Some problems with transitivity in Takivatan Bunun

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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, Takituduh
• Bunun: ± 50,000 ethnic members
• Takivatan: ± 1600 ethnic members
• All Bunun dialects are endangered
Concentration of Bunun inhabitants

- high
- moderate
- low
- incidental

Map of Hualien County, Taiwan

- Hualien City
- Nantou County
- Taipei City

Key locations:
- Ma-Yuan
- Qi-Mei
- Hualien
Takivatan Bunun

- 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
- Ellipsis of arguments and even affixes
Transitivity

• Transitivity:
  The number of core arguments that are required by the verb in a clause.

• 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

- Western-Austronesian languages of Taiwan, Philippines and some parts of Indonesia
- ‘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
Philippine-style argument alignment

- Typically minimal distinction between agent focus, undergoer focus and locative focus, sometimes circumstantial foci
- Reconstructed back to proto-Austronesian

<table>
<thead>
<tr>
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<th>Actor</th>
<th>Patient</th>
<th>Location</th>
<th>Circumstance</th>
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<tbody>
<tr>
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<td>*STEM-ən</td>
<td>*STEM-an</td>
<td>*Sa/Si-STEM</td>
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<td>CA-STEM</td>
<td>CA-STEM-ən</td>
<td>CA-STEM-an</td>
<td>*Sa/Si-CA-STEM</td>
</tr>
</tbody>
</table>

Ross (2009)
Philippine-style argument alignment

- Paiwan (Ross 2002)

(1) \(t<\text{əm}>kəl\quad a\quad qala\)
<AF>-drink SPEC stranger
‘The stranger will drink (something).’

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

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

(4) \(sì-təkəl\quad a\quad kupa\)
CF-drink SPEC cup
‘(S)he will drink it from a cup.’
Philippine-style argument alignment

- 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?
Argument alignment in Takivatan

- **Modular approach:**
  If a system is too complex to analyse in its entirety, break it apart in coherent and manageable subsystems (‘modules’).

- **Argument alignment modules in TVN:**
  - Focus suffixes
  - Participant orientation prefixes
  - Argument order
  - Pronouns
  - Complexity restrictions
Core arguments

• Agents
• Undergoers:
  – Patients
  – Instruments
  – Beneficiaries
  – Resultative objects
• Locative arguments

Periphral arguments: place, time, manner
Core arguments

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.
Core arguments

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.
Core 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
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 malŋaŋjausta maduqta.

siða [malŋaŋjaus-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 ŋabul, vanis.

maqtu pa-siða-an-in [ŋabul vanis]UN
can CAUS.DYN-take-_LF-PRV_ antler wild.boar

‘We can [in that place] catch deer and wild boar.’ (TVN-008-002:47)
Focus suffixes

- 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 \(-an\) on locative/directional verbs)
- In these cases, UF \(-un\) tends to have causative-like semantics
Focus suffixes

- Adjectives:

(8) Maqai masihal titiʔa, sihalun aipi sia binanauʔað
maqai ma-sihal [titi-ʔa]$_{AG}$
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)
Focus suffixes

• Locative/directional verbs:

(10) Hanun aip minpantu.

$\text{han-un}$ $\text{[aip]}_{\text{AG}}$ $\text{min-pantu}$

$\text{go-UF}$ $\text{DEM.S.VIS}$ $\text{BECOME-student}$

‘She [lit: that one] was sent there to become a student’ (TVN-012-002:119)
Focus suffixes

• 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
Participant orientation

- 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-*
Participant orientation

(11) Istamasàdan, udinunan
  is-tamasað-an [udinun-an] \textsubscript{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-saiv[-ʔak] \textsubscript{UN:BEN} [su] \textsubscript{AG} [tilas] \textsubscript{UN:PAT}
  IRR 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\} \textsubscript{AUX} [mu] \textsubscript{AG} \{madia\} \textsubscript{AUX} \{sin-suað\} [hutan] \textsubscript{UN:PAT}
  have 2P.N many RES.OBJ-grow yam
  ‘Did you (pl.) manage to grow many yams?’ (TVN-xx2-003:33)
Participant orientation

- 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.
Participant orientation

(14) Masaivʔak 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) Ukinʔak tilasa, na kisaivʔak 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)
Participant orientation

- 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…
# Pronouns

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<tr>
<th></th>
<th>Bound</th>
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<td>-(?)&lt;u&gt;k</td>
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<td>sak, saikin</td>
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</table>
Pronouns

- Free forms distinguish:
  - Focused agent form:
    - Agents in focus position

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

– 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
Pronouns

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

(18) Ma, tupaun ḍaku tu […]
ma tupa-un ḍaku$_{UN:PAT}$ tu
INTERR tell-UF 1$_{S.N}$ COMPL
‘Uli gave me a call’ (TVN-008-002:71)

(19) Tuqluʔun ḍaku qaimaŋsuð
tuqlu-un ḍaku$_{AG}$ qaimaŋsuð$_{UN:PAT}$
cover-UF 1$_{S.N}$ thing
‘I cover the thing’
Pronouns

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

(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)
Pronouns

• 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
Argument order

AG < INSTR < BEN < PAT < LO < PERIPHERAL

• But...
Complexity restrictions

- 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. Three arguments are 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.
Complexity restrictions

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

(22) naʔiskalatun ðaku tuqnaði asu.
  na-is-kalat-un  [ðaku]_{AG}  [tuqnað-i]_{UN:INSTR}  [asu]_{UN:BEN}
  IRR-INSTR-bite-UF  1S.N  bone-PRT  dog

‘I want to give the bone to a dog to bite it.’ (TVN-xx2-005:65)
Complexity restrictions

- Solution to the complexity problem: auxiliaries and SVCs

(23) * pasimulʔas ʔaku qaimaŋsuð?

pa-simul[-ʔas]_{AG}  [ʔaku]_{UN:BEN}  [qaimaŋsuð]_{UN:PAT}
CAUS.DYN-borrow-2S.F  1S.N  thing

‘Can you borrow me the thing?’ (TVN-xx2:004:5)
Complexity restrictions

(24) maqtuʔas pasimul ʔðaku qaimaŋsuð?

maqtu[-ʔas]AG pa-simul [ðaku]UN:BEN [qaimaŋsuð]UN:PAT

can-2S.F CAUS.DYN-borrow 1S.N thing

‘Can you borrow me the thing?’ (TVN-xx2:004:4)

(25) maqtuʔas pasimul qaimaŋsuð isaiv ʔðaku?

maqtu[-ʔas]AG pa-simul [qaimaŋsuð]UN:PAT

can-2S.F CAUS.DYN-borrow thing

i-saiv [ðaku]UN:BEN

AFF-give 1S.N

‘Can you borrow me the thing?’ (TVN-xx2:004:5)
Complexity restrictions

• 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.
  – Possibility to cross-reference arguments on the verb that cannot be expressed
Complexity restrictions

(26) *ispalu?luʔak viaʔi bunun.

\begin{align*}
\text{is-pa-luʔlu?[-ʔak]}_{AG} & \quad [\text{via-i}]_{UN:INSTR} \quad [\text{bunun}]_{UN:PAT} \\
\text{INSTR-CAUS.DYN-wound-1S.F} & \quad \text{knife-PRT} \quad \text{people}
\end{align*}

(27) ispaluʔluʔak bunun.

\begin{align*}
\text{is-pa-luʔlu?[-ʔak]}_{AG} & \quad [\text{bunun}]_{UN:PAT} \\
\text{INSTR-CAUS.DYN-wound-1S.F} & \quad \text{people}
\end{align*}

‘I use this knife to wound a person.’ (TVN-xx2-008:40)

(28) ispaluʔluʔ viaʔi bunun.

\begin{align*}
\text{is-pa-luʔluʔ} & \quad [\text{via-i}]_{UN:INSTR} \quad [\text{bunun}]_{UN:PAT} \\
\text{INSTR-CAUS.DYN-wound} & \quad \text{knife-PRT} \quad \text{people}
\end{align*}

‘I use this knife to wound a person.’ (TVN-xx2-008:40)
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./ditransitive opposition).
- None seem to fit into a NOM/ACC or a ERG/ABS alignment.
So, what about transitivity?

• On the other hand, there are clearly restrictions on which arguments can be expressed, also in the lexicon.

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

(30) *ma-sihaʔ-ak suʔu
    STAT-good-1S.F 2S.N
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…
Thank you for your attention!
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.


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Appendix I: Examples of focus systems

• Paiwan (Ross 2002)

(1) $t_{<\omega m>}k\emptyset l$ a qala
    $<$AF$>$-drink SPEC stranger
    ‘The stranger will drink (something).’ (Paiwan)

(2) $t\emptyset k\emptyset l-\emptyset n$ a vaua
    drink-PF SPEC wine
    ‘(S)he will drink the wine.’ (Paiwan)

(3) $t\emptyset k\emptyset l-an$ a kak\emptyset san
    drink-LF SPEC kitchen
    ‘(S)he will drink (the wine) in the kitchen.’ (Paiwan)

(4) $s\emptyset -t\emptyset k\emptyset l$ a kupa
    CF-drink SPEC cup
    ‘(S)he will drink it from a cup.’ (Paiwan)
Appendix II: Too-many-arguments problem: exotic solution

• Verbalization of pronouns

(38) Manak qaimaŋsuðìa, sinsaiv aipi bunun.

ma-nak [qaimaŋsuð-ìa]
STAT-1S.N thing-DEF.REF.PROX-SUBORD
sin-saiv [aipi]UN:PAT [bunun]AG
RES.OBJ-give DEM.S.PROX people
‘My thing here, other people have given it to me.’ (TVN-xx2-003:42)
Appendix III: Interpretation of one-argument constructions

(32) ludaqun bunun
   ludaq-un [bunun]_{AG}
   beat-UF people
   ‘You are beaten by some person’ (never: ‘some person is beaten’) (TVN-xx2-001:139)

(33) Tuqluʔun qaimaŋsuð
   tuqlu-un [qaimaŋsuð]_{UN}
   cover-UF thing
   ‘The thing/object is/has been covered.’ (not: ‘something was covered by the object’) (TVN-xx2-001:159)