ in (16) is obligatorily

<table>
<thead>
<tr>
<th>Slot</th>
<th>Tudip</th>
<th>Dip</th>
<th>Qubas</th>
<th>Laupaku</th>
<th>Laupadau</th>
<th>Laup</th>
<th>Haip</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. PTM slot</td>
<td>9</td>
<td>16</td>
<td>2</td>
<td>3</td>
<td>14</td>
<td>19</td>
<td>12</td>
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<tr>
<td>2. Pre-verbal with linker-a</td>
<td>6</td>
<td>11</td>
<td>0</td>
<td>0</td>
<td>11</td>
<td>15</td>
<td>0</td>
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<tr>
<td>3. Pre-verbal without linker</td>
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<td>0</td>
<td>0</td>
<td>0</td>
<td>3</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td>4. Between AUX and main verb</td>
<td>15</td>
<td>27</td>
<td>4</td>
<td>5</td>
<td>5</td>
<td>7</td>
<td>6</td>
</tr>
<tr>
<td>5. After the main verb</td>
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<td>0</td>
<td>0</td>
<td>0</td>
<td>6</td>
<td>8</td>
<td>11</td>
</tr>
<tr>
<td>6. First or only AUX without complementiser <em>tu</em></td>
<td>8</td>
<td>14</td>
<td>6</td>
<td>8</td>
<td>19</td>
<td>26</td>
<td>5</td>
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<td>7. AUX with complementiser <em>tu</em></td>
<td>5</td>
<td>9</td>
<td>16</td>
<td>20</td>
<td>6</td>
<td>8</td>
<td>1</td>
</tr>
<tr>
<td>8. Main verb</td>
<td>9</td>
<td>16</td>
<td>4</td>
<td>5</td>
<td>2</td>
<td>3</td>
<td>0</td>
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<td>9. Directional or locative derivation</td>
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<td>6</td>
<td>4</td>
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<td>11. Attribute of an NP</td>
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<td>12. Head of an NP</td>
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<td>46</td>
<td>23</td>
<td>12</td>
<td>18</td>
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<td>\textbf{No. of different slots}</td>
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<td>7</td>
<td>11</td>
<td>9</td>
<td>8</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

Table 2: Constructional variation of time words
followed by \textit{compl} \textit{tu}, and it is clear that the time word is inserted between the auxiliary and the complementiser.

\begin{flalign*}
(16) & & \text{Amuq tudipi mastaʔan tudip tu manaskali} & & \text{though that.time-PRT most that.time COMPL STAT-happy-PRT} \\
& & \text{amuq tudip-i} & & \text{mastaʔan tudip tu ma-naskal-i} \\
& & & & \text{And those were most happy days.’ (TVN-008-002:21)}
\end{flalign*}

This indicates that in these constructions \textit{tudip} is not functioning as an auxiliary. It could be interpreted either as a noun phrase or an adverbial phrase. Since the form is always invariant in this context, the latter is more probable.

The second extreme consists of cases where \textit{tudip} is modified by TAM marking, in the example below \textit{prv} -\textit{in}.

\begin{flalign*}
(17) & & \text{a maupa muqna tudipin minliskin tu namaquaq pasiʔadas qan sami} & & \text{thus next that.time-PRV INCH-believe COMPL} \\
& & \text{a maupa muqna tudip-in min-liskin tu} & & \text{na-maquaq pasi-adas qan sam-i} \\
& & & & \text{IRR-how.come SEPARATE-carry with 1E.TOP-PRT} \\
& & & & \text{‘thus I again remember how we worked together in those times’ (TVN-008-002:164)}
\end{flalign*}

In this case, the time word is clearly not grammatically invariant and does occur in a grammatical position in which it can unambiguously be analysed as an auxiliary. For examples such as the second instance of \textit{tudip} in (18), it is impossible to unambiguously determine which of the two categories above the form belongs to.

\begin{flalign*}
(18) & & \text{Aupa matudipa, nanuin tudip minliskin tu ni mamantuk tu} & & \text{‘But in those days, it had really come to a point where I acquired understanding that it wasn’t genuinely so.’ (TVN-008-002:165)} \\
& & \text{aupa ma-tudip-a} & & \text{thus STAT-that.time-SUBORD} \\
& & \text{nanu-in tudip min-liskin tu ni CV-mantuk tu} & & \text{really-PRV that.time INCH-believe COMPL NEG INTENS-genuine COMPL} \\
& & & & \text{‘But in those days, it had really come to a point where I acquired understanding that it wasn’t genuinely so.’ (TVN-008-002:165)}
\end{flalign*}

In clause-initial position (approx. 14\% of instances), \textit{tudip} behaves unambiguously as an auxiliary verb. It almost always has TAM marking and occurs in a position that is typically occupied by auxiliaries.

\begin{flalign*}
(19) & & \text{tudipin tupa tu tuŋanina} & & \text{‘At that point they proclaimed that it was finished’ (TVN-012-001:75)} \\
& & \text{tudip-in tupa tu tuŋan-in-a} & & \text{that.time-PRV say COMPL finish-PRV-LNK} \\
& & & & \text{‘At that point they proclaimed that it was finished’ (TVN-012-001:75)}
\end{flalign*}

Less commonly (in approx. 9\% of all instances), it also occurs as an initial auxiliary followed by a complementiser. In the example below, the presence of a progressive suffix -\textit{aŋ} and of the complementiser \textit{tu} is a strong indication that \textit{tudip} functions as an auxiliary verb.
Tuđip also commonly occurs as the main verb (16% of instances), usually as the only verbal form in a subordinate clause. In these constructions, its status as a verb is often indicated by TAM affixes or, as in (21), by a verbal prefix.

(21) Aupa matuđipa, nanuin tuđip minliskin tu ni mamantuk tu
thus that.time-PROG COMPL ANAPH call-UF COMPL RES.OBJ-work
really-PRV that.time INCH-believe COMPL NEG INTENS-genuine COMPL
‘But in those days, it had really come to a point where I acquired understanding that it wasn’t genuinely so.’ (TVN-008-002:165)

It is possible to create directional and locative derivations from the root tuđip, as in (22).

(22) paisqatudipina Bunun minhaiđa
cause that.time-PRV that.time-LNK Bunun INCH-exist
‘And from that time onwards, the Bunun became prosperous.’ (TVN-012-001:33)

Finally, the root tuđip occasionally occurs in the nominalisation tuđipʔað ‘a person of that period.’

Figure 1: Comparison of positional distribution of tuđip and dip

2.1.2. Dip

It is likely that dip and tuđip are historically related, although how both forms diverged is unclear. Also semantically, both forms are very similar. Like tuđip, the form dip ‘then’ creates an anaphoric time reference in the past. At the moment, it is not clear what the exact semantic or functional difference between the two forms is. However, the positional distribution of
*tudip* and *dip* are markedly different, as Figure 1 illustrates.

Most strikingly, more than half of all occurrences of *dip* function as discourse marker expressing hesitation. In this function, *dip* is usually followed by the complementiser *tu*, but not by any complement clause, and can occur in almost any position in the clause. There is clear evidence that the discourse marker *dip tu* is not grammatically integrated in the clause. For instance, in (23) *dip tu* immediately follows *natudipin* ‘then.’ It is difficult to explain this from a grammatical, or a semantic, point-of-view, unless one assumes that the form is here used as a hesitation marker that operates outside the grammatical influence of the clause.

(23) *Aupa natudipin, dip tu, paun tu madaiga kainaskalan*. 
*aupa* na-*tudip-in dip tu paun tu*  
thus irr-*that.time-prv then compl be.said compl*  
*madaia*-a ka-i-naskal-an  
big-lnk assoc.dyn-pst-beautiful-lf  
‘Thus in those days, this was considered to be a very happy event.’ (TVN-012-001:59)

We saw that in pre-verbal position, *tudip* occurs very often between an initial auxiliary and the main verb, and its grammatical status is typically ambiguous. *Dip*, on the other hand, typically occurs in positions where it clearly functions as an auxiliary. Interestingly, its behaviour tends to be different depending on whether it is followed by *compl tu*. When it is not followed by a complementiser (approx. 7.5% of all corpus attestations), *dip* typically has some sort of verbal morphology, most often the perfective marker *-in*.

(24) *Dipin babaðbaðin tu*  
dip-in CV-baðbað-in tu*  
then prv cont-have.conversation-prv compl*  
‘then they were talking’ (TVN-008-002:107)

On the other hand, when *dip* occurs in the auxiliary slot and is followed by *compl tu* (approx. 20% of corpus occurrences), it is always invariant, i.e. it does not take any verbal or nominal morphology, as in the example below.

(25) *dip tu taŋadaq libus*  
dip tu tan-ŋadaq libus*  
then compl dir-beneath hunting.grounds*  
‘In those days, it was situated beneath the hunting grounds’ (TVN-008-002:12)

A possible explanation for this contrast could be that the absence of the complementiser as a marker of the verbal status of *dip* other indicators need to be used to clearly indicate the time word’s grammatical status as an auxiliary.

*Dip* has been attested in locative and directional derivations, as in (26).

(26) *Idip tu amin.*  
i-dip tu amin*  
loc-there compl all*  
‘All things are over there.’ (TVN-008-vxxx:22)
In contrast to *tudip* and other time words, it is occasionally used with a spatial meaning, as in the form *mundip* ‘go there’ (TVN-008-002:125).

### 2.2. *Qabas* ‘in the old days’

The time word *qabas* ‘in the old days, in earlier times’ refers to a period in the remote past. It is the most versatile of the time words in this study and has been attested in all positions but one (it cannot function as a discourse marker).

In more than a quarter of all attestations, *qabas* functions as a clause-initial auxiliary without a complementiser *tu*. Most often, the time word occurs either without any verbal morphology, as in (27), or with a verbal prefix *DYN ma-*., as in (28).

*(27)* \(qabas\) nanu itu Tama Diqanin sintuqumis
\(qabas\) nanu itu tama diqanin sintuqumis
in.former.times really this.here father heaven bless
‘in former times the Father in Heaven really have us his blessing.’ (TVN-008-002:6)

*(28)*

\(maqabasi\) maupata naip qanupa
\(ma-qabas-i\) maupa-ta naip qanup-a
\(DYN\)-in.former.times-PRT thus-DEF,REF,DIST DEM,S,NVIS hunt-SUBORD
‘When somebody wanted to go hunting in the past […]’ (TVN-012-001:104)

It can take TAM affixes, but these forms are relatively rare. Forms of *qabas* followed by a free topical argument occur, but no forms with bound pronouns have been attested. Approximately 8% of all instances of *qabas* function as auxiliaries and are followed by a complementiser *tu*. These forms behave in all other respects like the forms without *compl tu*.

Approximately 19% of all attestations of *qabas* occur in the clause-final PTM slot.

*(29)*

\(daŋaða\) Sipun \(qabas\)
\(daŋað-an\) Sipun \(qabas\)
help-LF Japanese in.former.times
‘In those days, the Japanese helped in that place.’ (TVN-012-002:46)

In this position, *qabas* often appears as a bare root, but not necessarily so. Forms with the focus suffix *LF -an*, the progressive suffix *-aŋ* and the verbal prefix *DYN ma-* have been attested.

*Qabas* ‘in the old days’ and *tudip* ‘then’ are the only two time words in the present sample that commonly occur immediately before the verb with a linker *-a*.

*(30)*

\(Maupata\) qabasa paun tu titiʔun tu masðaŋ-i
\(maupa-ta\) qabas-a paun tu titi-un tu masðaŋ-i
\(thus-DEF,REF,DIST\) in.former.times-LNK be.said \(compl\) meat-UF \(compl\) same-PRT
‘This was how in the old days the meat was distributed in the same way’ (TVN-012-001:124)

We saw that *tudip* is always morphologically invariant in this context. This is also the case for
most occurrences of qabas, although occasional morphologically complex forms with the verbal prefix DYN ma- have been attested.

Certain invariant forms of qabas follow the main verb, but precede any complementiser belonging to the main verb (approx. 8 % of the attestations). These forms either follow or precede core arguments accompanying the main verb, as illustrated in (31)-(32).

(31) paun aipun qabas tu Dastalanam
    paun        aipun     qabas     tu    Dastalanam
    be.called    in.former.times    qabas    tu    Dastalanam
‘That [place] was in the former times called Dastalanam’ (TVN-012-002:167)

(32) sintupa qabas madadaŋʔað
    sintupa      qabas    madadaŋʔað
    in.former.times    elder
‘as the elders explained in the old days.’ (TVN-012-001:10)

Being always invariant and not obviously occurring in any nominal or verbal slot, these forms are probably best analysed as adverbials.

2.3. Laupaku, laupadau and other forms of laupa ‘now’

The variants of the time word laupa ‘now’ are particularly interesting to the present discussion because they illustrate that three different variants based on the same root, and with very similar semantic profiles, still exhibit distinct positional and grammatical behaviours, as is shown in Figure 2. Note that the label laupa includes a number of morphological variants, including the invariant form laupa ‘now’ and the complex form laupaŋ ‘a moment ago’ (from laupa + PROG -aŋ).

![Figure 2: Comparison of positional distribution of laupaku, laupadau and other forms of laupa](image)

Some differences are immediately apparent. While both laupaku and laupadau regularly occur in the PTM slot, other forms of laupa have never been attested in this position. Laupaku is much more evenly distributed across the positional categories and it is the only form that occurs in immediate post-verbal position (category 5) with any regularity. On the
other hand, instances of *laupa* without -*ku* or -*dau* constitute more than fifty percent of all auxiliary occurrences of the root. In this position, *laupa* never occurs with the complementiser *tu*. *Laupadau* is mainly used in the PTM slot or in locative/directional derivations. There is no apparent semantic or functional reason for this positional variation: with the exception of *laupaŋ*, which typically means ‘a moment ago’, all variants of *laupa* mean ‘now; at the present moment’. We will now have a look at each form in detail.

2.3.1. *Laupaku*

The time word *laupaku* ‘now’ is probably best regarded as a morphologically complex form consisting of the root *laupa* and the suffix -*ku*, which has so far only been attested in this single form and the historical origin of which is unclear. Amongst the three variants of *laupa*, *laupaku* exhibits the greatest degree of positional variation, and is also the only form that has never been attested with any verbal morphology. On the other hand, it does occur quite commonly the determiners DEF.SIT.PROX -*ki* DEF.SIT.MED -*kun* and DEF.SIT.DIST -*ka* (see De Busser 2009: 416-440 for a discussion of determiners in Takivatan Bunun).

Approximately 25 % of the attestations of *laupaku* are to be found in the clause-final PTM slot.

(33) ʔukin saduan laupaku
    ʔuka-in sadu-an laupaku
    NEG.have-PRV see-LF now
‘one cannot see them anymore at this moment.’ (TVN-012-002:137)

In this position, *laupaku* can occur with determiners, as in (34).

(34) maʔiti sia danjʔanan laupakuki
    ma-ʔiti sia danj-an-an laupaku-ki
    STAT-here ANAPH place-LF-LO now-DEF.SIT.PROX
‘You can stay at this place now’ (TVN-012-002:116)

Another 25 % of the instances of *laupaku* in the corpus occur immediately after the main verb or after the main verb plus another invariant element modifying the verb.

(35) haiða laupaku paun tu sia padantun maʔuvul
    haiða laupaku paun tu sia padan-tun ma-ʔuvul
    have now be.said COMPL ANAPH fine-leaved.reed-DEF.REF.MED STAT-flexible
‘and now there is what is called a flexible kind of reed’ (TVN-012-001:44)

These instances are always morphologically invariant; they cannot take any definiteness markers. Just like *qbas* ‘in the old days’, *laupaku* is best analysed as an adverbial in these contexts.

*Laupaku* also occurs between an auxiliary and the main verb, as in (36). It is always grammatically invariant in this position. Since it consistently occur after the auxiliary, but before any complementiser (if present), it is best analysed as an adverbial in this position.
About ten percent of all attestations of laupaku (5 tokens) occur in the initial auxiliary slot without a complementiser tu.

They have never been attested with verbal morphology or with bound pronouns.

2.3.2. Laupadau

Laupadau most commonly occurs in the PTM slot (approx 43% of all occurrences). It does not take any verbal morphology in this position, but can occur with the three situational definiteness markers (-ki, -kun, and -ka) mentioned in the previous section.

Laupadau often occurs in the form saulaupadau ‘until now, up to this day.’ No other locative or directional derivations have been attested so far.

2.3.3. Other forms of laupa

The remaining forms of laupa make up less than 15% of all occurrences and only 12 forms have been recorded. It is therefore difficult to draw any sound conclusions about its positional distribution. What is clear is that more than half of this group consists of the word laupan ‘a moment ago’, which is a contraction of laupa ‘now’ and the progressive suffix -aŋ.

Two thirds of all instances occur in the clause-initial auxiliary slot, but are not followed by a complementiser. It is clear from examples like

Figure 3: Relative frequency of variants of the root laupa ‘now’
(40) that these forms function as auxiliaries, because they trigger left-movement of the topical argument (aipun in this particular case).

(40) Laupaŋ aipun munkumbu
laupa-aŋ aipun munk-umbu
now-PROG DEM.S.MED.VIS ALL-inside
‘Now she went inside […]’ (TVN-008-003:199)

2.4. Haip ‘today’

The final time word, haip ‘today’, has the lowest corpus frequency of the five forms under scrutiny in this article. Its low frequency makes it difficult to make any reliable statements about its positional distribution. Most commonly, haip occurs between an auxiliary and the main verb of the clause.

(41) asa haip malmananu matibahiʔi
asa haip malmananu mati-bahi-i
want today put.effort.in MATI-have.dream-PRT
‘we now have to do our best to have a prophetic dream.’ (TVN-008-002:43)

Unlike other time words, haip also regularly occurs as a nominal modifier, as in (42).

(42) Uninaŋ haip tu sanavan
uninaŋ haip tu sanavan
thank.you today ATTR evening
‘Thank you on this evening’ (TVN-012-003:79)

This might be so because it is more noun-like than other time words. It refers to a well-delineated period in time (‘this day’) and therefore, one could argue, has more straightforward referential characteristics than time words that refer to a vague time period (e.g. qabas ‘in the old days’).

Haip is invariant, unless it occurs in the clause-initial auxiliary slot, where it has been attested with TAM marking.

(43) haipaŋ qaniʔan ɲausuŋ ʔita makusvaʔi siati daŋiʔan-anana
haip-aŋ qaniʔan
today-PROG day
ɲausuŋ ʔita makusva-i sia-ti daŋiʔan-an-a
first there.DIST cut.grass-PRT ANAPH-DEF.REF.PROX put.in-LOCATION-LNK
‘When it is that day, we first go there to cut the grass of that location’
(TVN-012-001:56, 2nd instance)

2.5. Intermediate conclusion

The previous section has demonstrated that time words in Takivatan can occur in an unusually large number of positions in the clause. This positional freedom is not random for three main reasons.
2.5.1. Grammatical restrictions

First, although time words can occur in a wide range of positions, it would be hard to call this free variation, as distinct grammatical behaviours tend to be associated with different positions. This is not the case in typical languages with a free constituent order. Consider, for instance, examples (44)-(46) from Warlpiri (Pama-Nyungan, Australian), which illustrate that noun phrases in Warlpiri can occur in any position and any order in a clause.

(44) *Ngarrka-ngku* ka *wawirri* *panti-rni*
    man-ERG AUX kangaroo spear-NONPAST
    ‘The man is spearing the kangaroo.’ (Hale 1983: 6)

(45) *Wawirri* ka *panti-rni* *ngarrka-ngku*
    kangaroo AUX spear-NONPAST man-ERG
    ‘The man is spearing the kangaroo.’ (id.)

(46) *Panti-rni* ka *ngarrka-ngku* *wawirri*
    spear-NONPAST AUX man-ERG kangaroo
    ‘The man is spearing the kangaroo.’ (id.)

There is a crucial difference between positional variation of noun phrases in Warlpiri and positional variation of time words in Takivatan. Whatever the position of the noun phrases in the three examples above, and whatever the motivation for this position, they always function as noun phrases, with the transitive subject always occurs in the ergative case, and the object in the (unmarked) absolutive case. In other words, when a language has a free constituent order, position does not influence grammatical behaviour.

The grammatical behaviour of Takivatan time words, on the other hand, varies considerably depending on their position in the clause. In initial position, time words often behave like auxiliary verbs: they might occur with a variety of verbal affixes, as in (47), (48), (49); take pronouns, as in (48); trigger left-movement of the topical argument, as in (47); and be followed by a complementiser, as in (49).

(47) *maqabas madadaínʔað paun tu misðaŋ*
    ma-qabas madadaínʔað paun tu misðaŋ
    DYN-in.former.times elder be.said COMPL group
    ‘in the old days the elders [built houses together] in a group.’ (TVN-012-001:63)

(48) *Laupaŋʔak taldanavin*
    laupaŋ-ʔak taldanav-in
    a.moment.ago-1s.TOP wash-PRV
    ‘I just finished washing.’ (TVN-xxx-xx1:166)

(49) *Aupa, maqabasaŋ tu atikisaŋa* [...]
    aupa ma-qabas-aŋ tu a-tikis-aŋ-a
    thus DYN-in.former.times-PROG COMPL STAT-small-PROG-SUBORD
    ‘Thus, when in the old days I was still small, [...]’ (TVN-006-001:3)

Time words occurring in immediate post-verbal position are always grammatically invariant, as illustrated in (35) and in (50) below.
In the clause-final PTM slot, time words appear in complementary distribution with prepositional phrases (compare (51) and (52)). Time words in this slot rarely take verbal morphemes, but certain forms regularly occur with definiteness markers.

(50) paun qabas tu Taŋkinuð
be.called in.former.times COMPL T. ‘In former times it was called Tankinuð’ (TVN-012-002:29)

As such, Takivatan time words do not so much occur in different positions as that they have the potential to be instantiated in a clause as different word classes in distinct grammatical slots with specific positional restrictions associated to them. In other words, the different positions in which time words can occur are not merely surface variations that reflect a single grammatical slot in the underlying structure. Rather, each position represent its own distinct grammatical slot with associated restrictions on word class and on morphological and grammatical behaviour. Obvious exceptions are positions 3 and 4 in Table 2, which are ambiguous between two grammatical slots. Instances of time words in these positions function sometimes as auxiliaries, and sometimes as invariant forms, and we will see that it is not always easy to classify corpus examples as belonging to either one or the other.
2.5.2. **Lexical and sub-lexical restrictions**

Positional variation also has clear lexical (and sub-lexical) restrictions. All time words are not evenly distributed across their positional options. On the contrary, positional distribution of individual time words varies greatly and different forms of the same time word can have radically different distributions. This is obvious from Figure 4, which is a visualisation of the numerical data in Table 1 as a bar chart.

Certain time words occur in positions that are not attested for others. For instance, *tudip* ‘then’ can occur immediately before the verb, *laupa* ‘now’ cannot. Some time words, like *laupa* have a preference for a small number of positions. Others, like *qabas* ‘in the old days,’ are dispersed across all possible positions. In addition, it is obvious from the chart that different forms of the same time word can have radically different distributions. This is most markedly the case with the three main variants of *laupa* ‘now.’ Their positional preferences are so radically different that one could wonder if these forms should be considered to be variants of the same root or different lexemes.

Most of these positions are correlated with specific grammatical behaviours. Time words in initial position tend to behave like auxiliary verbs. Time words in immediate pre-verbal and post-verbal position are often invariant and appear to modify the verb. Time words in clause-final position might be best explained as adverbials.

2.5.3. **Interpersonal variation**

Something that is not immediately clear from data presented so far is that there is considerable inter-speaker variation in the use of time words. The sample used in this study is mainly based on a total of 3 hours 7 minutes of recorded narrative text from three informants (Uli, F, 18m; Vau, M, 1h40m; Tulbus, M, 1h09m). Figure 5 plots their individual use of different time words, expressed as the average number of occurrences of each time word per minute of recorded text.

![Figure 5: Breakdown per speaker of the normalised frequency of occurrence of time words (measured in occurrences per minute of recorded text)](image)

It is clear that the selection of particular time words is strongly influenced by individual preferences. For instance, Vau uses *tudip* ‘then’ almost three times as much as Tulbus does. Additional research is necessary to determine whether this skewed distribution has an influence on positional variation. There are some signs which indicate that this effect is
minimal and that individual speakers do not select for particular positions across a range of
time words. For instance, dip ‘then’ and qabas ‘in the old days’ have a similar frequency of
occurrence in the narratives of all three speakers, but still have a radically different positional
distribution (see Figure 4). Conversely, the positional distribution of tudip ‘then’ and qabas
follows a rather similar pattern (see Fig. 4), but their frequency of occurrence is highly
skewed towards certain speakers. Both observations suggest that while the frequency of
occurrence of individual time words is not constant among speakers, the actual distribution of
these time words across possible positions is fairly stable.

3. Possible reasons for positional variability

The previous sections are a careful description of the extent and nature of positional variation
of Takivatan time words. We still do not know what the reasons are for (a) the wide range of
variability and (b) the preference of individual time words to occur in certain constructions?
These two questions will be discussed in this section. The following subsections will
concisely touch on a number of structural, cognitive-functional, and historical-typological
explanations for the variability of the positional, and associated grammatical, behaviour of
time words.

3.1. Structural explanations

In language, differentiation of form tends to correlate with differentiation of meaning. In the
absence of a clear semantic differentiation between the different positions, it could therefore
be assumed that it must be possible to explain differentiation of form (in this case, the position
in a clause) as a result of certain properties of the grammatical or semantic structure of the
clause.

Givón (1983: 208) remarks that “[o]ne of the most common devices in language for indicating
scope relations is by translating them, at the code level, into ordering/proximity relations.”
This means that we could attempt to explain positional variation of time words in terms of a
functional need to vary their scope (see Klein 1994: 159), analogous to a scope analysis of
quantifiers (Reinhart 1997, Kuno & Takami 2002 *inter alia*). However, while the notion of
variable scope does make sense for quantifiers, it is much more problematic for time words.
Conceptually, the standard assumption would be that time words always have scope over an
entire clause (or sometimes even a sentence), since the temporal setting that they express is
typically relevant for the entire event. Consider for instance (53) and (54).

(53)  *daŋaðʔak* tudip
dagaðʔak tudip
help-1S.TOP that.time
‘[...] so I helped him at that time.’ (TVN-008-002:225)

(54)  *tudip* tu mainaʔitaʔin malmananu
tudip tu mainaʔitaʔin mal-ma-nanu
that.time COMPL ABL-then-PRV STATE-STAT-really
‘[...] and at that time I came from that place full of dedication’ (TVN-008-002:209)

In the first example, *tudip* ‘then’ occurs in the clause-final PTM slot; in the second, as a
clause-initial auxiliary with a complementiser. Nevertheless, both forms mean exactly the same and no genuine difference in scope can be observed. For instance, it does not make sense to say that in (53) only has scope over the topical argument and in (54) over the entire clause, or vice versa.

A closely related explanation could take the syntactic proximity of a time word to a verb as an iconic projection of conceptual distance. This would mean that the closer a time word occurs to the main verb, the more tightly integrated its temporal semantics are in the event expressed by that verb. A first problem with this analysis is that, while it might be able to explain the difference between time words occurring close to the verb and those that occur towards the periphery of the clause, it is hard to see how proximity could explain the difference between clause-initial and clause-final time words at an equal distance of the verb. A second problem is that it is hard to imagine how there can be variation in the degree to which a temporal setting is conceptually integrated in an event. Compare for instance (51) with (55) below.

(55)  sintupa qabas madadaiʔað
  sin-tupa  qabas  madadaiʔað
  RES.OBJ-say  in.former.times  elder
  ‘as the elders explained in the old days.’ (TVN-012-001:10)

In (51), *qabas* ‘in the old days’ is in clause final position and is preceded by a core argument; in (55), it occurs immediately after the verb. The meaning of the time word in both examples appears identical and there is no clear evidence for a difference in conceptual distance.

We can therefore tentatively conclude that there are no obvious structural explanations for the positional variability of Takivatan time words.

### 3.2. Cognitive-functional explanations

From a cognitive perspective, one could argue that the notion of time – or more specifically of temporal setting – has an inherent ambiguity in most languages with regards to its ontological status. It is often unclear whether the temporal setting of an event should be encoded as an event or as a referential entity. One would expect that such ambiguity is reflected in the surface structure of the language and it is reasonable to assume that in Takivatan Bunun, this ambiguity could have led to the type of positional variation that has been observed for time words. This hypothesis has the potential to explain why time words sometimes exhibit more verb-like behaviours (in clause-initial positions) and sometimes more noun-like behaviours (in clause-final position). It fails at explaining why is clause-initial positions are associated with verb-like behaviour and clause-final positions with noun-like behaviours, but one could argue that this is merely the consequence of the grammatical slot in which the time words occur.

There is no real evidence for the main hypothesis, namely that time is an inherently ambiguous concept in human cognition. Since this claim is made about human cognition in general, sufficient evidence could only be gathered by conducting a cross-linguistic study. More importantly, positing ambiguity as a potential source of variability of time words, be it in Takivatan or in language in general, does not explain why the Takivatan situation is different from that in other languages. For instance, time adverbials in English also have a variable placement, as illustrated in (56)-(58).
In these examples today occurs in final, medial, and initial position. However, in each position the time word clearly functions as the head of an adverbial phrase, modifying either the verb, the verb phrase, or the clause. As we explained in 2.5.1, this is very different from Takivatan time words, which are instantiated in different grammatical slots and, depending on their position, have to be analysed as belonging to different word classes.

A functional explanation would look for a relationship between positional variation and information structure. It is often assumed that there is some sort of relation between the order of words and constituents on the one hand, and pragmatic salience on the other (see e.g. Firbas 1992: 117-134). From a functional perspective, one could therefore argue that positional variation in the realisations of time words is motivated by the variable communicative needs of Takivatan speakers. In other words, positional variation in time words reflects differences in communicative intent or pragmatic salience.

How this could work exactly is not clear at this moment, but it is possible to formulate an initial hypothesis. Lambrecht observes that discourse referents “are syntactically expressed in argument (including adjunct) categories. […] Predicates by definition do not denote discourse referents but attributes of, or relations between, arguments’ (Lambrecht 1996: 75). Only discourse referents are normally eligible for topic-hood, whereas relations tend to be more central to the realisation of pragmatic focus structure (see Lambrecht 1996: 221-235). This implies that for an explanation of positional variation among Takivatan time words, their grammatical behaviour is equally important as the positions that are associated with this behaviour. When a time word occurs in the clause-initial auxiliary position, it is functioning as a part of the verbal predicate and is therefore encoded as a relationship. In the clause-final PTM slot, time words function as peripheral noun-like arguments and therefore have referential status. Invariable forms in pre- or post-verbal position are modifying the verb and neither encode referents nor relationships.

The hypothesis that information structure is one of the factors that helps to determine the position of time words in a clause is particularly appealing because it has been postulated for other languages. For instance, Quirk et al. 1985: 290-291 say about English adverbs that the “selection of one position rather than another is influenced by several factors, but chief among them is the information structure of the sentence.” However, its applicability to the Takivatan case, and its exact workings, will need to be determined experimentally. An in-depth analysis of the exact effect of positional variation of time words on information structure is beyond the present discussion. What is clear is that an adequate description will need to go beyond binary distinctions such as the ones proposed by Lambrecht 1996 (topic vs. focus structure).

3.3. Historical-typological explanations

An alternative (or complementary) interpretation would be that positional variability is not the result of a communicative need, but rather the consequence of communicative or grammatical
ambiguity. Different sources for such ambiguity could be identified; only two will be touched on here.

First, it is possible that there is something about the semantic and grammatical structure of time words that makes them inherently ambiguous (or, in some languages, historically unstable). Cross-linguistically, one would then expect a tendency for time expressions to exhibit a more variable behaviour than most other word classes in a language. In some languages, even those with a relatively strict word order, this could manifest itself in positional variability. A language like English appears to support this assumption. For instance, Quirk et al. (1985: 490) distinguish seven distinct grammatical positions for adverbials in English, and give a time expression as an example:

(59) a. **By then** the book must have been placed on the shelf.
b. The book **by then** must have been placed on the shelf.
c. The book must **by then** have been placed on the shelf.
d. The book must have **by then** been placed on the shelf.
e. The book must have been **by then** placed on the shelf.
f. The book must have been placed **by then** on the shelf.
g. The book must have been placed on the shelf **by then**.

(Quirk et al. 1985: 490)

Again, this does not explain why Takivatan is different from those languages (remember that its time words are realised as different word classes depending on their position), but it might provide us with an explanation of why variety arose in the first place. The problem with this explanation is that in many languages, the behaviour of adverbials (expressing time and other categories) is not variable at all. For instance, in Qiang (a Tibeto-Burman language) time words typically occur in clause-initial position (LaPolla 2003: 215), and this pattern appears to be not uncommon among Tibeto-Burman languages.

Finally, word class ambiguity is concept that is especially relevant to a long-standing discussion in Austronesian linguistics. It has been observed that in many Austronesian languages the word class of many lexical roots and stems depends on the syntactic environment in which they occur (see Himmelmann 2006, *inter alia*). It is to be expected that an increased fluidity in word class assignment leads to larger positional variability, as words that can be realised as multiple word classes can also occur in an increased number of grammatical slots. One could assume that this is especially the case for word classes that do not typically function as the semantic head of core arguments or main predicates.

Support for this hypothesis can be found in other Austronesian languages of Taiwan, such as Saisiyat and Rukai, where time words exhibit a similar positional variability. Examples (60)-(62) are from the Maga of Rukai. They show the time word *la* ‘then’ in preverbal (60), postverbal (61), clause-initial (62), and clause-final position (62).

(60) *i-ku* θab-θabrə-ɖa ka *la* slara dia maa
  TOP-NOM RED-young man-3S.GEN TOP then DYN.NFIN:chase 3S.OBL FP
  ‘Her boyfriends went after her.’ (Maga Rukai; FLC 05.002.a)
4. Conclusion

In this article, I have given a detailed overview of variations in the position of the four most common Takivatan time words and their variant forms. From the data, a number of conclusions were drawn. First, time words exhibit an large degree of positional variability that is correlated to differences in grammatical behaviour (unlike a language like English, where positional freedom of adverbials has little effect on their grammatical status). Second, there are considerable differences between the positional distributions of individual time words and between different variants of the same time word. Third, while there is considerable interpersonal variation in the frequency of use of individual time words, this does not appear to bias individual speakers in favour of or against certain positional options.

In section 3, I tried to come to a tentative understanding of why this unusual positional variability occurs. I demonstrated that purely structural explanations, in which positional variability is motivated by grammatical or semantic mechanisms alone, have to be dismissed, as does the hypothesis that positional variation in time words is the result of an inherent cognitive instability in the perception of time words. More likely, positional variability is caused by the ever-changing communicative needs of Takivatan speakers. In this view, different clausal positions of time words, and their associated grammatical behaviours, can be explained in terms of the status of the temporal expression in the information structure of the clause. From a typological perspective, the positional and grammatical variability of Takivatan time words could partly be a consequence of the fact that they occur in a language where word class boundaries are rather fluid. Note that the information structure hypothesis and the fluid word class hypothesis are not necessarily mutually exclusive and it is very likely that variations in the positions of time words need to be explained by means of a combination of factors. What exactly these factors are and how they work is the topic for further research.

Abbreviations

| 1e | first person exclusive          | ATTR | attributive marker | DYN | dynamic event |
| 1p | first person plural             | AUX  | auxiliary          | EMO | emotive particle |
| 1s | first person singular           | CAUS | causative          | EMOT| derivation prefix marking |
| 3s | third person singular           | COMPL| complementiser     | ERG | ergative       |
| ABL| ablative                        | CONT | continuous         | FIN | finite         |
| AF | actor focus                     | DEF  | definiteness marker| FP  | focus particle |
| AG | agent                           | DEFIN| definitional       | GEN | genitive       |
| ALL| allative                        | DEM  | demonstrative      | HABIT| habitual      |
| ANAPH| anaphoric pronoun             | DIR  | directional        |     |               |
| ASSOC| associative                     | DIST | distal             |     |               |
INCH  inchoative
INTENS intensive
INTER interjection
IRR irrealis
LF locative focus
LINK linker
LOC stationary locative
MED medial
N neutral argument
NEG negative
NFIN non-finite
NOM nominative
NONPAST non-past
NVIS non-visual
OBL oblique
POSS possessive
PROG progressive
PROX proximal
PRT particle
PRV perfective
PST past
RECIP reciprocal
RED reduplication
REF referential
REP repetitive
RES.OBJ resultative object
S singular
SIT situational
STAT stative event
STAT,NEG negative stative event
STATE derivation prefix marking a state
SUBJ subjunctive
SUBORD subordinator
TERMIN terminative
TOP topical argument
UF undergoer focus
VIS visual

Bibliography


