Some problems with transitivity in Takivatan Bunun (and possibly other languages)

Rik De Busser
rdbusser@gmail.com

Takivatan is one of the five dialects of Bunun, an Austronesian language spoken in Taiwan. Like many Austronesian languages of Taiwan and the northern Philippines, it has rather peculiar argument alignment system, often referred to as a focus system or a Philippine-style voice system. This typically means that these languages have a more-than-binary alternation between alignment options, indicated by cross-referencing morphology on the verb and distinguishing between agent, undergoer, location, and sometimes circumstantial ‘voices’. This poses a challenge to traditional views on transitivity and valency.

In this talk, I will give an overview of the morphological and syntactic mechanisms that influence argument expression and argument implication in Takivatan Bunun. I will argue that the interactions that exist between these mechanisms make it difficult to define Takivatan argument alignment in terms of traditional concepts of valency and transitivity. Finally, I will suggest a possible solution for this problem that builds on a modular and prototypical analysis.

1. Introduction

General research background

- Descriptive linguistic approach
- Based on real-world text data from fieldwork (± 1 year)
- ‘Basic linguistic theory’ (see Dryer 2006, Dixon 2009)
  - Low-level grammatical descriptions
  - As ‘theory-neutral’ as possible
  - Typically bottom-up

Takivatan Bunun

- Austronesian, Taiwan
- One of the five Bunun dialects:
  - Southern: Isbukun
  - Central: Takivatan, Takbanuaz
  - Northern: Takibakha, Taktuduh
- Bunun: ± 50,000 ethnic members
- Takivatan: ± 1600 ethnic member
- All Bunun dialects are endangered
Some problems with transitivity in Takivatan Bunun

Typological characteristics

- Verb-initial (~VAO)
- Agglutinative, predominantly head-marking
- Extremely rich verbal morphology (+200 affixes and counting)
- Open word classes: nouns, verbs, adjectives
- No adverbs, ‘adverbial’ concepts encoded as auxiliary verbs

Some definitions

Transitivity

The number of core arguments that are required by the verb.

Argument alignment

The morphological and syntactic mechanisms that influence the expression and semantic implication of core arguments in the predicate-argument complex

- Argument realization
- Argument implication

Philippine-style argument alignment

- ‘Focus system’ or ‘Philippine-style voice/alignment system’ (PAS)
- Austronesian focus ≠ pragmatic focus
- Complex cross-referencing morphology on the verb
- In many languages also nominal marking
- Typically minimal distinction between agent focus, undergoer focus and locative focus, sometimes circumstantial foci
Reconstructed back to proto-Austronesian (see Ross 2009)

<table>
<thead>
<tr>
<th>Actor</th>
<th>Patient</th>
<th>Location</th>
<th>Circumstance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Realis</td>
<td>*M-STEM</td>
<td>*STEM-ən</td>
<td>*STEM-an</td>
</tr>
<tr>
<td>Realis perfective</td>
<td>*M-&lt;in&gt;-STEM</td>
<td>*&lt;in&gt;-STEM</td>
<td>*&lt;in&gt;-STEM-an</td>
</tr>
<tr>
<td>Irrealis</td>
<td>CA-STEM</td>
<td>CA-STEM-ən</td>
<td>CA-STEM-an</td>
</tr>
</tbody>
</table>

Examples from Paiwan (Ross 2002)

(1)  təm>kəl a qala
     <AF>-drink SPEC stranger
     ‘The stranger will drink (something).’

(2)  təkəl-ən a vaua
     drink-PF SPEC wine
     ‘(S)he will drink the wine.’

(3)  təkəl-an a kakasan
     dink-LF SPEC kitchen
     ‘(S)he will drink (the wine) in the kitchen.’

(4)  si-təkəl a kupa
     CF-drink SPEC cup
     ‘(S)he will drink it from a cup.’

Some problems with PAS

- How many different PASs are there?
- Paradigm with prefixes, infixes and suffixes
- Cross-references arguments that in other languages would be oblique (location, beneficiary, instrument, …)
- Does not easily correspond to NOM/ACC or ABS/ERG alignment patterns
- Voice or no voice?

2. Argument alignment in Takivatan

Modular approach:

If a system is to complex to analyse it in its entirety, break it apart in manageable subsystems (‘modules’).

Argument alignment modules in TVN:

- Focus suffixes: AF -Ø, UF -un, LF -an
- Participant orientation prefixes
- Argument order
- Pronouns
- Complexity restrictions
3. Core Arguments

- Agents
- Undergoers:
  - Patients
  - Instruments
  - Beneficiaries
  - Resultative objects
- Locative arguments

- Peripheral arguments: place, time, manner

Criteria

1. Core arguments fall under the scope of focus suffixes
2. Core arguments that are targeted by a focus suffix can be left-dislocated with the topicalizer a
3. There is no case distinction between different core arguments when they are not target by verbal morphology; they all appear in the neutral form.
4. Cross-referenced free personal agent pronouns distinguish two forms: F for agents and the neutral form in all other cases. If this was evidence for identifying core arguments, all undergoer arguments, including patients, would be non-core.
5. Peripheral arguments are typically clause-final and occur after all core arguments.
6. Peripheral arguments can be realised as NPs or PPs; the latter historically derive from SVCs. Core arguments can only be noun phrases.
7. Some peripheral arguments can be expressed preverbally as an auxiliary construction; this is impossible for all core arguments.
8. The unmarked argument order is
   V<AG<INSTR<BEN<PAT<LO
   If instruments and beneficiaries were non-core, one has to explain why they occur before patients.
9. Locative arguments can occur in immediate post-verbal position, unlike peripheral place arguments.

Problems with transitivity

- Beneficiaries, Instruments, and Locations are core arguments
- Potential for hepta- and hexatransitive constructions
- Does not correspond to traditional distinction between core and periphery, but makes most sense syntactically

4. Focus suffixes

- Topicalize a functional role
- Three focus types:
  - Agent focus (AF): -Ø
  - Undergoer focus (UF): -un
  - Locative focus (LF): -an
Note: Other analyses typically incorporate prefixes and infixes in the focus system

(5) Siða malñaajusta maduqta.
    siða [malñaaju-s-ta]AG [maduq-ta]UN
    Take-AF shaman-DEF.REF.DIST millet-DEF.REF.DIST
    ‘The shaman took millet.’ (adapted from TVN-012-001:69)

(6) Siðaʔun asik.
    siða-un [asik]UN
    take-UF shrub
    ‘[They] gathered the shrubs.’ (adapted from TVN-012-001:24)

(7) Maqtu pasiðaʔanin ńabul, vanis.
    maqtu pa-siða-an-in [ńabul vanis]UN
    can CAUS.DYN-take-LF-PRV antler wild.boar
    ‘We can catch deer and wild boar.’ (TVN-008-002:47)

**Domain of use**

- Alternation of three suffixes is most common on dynamic verbs expressing transitive-like concepts
- But can occur on almost any verb types (with the exception of LF on locative/directional verbs)
- In those cases, UF tends to have causative-like semantics
- Examples with adjectives:

(8) Maqai masihal titiʔa, sihalun aipi sia binanauʔað
    maqai ma-sihal [titi-a]AG
    if STAT-good meat-SUBORD
    sihal-un [aipi]AG [sia binanauʔað]UN:BEN
    good-UF DEM.S.PROX ANAPH wife
    ‘If the meat was good, he could store it [this one] well for his wife.’
    (TVN-012-001:52)

(9) Masihalan dalaquna
    ma-sihal-an [dalaq-un-a]LO
    STAT-good-LF land-EMPH-LNK
    ‘The land there was good.’ (TVN-012-002:167)

- Examples with locative/directional verbs:

(10) Hanun aip minpantu.
    han-un [aip]AG min-pantu
    go-UF DEMS.VIS BECOME-student
    ‘She [lit: that one] was sent there to become a student’ (TVN-012-002:119)
Some problems with transitivity in Takivatan Bunun

Problems with transitivity
- Problems with transitivity:
  - Tripartite distinction
  - Almost all focus types can occur on all verbs, albeit with a different semantic result
  - Are they voice? That would imply that:
    - Dynamic events are typically ditransitive, since they can occur in AF, UF and LF
    - Stative events are transitive or ditransitive, since they can occur in AF, LF and (less commonly) UF
    - Locative events have the potential to be transitive, since they can occur in AF and UF

5. Participant orientation prefixes
- Topicalize a functional role by raising it to agent position
- Prefixes:
  - Instrument orient. (INSTR): is-
  - Beneficiary orient. (BEN): ki-
  - Resultative object orient. (RES.OBJ): sin-
- Examples:

(11) Istamasaðan, udinunan
    is-tamasað-an [udinun-an]LO
    INSTR-strong-LF gather-LF
    ‘We were very fervent at the [prayer] gathering.’ (TVN-008-002:221)

(12) Ukinʔak tilasa, na kisaivʔak su tilas.
    uka-in[-ʔak] [tilas-a]
    NEG.have-PRV-1S.F cereal-SUBORD
    na ki-sai[v-ʔak]UN:BEN [su]AG [tilas]UN:PAT
    BEN-give-1S.F 2S.N cereal
    ‘I don’t have rice anymore, you give me rice!’ (TVN-xx2-003:46)

(13) Haiða mu madia sinsuað hutan?
    {haiða}AUX [mu]AG {madia}AUX {sin-suað} [hutan]UN:PAT
    have 2P.N many RES.OBJ-grow yam
    ‘Did you (pl.) manage to grow many yams?’ (TVN-xx2-003:33)

Participant orientation vs. focus
- Functionally similar to focus suffixes
- Syntactically different:
  - Can co-occur with focus (see ex. 8)
  - Whereas focus only changes pronominal case, PO prefixes also ‘promote’ the functional role under their scope to agent position.
(14) Masaïvʔak su tilas.
{ma-saiv}[ʔak]AG [su]UN:BEN [tilas]UN:PAT
DYN-give-1S.F 2S.N cereal
‘I give you rice.’ (constr.)

(15) Ukin ?ak tilasa, na kisaïvʔak su tilas.
{uka-in}[ʔak] [tilas-a]
NEG.have-PRV-1S.F cereal-SUBORD
na  {ki-saiv}[ʔak]UN:BEN [su]AG [tilas]UN:PAT
IRR BEN-give-1S.F 2S.N cereal
‘I don’t have rice anymore, you give me rice!’ (TVN-xx2-003:46)

Problems with transitivity

- Problems with transitivity:
  - Applicatives? Not really, because:
    - No promotion from periphery to core
    - No demotion of agent to periphery
    - Number of core arguments does not change
  - With focus suffixes part of a voice system? Then you could get hepta- or hexavalent constructions…

6. Pronouns

<table>
<thead>
<tr>
<th>Bound</th>
<th>Focused</th>
<th>Non-foc. Ag</th>
<th>Neutral</th>
<th>Free</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>F</td>
<td>NFA</td>
<td></td>
<td>F</td>
</tr>
<tr>
<td>1S</td>
<td>-(?ak)</td>
<td>-(?)uk</td>
<td>δaku, nak</td>
<td>sak, saikin</td>
</tr>
<tr>
<td>2S</td>
<td>-(?as)</td>
<td>—</td>
<td>suʔu, su</td>
<td>—</td>
</tr>
<tr>
<td>3S</td>
<td>-(?)is</td>
<td>—</td>
<td>PROX isti</td>
<td>MED istun</td>
</tr>
<tr>
<td>1T</td>
<td>—</td>
<td>—</td>
<td>mita</td>
<td>?ata, inʔata</td>
</tr>
<tr>
<td>1E</td>
<td>-(?am)</td>
<td>—</td>
<td>δami, nam</td>
<td>δamu, sam</td>
</tr>
<tr>
<td>2P</td>
<td>-(?)am</td>
<td>—</td>
<td>muʔu, mu</td>
<td>amu</td>
</tr>
<tr>
<td>3P</td>
<td>—</td>
<td>—</td>
<td>PROX inti</td>
<td>MED intun</td>
</tr>
</tbody>
</table>

Free forms distinguish between

- Focused agent form:
  - Agents in focus position
Some problems with transitivity in Takivatan Bunun

(16) miliskin sak tu nitu mataiklas
miliskin [sak]_{AG} tu ni-tu ma-tai̱klas
think 1S.F COMPL NEG-COMPL STAT-intelligent
‘I believe that I am not very intelligent.’ (TVN-012-002:1)

- Neutral form:
  - Agents when not in focus (i.e. in UF and LF)
  - Undergoers in focus position
  - Undergoers when not in focus
  - All left-dislocated elements whether in focus or not
  - Post-nominal possession

(17) Mindaidað aipun ðaku.
min-daidað [aipun]_{AG} [ðaku]_{UN:PAT}
BECOME-love DEM.S.MED 1S.N
‘She must not love me.’ (TVN-xx2-007:48)

(18) Ma, tupaun ðaku tu […]
ma tupa-un [ðaku]_{UN:PAT} tu
INTERR tell-UF 1S.N COMPL
‘Well, I was told: [Come with us.]’ (TVN-008-002:71)

(19) Tuquluʔun ðaku qaimaŋsuð
tuqlu-un [ðaku]_{AG} [qaimaŋsuð]_{UN:PAT}
cover-UF 1S.N thing
‘I cover the thing’

Bound forms distinguish between

- Bound forms:
  - Mark focused forms (typically agents, but sometimes undergoers)
  - -uk marks non-focused agents in UF constructions.

(20) maqunʔak ismut
maqun[-ʔak]_{AG} [ismut]_{UN:PAT}
cut-1S.F grass
‘I cut off the grass’ (TVN-012-002:8)

(21) Kinalatunʔak asu.
k〈in〉alat-un[-ʔak]_{UN:PAT} [asu]_{AG}
〈PST〉-bite-UF-1S.F dog
‘I have been bitten by a dog.’ (TVN-xx2-005:73)

Problems with transitivity

- Free and bound pronouns have different splits:
  - Free: focused agent vs. everything else
Bound: everything focused vs. non-focused agent
- Neither corresponds to traditional NOM/ACC or ERG/ABS alignment splits
- … and neither to the distinctions made by suffixes and prefixes

7. **Argument order and complexity restrictions**

AG < INSTR < BEN < PAT < LO < PERIPHERAL

- But…
- It is rare to express more than one free argument on a single verb
- It is impossible to express more than three arguments on a verb. This is possible when:
  - There is no ambiguity about the functional role of each participant
  - Arguments are not too bulky; typically only one-word arguments are allowed
  - More likely when the first element is a (bound) pronoun

- Rare example of a three-argument construction with three free arguments:

(22) naʔiskalatun ðaku tuqnaði asu.

IRR-INSTR-bite-UF 1 S.N bone-PRT dog
‘I want to give the bone to a dog to bite it.’ (TVN-xx2-005:65)

- Solution to the complexity problem: auxiliaries and SVCs

(23) * pasimulʔas ðaku qaimaŋsuð?

pa-simul [-ʔas] AG [ðaku] UN:BEN [qaimaŋsuð] UN:PAT
CAUS.DYN-borrow-2S.F 1 S.N thing
‘Can you borrow me the thing?’ (TVN-xx2:004:5)

(24) maqtuʔas pasimul ðaku qaimaŋsuð?

maqtu [-ʔas] AG pa-simul [ðaku] UN:BEN [qaimaŋsuð] UN:PAT
can-2S.F CAUS.DYN-borrow 1 S.N thing
‘Can you borrow me the thing?’ (TVN-xx2:004:4)

(25) maqtuʔas pasimul qaimaŋsuð isaiv ðaku?

maqtu [-ʔas] AG pa-simul [qaimaŋsuð] UN:PAT
can-2S.F CAUS.DYN-borrow thing
i-saiv [ðaku] UN:BEN
AFF-give 1 S.N
‘Can you borrow me the thing?’ (TVN-xx2:004:5)

**Problems with transitivity**

- It is not clear how these hard limits on the number of arguments in a clause influence (a) the valency of a verb and (b) the ‘inherent’ transitivity of a construction.
Some problems with transitivity in Takivatan Bunun

- Possibility to cross-reference arguments on the verb **cannot** be expressed

(26) *ispaluʔluʔak viaʔi bunun.
    is-pa-luʔ[ʔ-ak]AG [via-i]UN:INSTR [bunun]UN:PAT
    INSTR-CAUS.DYN-wound-1S.F knife-PRT people

(27) ispaluʔluʔak bunun.
    is-pa-luʔ[ʔ-ak]AG [bunun]UN:PAT
    INSTR-CAUS.DYN-wound-1S.F people
    ‘I use this knife to wound a person.’ (TVN-xx2-008:40)

(28) ispaluʔluʔ viaʔi bunun.
    is-pa-luʔ[ʔ]AG [via-i]UN:INSTR [bunun]UN:PAT
    INSTR-CAUS.DYN-wound knife-PRT people
    ‘I use this knife to wound a person.’ (TVN-xx2-008:40)

8. **So, what about transitivity?**

- Each of the argument alignment modules pose problems
- Interactions between modules are complex (e.g. pronouns vs. focus suffixes vs. prefixes)
- None seem to fit into a traditional concept of transitivity (intrans./trans./ditrans. Opposition)
- None seem to fit into a NOM/ACC or a ERG/ABS alignment
- On the other hand, there are clearly restrictions on which arguments can be expressed, also in the lexicon.

(29) ma-sihalʔak
    STAT-good-1S.F
    ‘I am good’

(30) *ma-sihalʔak suʔu
    STAT-good-1S.F 2S.N

9. **Modularity again**

- Modularity is not just an analytical choice, it is a solution
- Transitivity as an epiphenomenon
- Fits in with a prototypical approach to transitivity (Hopper & Thompson 1980; Næss 2009)
- But that is for next time…

10. **Bibliography**

De Busser, Rik. 2009. *Towards a Grammar of Takivatan: Selected Topics*. PhD dissertation at the Research Centre for Linguistic Typology, La Trobe University, Melbourne, Australia.


