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

WRTAL, Taipei
26-28 October 2011

Rik De Busser
Academia Sinica
rdbusser@gmail.com
Concentration of Bunun inhabitants

- incidental
- low
- moderate
- high
Introduction

- Takivatan < Bunun < Austronesian
- Verb-initial language
- Focus system

Actor focus:

(1) siða malŋaŋausta maduqta
   siða malŋaŋaus-ta maduq-ta
   take-AF shaman-DEF.REF.DIST millet-DEF.REF.DIST
   ‘The shaman took millet.’ (Adapted from TVN-012-001:69)
Introduction

Undergoer focus:

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

Locative focus:

(3) *maqtu pasiḍaʔanin ṣabul vanis*
    *maqtu pa-siḍa-an-in ṣabul vanis*
    can CAUS.DYN-take-LF-PRV antler wild.boar
    ‘(In that place) we can catch deer and wild boar.’
    (TVN-008-002:47)
Time words

- There is no coherent class of adverbs in Takivatan
- There is a class of words that express place, manner and time (PTM words)
- The four most common time words:
  - *tudip* ‘then, at that time’ and *dip* ‘then’
  - *qabas* ‘in the old days, in earlier times’
  - *laupaku* ‘now, at the present moment’, *laupadau* ‘now’, *laupa* ‘now’ and *laupan* ‘a moment ago’
  - *haip* ‘today, now’
## Time words

<table>
<thead>
<tr>
<th>Form</th>
<th>No. of tokens</th>
<th>Tokens / minute of recorded text</th>
</tr>
</thead>
<tbody>
<tr>
<td>tudip</td>
<td>170</td>
<td>0.91</td>
</tr>
<tr>
<td>dip</td>
<td>101</td>
<td>0.54</td>
</tr>
<tr>
<td>qabas</td>
<td>94</td>
<td>0.5</td>
</tr>
<tr>
<td>laupaku</td>
<td>58</td>
<td>0.31</td>
</tr>
<tr>
<td>laupadau</td>
<td>26</td>
<td>0.14</td>
</tr>
<tr>
<td>laupa (other forms)</td>
<td>19</td>
<td>0.1</td>
</tr>
<tr>
<td>haip</td>
<td>22</td>
<td>0.12</td>
</tr>
</tbody>
</table>
Time words

- They can occur in an unusual amount of positions in the clause.

- Classification of instances in the corpus
  - Position in the clause
  - Associated grammatical behaviours for each position

- In this study, I distinguished between 12 different positions

*Note: ‘invariant’ in this talk means morphologically invariant, i.e. unable to be modified by bound morphology*
Positions in the clause

1. Place-Time-Manner (PTM) slot:
   - clause-final grammatical slot
   - noun-like or prepositional-phrase-like behaviour
   - all except *laupa* ‘now’ and *laupanŋ* ‘a moment ago’

(14) *Haiďa mukalumaqa tudip*  
    *haiďa 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)
Positions in the clause

2. Pre-verbal position with a general linker -a:
   • immediately preceding the verb
   • typically invariant
   • *tudip* ‘then’ and *qabas* ‘in the old days’

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

3. Pre-verbal position without a linker:
   - same as previous
   - qabas, laupaku ‘now’, and laupadau ‘now’

(X) ḳisaq su uvaʔʔað laupaku kuðakuða?
‘Where are your children working now?’ (TVN-xxx-xx1:97)
Positions in the clause

4. Between auxiliary and main verb:
   • Occurs after an auxiliary or between auxiliaries, but in any case before the main verb
   • Sometimes like 2-3 (invariant); sometimes like 6-7 (auxiliary)
   • all forms
Positions in the clause

a) Invariant

(16) Amuq tudipi mastaʔan tudip tu manaskali.

Amuq tudip-i mastaʔan
though that.time-PRT most

And those were most happy days.’ (TVN-008-002:21)

b) Auxiliary-like
Positions in the clause

a) Invariant

b) Auxiliary-like

(17) A maupa muqna tudipin minliskin tu namaquaq pasiʔadas qan sami

Thus I again remember how we worked together in those times’ (TVN-008-002:164)
Positions in the clause

5. Following the main verb:

- immediately follows the main verb, or the main verb plus a core argument
- invariant
- qabas, laupaku, laupadau, laupa

(35) haiða laupaku paun tu sia padantun maʔuvul
haiða  laupaku  paun  tu
have  now  be.said  COMPL
sia  padan-tun  maʔuvul
ANAPH  reed.sp-DEF.REF.MED  STAT-flexible
‘and now there is what is called a flexible kind of reed’
(TVN-012-001:44)
6. First or only auxiliary without complementiser:

- initial position; typically can take verbal morphology
- verb-like behaviour; probably best analysed as an auxiliary
- all forms

(28) *maqabasi maupata naip qanupa*

*ma-qabas-i*  
DYN-in.former.times-PRT  
thus-DEF.REF.DIST

*naip*  
DEM.S.NVIS  
hunt-SUBORD

‘When somebody wanted to go hunting in the past [...]’

(TVN-012-001:104)
Positions in the clause

7. First or only auxiliary followed by complementiser *tu*:

- initial position; followed by complementiser; verbal morphology sometimes possible
- verb-like behaviour, consistent with auxiliaries
- all forms except for *laupadau*, *laupa* (incl. *Laupaŋ*)

(20)   *[...] tudip-əŋ tu sia tupa-un tu sinkuðakuða*

   *tudip-əŋ*    *tu*    *sia*    *tupa-un*    *tu*
   that.time-PROG    COMPL    ANAPH    call-UF    COMPL

   *sin-kuðakuða*
   RES.OBJ-work

   ‘[life ...] in those days that was called sinkuðakuða (a life of labour)’ (TVN-008-002:234)
Positions in the clause

8. Time word functions as main verb:
   - Only element in the predicate; takes wide range of verb-related morphology
   - all forms except for laupaku and haip ‘today’
‘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)
9. Functions in locative/directional derivation:

- preceded by locative or directional prefix
- all forms except for laupa (incl. laupany) and haip

(39) Saulaupadau mastaʔan matunaskali Tama Diqanin tu sau-laupa-dau mastaʔan matu-naskałi TERMIN-now-EMO most EMOT-happy-PRT tama diqanin tu father heaven COMPL ‘Till today, I am very grateful to the Father in Heaven’ (TVN-008-002:163)
Positions in the clause

10. Functions as a discourse marker:
   - no grammatical function in clause
   - invariant
   - only dip ‘then’ in the form dip tu

(23) Aupa natudipin, dip tu, paun tu madaiŋa kainaskalan
aupa na-tudip-in   dip   tu   paun
thus IRR-that.time-PRV then COMPL be.said
tu madaiŋ-a ka-i-naskal-an
COMPL big-LNK ASSOC.DYN-PST-beautiful-LF
‘Thus in those days, this was considered to be a very happy
event.’ (TVN-012-001:59)
Positions in the clause

11. Attribute of a noun phrase:
   - pre- or post-nominal attributive constructions
   - qabas, laupaku, laupadau, haip

(42) Uninaŋ haip tu sanavan

uninay haip tu sanavan
thank.you today ATTR evening
‘Thank you on this evening’ (TVN-012-003:79)
Positions in the clause

12. Head of a noun phrase:
   - noun-like behaviour
   - *tudip, qabas, laupaku*

(282) Aupa, maisnaʔita san laupaku
     aupa maisnaʔita san laupaku
     thus ABL-then at now
     ‘Thus, from that time until now’ (TVN-003-xxx:7)
<table>
<thead>
<tr>
<th>Category</th>
<th>Tudip</th>
<th>Dip</th>
<th>Qalbas</th>
<th>Laupaku</th>
<th>Laupadau</th>
<th>Laupa</th>
<th>Haip</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>#</td>
<td>%</td>
<td>#</td>
<td>%</td>
<td>#</td>
<td>%</td>
<td>#</td>
</tr>
<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>
</tr>
<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>
</tr>
<tr>
<td>3. Pre-verbal without linker</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>3</td>
<td>4</td>
<td>0</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>
<td>0</td>
<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 tu</td>
<td>8</td>
<td>14</td>
<td>6</td>
<td>8</td>
<td>19</td>
<td>26</td>
<td>5</td>
</tr>
<tr>
<td>7. AUX with complementiser tu</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>
</tr>
<tr>
<td>9. Directional or locative derivation</td>
<td>1</td>
<td>2</td>
<td>5</td>
<td>6</td>
<td>4</td>
<td>5</td>
<td>3</td>
</tr>
<tr>
<td>10. Discourse marker</td>
<td>0</td>
<td>0</td>
<td>43</td>
<td>54</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>11. Attribute of an NP</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>2</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>12. Head of an NP</td>
<td>3</td>
<td>5</td>
<td>0</td>
<td>0</td>
<td>2</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>56</td>
<td>80</td>
<td>74</td>
<td>46</td>
<td>23</td>
<td>12</td>
<td>18</td>
</tr>
<tr>
<td><strong>No. of different slots</strong></td>
<td>8</td>
<td>7</td>
<td>11</td>
<td>9</td>
<td>8</td>
<td>4</td>
<td>23</td>
</tr>
</tbody>
</table>
Positions

1. PTM slot
2. Pre-verbal with linker -a
3. Pre-verbal without linker
4. Between AUX and main verb
5. After the main verb
6. First or only AUX without complementiser *tu*
7. AUX with complementiser *tu*
8. Main verb
9. Directional or locative derivation
10. Discourse marker
11. Attribute of an NP
12. Head of an NP
Conclusion

- Time words in Takivatan Bunun occur in an unusual number of positions in the clause
- Positions tend to be associated with grammatical behaviours
- Individual time words (and variants of time words) have different distributions
- There is interpersonal variation in the frequency distribution of time words
Grammatical restrictions

• Positional variability ≠ free variation

English:

(56) **Today** we are printing a special token to complete the voucher we gave you yesterday.

(57) The Limit can **today** reveal chart star Felix's REAL name.

(58) The monkeys are on your cars **today**.

Vs.

Takivatan:
Grammatical restrictions

Takivatan:

(48) *Laupaŋʔak taldanavin*  
\textit{laupa-anʔak} \hspace{1cm} \textit{taldanav-in}  
a.moment.ago-PROG-1S.TOP \hspace{1cm} \text{wash-PRV}  
‘I just finished washing.’ (TVN-xxx-xx1:166)

(51) *daŋaðan Sipun qabas*  
\textit{daŋað-an} \hspace{1cm} Sipun \hspace{1cm} \textit{qabas}  
help-LF \hspace{1cm} Japanese \hspace{1cm} in.former.times  
‘In those days, the Japanese helped in that place.’ (TVN-012-002:46)
Grammatical restrictions

Takivatan:

(48) Laupaŋʔak taldanavin
    laupa-anŋʔak
    a.moment.ago-PROG-1S.TOP
    ‘I just finished washing.’ (TVN-xxx-xx1:166)

(51) daŋaðan 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)
(Sub-)lexical restrictions

- Time words are not evenly distributed across positional options
- Variation between time words
- Variation between different forms of the same time word
- There is no clear semantic motivation for this variation
Positions
1. PTM slot
2. Pre-verbal with linker -a
3. Pre-verbal without linker
4. Between AUX and main verb
5. After the main verb
6. First or only AUX without complementiser *tu*
7. AUX with complementiser *tu*
8. Main verb
9. Directional or locative derivation
10. Discourse marker
11. Attribute of an NP
12. Head of an NP
Interpersonal variation

- Selection of particular time words is strongly influenced by individual preferences
- This skewing does not appear to have an influence on positional variation
Interpersonal variation

![Bar chart showing occurrences per minute for Uli, Vau, and Tulbus with different colors for tudip, dip, qabas, laupaku, and laupa.](image-url)
Explanations

What is the reason / cause of this positional and grammatical variation?

1. Structural explanations
   - Scope (~ quantifier scope)
     - Not really clear how this would work for time words
   - Iconicity (syntactic distance indicates conceptual distance)
     - 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
     - Again, not clear how this would make sense
Explanations

2. Cognitive-functional explanations

- The notion of temporal setting is inherently ambiguous in language
  - No real evidence
  - Does not explain why Takivatan is different from English
- Different positions reflect differences in information structure
  - Clause-initial position → verb-like → encodes a relationship
  - Clause-final position → noun-like → encodes a referent
  - Position as an indicator of the importance of the temporal setting to the development of the event
Explanations

3. Historical-typological explanations

- Temporal expressions are cross-linguistically ambiguous
  - Variable position of time adverbials in other languages
  - But what does this explain? (Symptom rather than explanation)
- A result of word class ambiguity in Austronesian languages
  - The word class of many lexical roots and stems depends on the syntactic environment in which they occur
  - Words that do not typically function as the semantic head of the predicate or core arguments are more likely to have a variable word class (and therefore position)
Thank you very much for your attention