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To cite this version:
Neige Rochant, Hélène Gérardin. Alignment in the Andic Languages: Towards a Definition of Transitivity in Zilo Andi. Syntax of the World’s Languages VIII, LLACAN, Sep 2018, Paris, France. hal-03876565

HAL Id: hal-03876565
https://hal.science/hal-03876565
Submitted on 28 Nov 2022

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Alignment in the Andic Languages:
Towards a Definition of Transitivity in Zilo Andi

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0. Introduction

0.1. Perilinguistic data

- Russian Federation > Republic of Dagestan (Caucasus) > Botlikh district
- Nakh-Dagestanian (East-Caucasian) > Dagestanian > Avar-Andic-Tsezic > Andic (8-10 languages) > Andi (~ 9 dialects) > Zilo dialect
- ~ 20,000 Andi speakers — trilingual in Avar and Russian — threatened language (Simons & Fennig 2018)

0.2. Overview of morphosyntax

- Ergative/P- alignment (c.f. Creissels 2014)
- Syntactic roles indicated through case marking and, in many verbs, agreement in gender-number (only with nominative argument)
- Intransitive construction: \( V[S_{\text{NOM}}] \)
  
  \begin{align*}
  (1) & \quad \chi\text{adjizati} & \quad j-\text{uk:-u} \\
  & \quad \text{Khadizhat[F][NOM]} & \quad \text{F-fall-AOR} \\
  & \quad \text{`Khadizhat fell down.'} \\
  
  (2) & \quad q\chi``\text{urban-di} & \quad \chi``\text{ammi} & \quad b-\text{ittf:-ij} \\
  & \quad \text{Qurban-ERG} & \quad \text{fish[AN][NOM]} & \quad \text{AN-catch-PF} \\
  & \quad \text{`Qurban caught a fish.'}
  \end{align*}

- Any argument retrievable by context is omissible
- No overt valency-decreasing derivation
- Productive synthetic causative (ex. 3)
(3) a. *kasar*  
   *ts’at-o.*  
   paper[INAN2][NOM] burn-AOR  
   ‘The paper burnt.’

b. *den-ni* *kasar*  
   *ts’at-ol-i*  
   I-ERG paper[INAN2][NOM] burn-CAUS-AOR  
   ‘I burnt the paper.’

- 2 equipollent denominal derivations: inchoative (ex. 4a) vs. factitive (ex. 4b)

(4) a. *fiw*  
   *ts’ik’u-t-ij.*  
   milk[INAN2][NOM] sour-INCH-PF  
   ‘The milk turned sour.’

b. *milir-di* *fiw*  
   *ts’ik’u-jd-ij.*  
   sun-ERG milk[INAN2][NOM] sour-FCT-PF  
   ‘The sun soured the milk.’

0.3. Methodology and data

**AIMS:**
- Draw map of Zilo bivalent verbs
- Analyze Zilo data within framework of transitivity
- Propose interpretation of data more relevant than common theory on lability, as recommended by Creissels (2014)
- Show how Zilo data can contribute to better understanding of transitivity cross-linguistically
- Present hitherto unknown data from one of the least described branches of the Dagestanian languages

**METHOD:** builds on Gérardin (2016) for Georgian (non-related Caucasian language):
- Rigorously separate levels of linguistic study (morphology, syntax, semantics and pragmatics)
- Record all primary verbs and submit them to different types of tests in order to determine their relation to the transitive prototype (ex. 2) (cf. Næss 2007; Hopper & Thompson 1980)
- Establish transitivity scale

**DATA:** all from personal fieldwork (Apr/Aug 2017-Aug 2018)¹

¹ We thank dearly all our native Zilo-speakers consultants, especially A. M. Magomedov’s family.
1. **1st transitivity test: compatibility with** $A_{ERG}$

- **Purpose:** determine degree of transitivity of verb based on its compatibility with an $A_{ERG}$ in underived form
- **Material:** Database of 318 verbs elicited from Russian to Andi with one basic sample sentence
- **Process:** check possibility for each verb to be used with & without an $A_{ERG}$ in underived form
  
  - Sample construction $V[S_{NOM}] \ominus A_{ERG} = OK$ or * ?
  - Sample construction $V[P_{NOM}, A_{ERG}] \ominus A_{ERG} = OK$ or * ?

**Examples:**

(5) a. $k’epi$ \( \rightarrow \) $r-uk:-u$.  
   jug[INAN2][NOM] INAN2-fall-AOR
   ‘The jug fell down.’

b. *$pat’imati-di$ $k’epi$ \( \rightarrow \) $r-uk:-u$.  
   Patimat-ERG jug[INAN2][NOM] INAN2-fall-AOR
   # ‘Patimat dropped the jug.’

c. $ok$ *$Pat’imati-di$ $k’epi$ \( \rightarrow \) $r-uk:-ol-i$.  
   Patimat-ERG jug[INAN2][NOM] INAN2-fall-CAUS-AOR
   ‘Patimat dropped the jug.’

(6) a. $den-ni$ \( \rightarrow \) $ingur$ $ar\chi$-on.  
   I-ERG window[INAN1][NOM] open-AOR
   ‘I opened the window.’

b. $ok$ *$ingur$ \( \rightarrow \) $ar\chi$-on.  
   window[INAN1][NOM] open-AOR
   ‘The window was opened.’ / ‘The window opened.’

**Conclusions:**

1) The test results in division of verb database into two categories: $A_{ERG}$-compatible and $A_{ERG}$-incompatible

i) $A_{ERG}$-incompatible:

(a) inchoative denominals (suffix -ɬ), e.g.:


(b) 144 non-derived verbs, e.g.:

$bahan$ ‘unravel’; $ab\chio$ ‘lie’; $abaxo$ ‘swell’; $adal\chiu$ ‘go crazy’; $CL-u\chili$ ‘end/become’; $g\’ansun$ ‘light up’; $hebtjun$ ‘sneeze’; $helli$ ‘run’; $kabi$ ‘enter’; $kolli$ ‘float, swim’; $kulikun$ ‘itch/tickle’; $q\chi’ixon$ ‘fall asleep’;
ii) \( A_{\text{ERG}} \)-compatible: 127 verbs.

2) All \( A_{\text{ERG}} \)-compatible verbs allow use without \( A_{\text{ERG}} \), however:

(a) Some of them seem to allow \( A \) construction ONLY with passive reading (ex. 7)

(b) Some others seem to allow \( A \) construction with BOTH passive and anticausative readings (ex. 6)

\[
\begin{align*}
\text{(7) a. } & \text{den-ni } josi \quad q\chiamm-i. \\
& I-\text{ERG girl}[F][\text{NOM}] \text{ capture-AOR} \\
& \text{‘I captured the girl.’}
\end{align*}
\]

\[
\begin{align*}
\text{b. } & \emptyset \quad josi \quad q\chiamm-i. \\
& A_\emptyset \text{ girl}[F][\text{NOM}] \text{ capture-AOR} \\
& \text{‘The girl was captured.’} \quad (\# \text{‘The girl captured.’})
\end{align*}
\]

- Verbs of type ‘capture’ considered to be higher than verbs of type ‘close’ on transitivity scale, but clear distinction between the two groups requires further testing

\[
\Rightarrow \text{ Test 1 distinguishes category of } A_{\text{ERG}} \text{ incompatible verbs (left) and } A_{\text{ERG}} \text{ compatible verbs}
\]

<p>| Table 1: Test of compatibility with ( A_{\text{ERG}} ) |
|---------------------------------|---------------------------------|</p>
<table>
<thead>
<tr>
<th>1) +/- ( A_{\text{ERG}} ) test</th>
<th>( A_{\text{ERG}} ) licenced only by causative marker</th>
</tr>
</thead>
<tbody>
<tr>
<td>( A_{\emptyset} ) licenced with both PASS &amp; ANTICAUS reading (b)</td>
<td></td>
</tr>
<tr>
<td>( A_{\emptyset} ) licenced only with PASS reading (a)</td>
<td></td>
</tr>
<tr>
<td>bat‘ali ‘separate’</td>
<td>CL-itfon ‘bring’</td>
</tr>
<tr>
<td>tfurukiti ‘get soiled’, ts’ik’uli ‘sour’, etc.</td>
<td>ummi ‘push’</td>
</tr>
<tr>
<td>CL-uku ‘fall’</td>
<td>CL-iq’u ‘slaughter’</td>
</tr>
<tr>
<td>CL-edon ‘talk’</td>
<td>CL-itfii ‘catch’</td>
</tr>
<tr>
<td>CL-uts’o ‘melt’</td>
<td>arxon ‘open’</td>
</tr>
<tr>
<td>kimmi ‘smile’</td>
<td>CL-it’i-jd-i ‘straighten’</td>
</tr>
<tr>
<td>turi ‘break down’, etc.</td>
<td>bari-jd-i ‘sharpen’</td>
</tr>
<tr>
<td>( \emptyset ) transitive</td>
<td>tfuruki-jd-i ‘stain’, etc.</td>
</tr>
</tbody>
</table>

H. Gérardin & N. Rochant  
Syntax of the World’s Languages (SWL8)  
3–5 Sep. 2018
2. 2\textsuperscript{nd} transitivity test: identification of the syntactic role of the reflexive-intensive pronoun

- **Source:** Kibrik (1996: 111) & Ljutikova (2001: 380)
- **Material:** all verbs diagnosed as A\textsubscript{ERG}-compatible by the first test
- **Purpose:** discriminate between A\textsubscript{ERG}-compatible verbs able to be used without A\textsubscript{ERG} only with passive interpretation and those for which the absence of A\textsubscript{ERG} can trigger both passive and anticausative readings
- **Background:** Andi pronoun ʒi-CL=gu focalizes any argument, taking its case. Its nominative form can be used to focalize either S (ex. 8) or P (ex. 9)

(8) ʒi-r=gu  r-iʒ-un  qχ’urtʃi-tli  reʃa.
RFL-INAN\textsubscript{2}=EMPH  INAN\textsubscript{2}=grow-AOR  apricot-GEN  tree[INAN\textsubscript{2}][NOM]
‘The apricot tree grew by itself (i.e. without human participation).’

(9) den-ni  ʒi-w=gu  direktor  qχ’or-i.
I-ERG  RFL-M=EMPH  director[M][NOM]  call-AOR
‘I called the director himself.’

- **Process:**
  - Use each A\textsubscript{ERG}-compatible verb without A\textsubscript{ERG}, focalizing the ARG\textsubscript{NOM} with pronoun ʒi-CL=gu, and check semantics of product sentence
  - Pronoun ʒi-CL=gu supposed to emphasize semantic difference between passive and anticausative uses of null-A constructions \(\rightarrow\) requirement for identifying if a verb used with an empty agent slot allows for both anticausative and passive readings or only the passive one
  - If an A\textsubscript{ERG}-compatible verb used in a A\(\varnothing\) construction allows only passive reading, \(\rightarrow\) made clear by pronoun ʒi-CL=gu meaning ‘X itself is affected by A’ (ex. 10). If an A\textsubscript{ERG}-compatible verb used in a A\(\varnothing\) construction allows anticausative reading, \(\rightarrow\) correlates with pronoun ʒi-CL=gu meaning ‘X undergoes V by themself’ (ex. 11)

(10) A\(\varnothing\)  ʒi-w=gu  direktor  qχ’or-i.
A\(\varnothing\)  RFL-M=EMPH  director[M][NOM]  call-AOR
‘The director himself was called.’

(11) A\(\varnothing\)  ingur  ʒi-b=gu  arχ-on.
A\(\varnothing\)  window[INAN\textsubscript{1}][NOM]  RFL-INAN\textsubscript{1}=EMPH  open-AOR
‘The window opened by itself.’

- **Results:**
  1) All non-derived A\textsubscript{ERG}-compatible verbs are compatible with reading ‘X undergoes V by themself’ of pronoun ʒi-CL=gu (ex. 12):
2) Only factitive denominals are incompatible with reading ‘X undergoes V by themself’ of pronoun zi-CL=gu (ex. 15). → allow A∅ constructions ONLY with passive (arbitrary) reading.

(15) motf’i  zi-w = gu  *sasi-jd-esa  /  ṣəsəli Tedkoʃelo  
child[M/F][NOM] RFL-M=EMPH healthy-FCT-FUT.NEG healthy-INCH-FUT.NEG
‘The child isn’t going to heal by himself!’

⇒ Test 2 distinguishes A_Erg compatible verbs allowing anticausative reading of A∅ constructions, vs. A_Erg compatible verbs allowing A∅ only with passive reading

Table 2: Test of the reflexive-intensive pronoun

<table>
<thead>
<tr>
<th>1) +/- A_Erg test</th>
<th>A_Erg licenced only by causative marker</th>
<th>A_Erg licenced without causative marker</th>
</tr>
</thead>
<tbody>
<tr>
<td>2) RFL test</td>
<td>A∅ licenced with both PASS &amp; ANTICAUS reading</td>
<td>A∅ licenced only with PASS reading</td>
</tr>
<tr>
<td>bat‘adi ‘separate’</td>
<td>CL-itfṣon ‘bring’</td>
<td>sasi-jd-i ‘heal’</td>
</tr>
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<td>tfurukiši ‘get soiled’, ts‘ik‘uši ‘sour’, etc.</td>
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</tr>
<tr>
<td>CL-uts‘o ‘melt’</td>
<td>qṣuqṣa ‘separate’</td>
<td>jobi-jd-i ‘neuter’, etc.</td>
</tr>
<tr>
<td>kṣimmi ‘smile’</td>
<td>arṣon ‘open’, etc.</td>
<td></td>
</tr>
<tr>
<td>turi ‘break down’, etc.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

⊕ transitive

- Combination of three typological features (radical P-alignment + unrestricted use of null-A constructions + no agent demoting/removing derivation) ⇒ null-A TR predications = ITR predications. → All \( A_{\text{ERG}} \) compatible verbs are able to be used in ITR construction (with either passive or anticausative reading)

- Overt markers implying semantic presence of an Agent (here: factitive, in opposition to inchoative) restrict semantics of null-A constructions to passive reading

3. **3rd transitivity test: morphology and syntax of the imperative**

   - **Purpose:**
     - Corroborate results of tests 1 & 2
     - Further refine typology of \( A_{\text{ERG}} \)-compatible verbs

3.1. **Morphological subtest: ability to form an intransitive/transitive imperative**

   - **Source:** Kibrik (1996:110) & Ljutikova (2001:379)
   - **Background:** Andi features two imperative suffixes in distributional alternation:
     - /\( Vb \)/ (past stem vowel + -\( b \)) used in intransitive constructions (ex. 16)
     - /-\( o \)/ (bare athematic stem + -\( o \)) used in transitive constructions (ex. 17)

   - (16) \( j-\text{er}_s-ab \) \( ho<j>a! \)
     - F-hurry-IMP(ITOR) here\(<F>\)
     - ‘Come here quickly!’

   - (17) \( \text{hints}^\prime_u \) \( r-\text{i}d-o! \)
     - door[INAN₂][NOM] INAN₂-lock-IMP(TR)
     - ‘Lock the door!’

   - **Process:** check existence of intransitive and transitive imperative forms in paradigm of each verb

   - **Expectations:** ability to form intransitive imperative supposed to show a verb’s compatibility with intransitive construction, vs. ability to form transitive imperative supposed to show a verb’s compatibility with transitive construction

     - Previously diagnosed \( A_{\text{ERG}} \)-incompatible verbs expected to be able to form intransitive, but not transitive imperative
     - Previously diagnosed \( A_{\text{ERG}} \)-compatible verbs expected to be able to form transitive imperative
Only A\textsubscript{ERG}-compatible verbs allowing for anticausative reading of A\textsubscript{∅} constructions expected to be able to form intransitive imperative

Morphological selection of imperative form supposed to correlate with overt syntactic feature: selection of argument in role of imperative addressee.

\rightarrow Subtest used in combination with the imperative addressee subtest.

3.2. Syntax: selection of the argument in role of imperative addressee

\begin{itemize}
  \item \textbf{SOURCE:} Forker (2013:493–494)
  \item \textbf{BACKGROUND:} intransitive imperative constructions select their unique argument as imperative addressee (ex. 18), while transitive imperative constructions only allow for the ergative argument to be selected as imperative addressee (ex. 19). The imperative addressee can be overtly expressed both:
  \begin{itemize}
    \item outside imperative clause in function of unmarked vocative (\textit{wofo}, \textit{pat’imat});
    \item inside clause as subject of imperative predicate inflected for case (\textit{men}, \textit{menni}).
  \end{itemize}
  \begin{align}
    (18) \quad & \text{\textit{wofo}, } \text{men } \text{i} \text{hal}t’-\text{um}! \\
     & \text{boy[M]} \quad \text{thou[NOM]} \quad \text{work-IMP(ITR)} \\
     & \text{‘Boy, work!’}
  \end{align}
  \begin{align}
    (19) \quad & \text{\textit{pat’imat}, } \text{men-ni } \text{b-\text{ed}:o } \text{vedra!} \\
     & \text{Patimat[F]}, \quad \text{thou-ERG} \quad \text{INAN}_{1}-\text{leave-IMP(TR)} \quad \text{bucket[INAN]}_{1}[\text{NOM}] \\
     & \text{‘Patimat, leave the bucket!’}
  \end{align}
  \item \textbf{PROCESS:} for each verb, check the grammaticality of:
    \begin{itemize}
      \item the ITR imperative form used in an ITR imperative construction, i.e. in combination with a nominative addressee (= ITR imperative pattern)
      \item the TR imperative form used in a TR imperative construction, i.e. in combination with an ergative addressee (= TR imperative pattern)
    \end{itemize}
  \item \textbf{EXPECTATIONS:} to corroborate with the morphological imperative subtest
\end{itemize}

3.3. A\textsubscript{ERG}-incompatible verbs to the test

\begin{itemize}
  \item \textbf{RESULTS:} expectations met: all A\textsubscript{ERG}-incompatible verbs can be used with ITR imperative pattern, but not with TR imperative pattern
    \begin{align}
      (20) \quad & \text{\textit{den } } \text{\textit{bug-u }wots:u-?o.} \\
        & \text{I[NOM]} \quad \text{believe-AOR} \quad \text{brother-SUPER.LAT} \\
        & \text{‘I believed my brother.’}
    \end{align}
    \begin{align}
      & \text{\textit{wots:i, }\textit{men }\text{bug-ub }di-?o!} \\
        & \text{brother } \text{thou[NOM]} \quad \text{believe-IMP(ITR)} \quad \text{I-SUPER.LAT} \\
        & \text{‘Brother, believe me!’}
    \end{align}
\end{itemize}
c. *wotsi, *(men-ni) *buŋ-o
   brother   thou-ERG believe-IMP(TR)
   ‘Brother, believe!’

d. okhede-w buŋ-oll-o men-ni!
   ‘Fool him!’

3.4. $A_{ERG}$-compatible verbs to the test

   - **RESULTS:** expectations met partially:

   1) Only $A_{ERG}$-compatible verbs allowing anticausative reading of $A_{∅}$ can be used both in TR and ITR imperative pattern (ex. 21), sometimes provided setting of a fantastic context (ex. 22).

Examples of $A_{ERG}$-incompatible verbs tested positive $⊕$ to both TR and ITR imperatives patterns:

   (21) a. q$χ$’urban-di w-ak’ar-un ifi$<w>$a homolosadul
       Qurban-ERG M-gather-AOR home$<M>$ friend[F/M].PL[NOM]
       ‘Qurban gathered his friends at home.’

   b. it$lu$-w$=gu$ men-ni w-ak’ar-on homolosadul
       all-M=EMPH thou-ERG M-gather-IMP(TR) friend[F/M].PL[NOM]
       ‘Gather all your friends!’

   c. adam, bis$il$ w-ak’ar-um-ul!
       ‘People, gather yourselves!’

   (22) a. hegef-di hints’u rifs-d$ij$
       DEM:M-ERG door[INAN2][NOM] lock-PF
       ‘He locked the door.’

   b. pat’imat, men-ni hints’u rifs-o!
       Patimat[F] thou-ERG door[INAN2][NOM] lock-IMP(TR)
       ‘Patma, lock the door!’

   c. hints’u, men rifs-ib! (+ fantastic context)
       door[INAN2] thou[NOM] lock-IMP(ITR)
       ‘Door, lock yourself!’

Example of $A_{ERG}$-compatible verbs tested positive $⊕$ to the TR imperative pattern and negative $⊖$ to the ITR imperative pattern:
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(23) a. *toxturada-di wofo sasi-jd-i
    doctor.PL-ERG boy[M][NOM] healthy-FCT-AOR
    ‘The doctors healed the boy.’

    b. toxturadul, bisi-di wofo sasi-jd-o!
    doctor[M].PL you-ERG boy[M][NOM] healthy-FCT-IMP(TR)
    ‘Doctors, heal the boy!’

    c. wofo, men *sasi-jo-dib! / ok *sasi-jo-ib!
    boy[M] thou[NOM] healthy-FCT-IMP(ITR) healthy-INCH-IMP(ITR)
    ‘Boy, recover!’

2) One unexpected case: inconsistent results of the two imperative subtests: $A_{ERG}$-compatible verb CL-*$i$o ‘bring’ can be used in $ITR$ imperative pattern with meaning ‘arrive’, but cannot be used in fully transitive pattern: compatible with $TR$ imperative construction, but not with $TR$ imperative form: $ITR$ imperative form used in the $TR$ imperative construction (ex. 24).

(24) a. den-ni bisi-tu b-i?-o sajsati.
    I-ERG you-DAT INAN$_1$- bring/arrive-AOR gift[INAN$_1$][NOM]
    ‘I brought you a gift.’

    b. wofo, men ho-w>a w-u?-ob!
    ‘Boy, come over here!’

    c. *di-tu men-ni sajsati b-i?-o!
    I-DAT thou-ERG gift[INAN$_1$][NOM] INAN$_1$- bring/arrive-IMP(TR)
    ‘Bring me a gift!’

    d. ok di-ulu men-ni sajsati b-i?-ob!
    I-DAT thou-ERG gift[INAN$_1$][NOM] INAN$_1$-bring/arrive-IMP(ITR)
    ‘Bring me a gift!’

⇒ Test 3 introduces category containing verb CL-*$i$o ‘bring/arrive’, $A_{ERG}$ compatible verbs sharing with $A_{ERG}$ incompatible verbs unavailability of $TR$ imperative form.
### Table 3: Imperative tests

<table>
<thead>
<tr>
<th>Test</th>
<th>A\textsubscript{ERG} licenced only by causative marker</th>
<th>A\textsubscript{ERG} licenced without causative marker</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) +/- A\textsubscript{ERG} test</td>
<td>A\textsubscript{ERG} licenced with both PASS &amp; ANTICAUS reading (b)</td>
<td>A\textsubscript{ERG} licenced only with PASS reading (a)</td>
</tr>
<tr>
<td>2) RFL test</td>
<td>Only ITR IMP form available</td>
<td>Both ITR &amp; TR IMP patterns available</td>
</tr>
<tr>
<td>3) IMP test</td>
<td>bat’\textaeli ‘separate’</td>
<td>CL-i?o ‘arrive/bring’</td>
</tr>
<tr>
<td></td>
<td>t\textaeluruki\textaeli ‘get soiled’,</td>
<td>ummi ‘push’</td>
</tr>
<tr>
<td></td>
<td>ts’ik’\textaelu\textaeli ‘sour’,</td>
<td>CL-\textit{itfi} ‘catch’</td>
</tr>
<tr>
<td></td>
<td>etc.</td>
<td>CL-\textit{iq’o} ‘open’, etc.</td>
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<td></td>
<td>etc.</td>
<td>\textit{turi} ‘break down’,</td>
</tr>
</tbody>
</table>

\[\oplus \text{ transitive} \rightarrow \oplus \text{ transitive}\]

4. **4\textsuperscript{th} transitivity test: the causative**

- **Purpose**: further refine typology of A\textsubscript{ERG}-compatible verbs allowing anticausative reading of A\textsubscript{Ø}.
- **Background**: Andi causative suffix /-\textit{ol}/ can derive both bivalent TR verbs form ITR verbs (ex. 26) and trivalent TR verbs from bivalent TR verbs (ex. 25)

\[(25)\] a. t\textaelurt\textaela a-\textit{r-g-o} turti-t\textaeli.

\[\text{butter[INAN2][NOM] mix<INAN2>-AOR seed_butter-INTER}\]

‘The butter mixed together with the seed butter.’

b. \textit{den-ni} t\textaelurt\textaela a-\textit{r-g-ol-ij} turti-t\textaeli.

I-\textsubscript{ERG} \[\text{butter[INAN2][NOM] mix<INAN2>-CAUS-PF seed_butter-INTER}\]

‘I mixed the butter together with the seed butter.’

\[(26)\] a. \textit{gedo-di} q\textit{\'ammi} t\textit{s’ek’}a \textit{motif’i}t\textaelu-b.

\[\text{cat-ERG bite-AOR finger[INAN1][NOM] child-INAN1(\text{GEN})}\]

‘The cat bit the child’s finger.’
b. *motʃ’if-di gedo-₉-o qχ’amm-₉-i ts’ek’a.*
   child-ERG cat-AFF<INAN₁> bite-CAUS-AOR finger[INAN₁][NOM]
   ‘The child made the cat bite [his] finger.’

- **PROCESS:** test which uses (TR vs. ITR) of a A\textsubscript{ERG}-compatible verb can be causativized, by checking the valency (bivalent vs. trivalent) of its causative derivate.

- **RESULTS:**
  - Almost all non-derived A\textsubscript{ERG}-compatible verbs can be causativized only in their TR use: their causative derivates are always trivalent (ex. 27). → higher on the transitivity scale.
  - Limited group of non-derived A\textsubscript{ERG}-compatible verbs can be causativized in both their TR and ITR uses: their causative derivates are ambiguous between trivalent and bivalent (ex. 28). → lower on the transitivity scale.

(27) a. *pat’imati-di roqχ’-on hints’u.*
   Patimat-ERG close-AOR door[INAN₂][NOM]
   ‘Patimat closed the door.’

b. *hints’u roqχ’-on.*
   door[INAN₂][NOM] close-AOR
   ‘The door has closed.’

c. *pat’imati-di roqχ’-onl-i hints’u.*
   Patimat-ERG close-CAUS-AOR door[INAN₂][NOM]
   # ‘Patimat closed the door.’
   OK‘Patimat made [someone] close the door.’

(28) a. *jofu-di kʷeru b-its’-ij ɭen-di*
   girl-ERG jug[INAN₁][NOM] INAN₁-fill-PF water-INST
   ‘The girl filled the basin with water.’

b. *vedra b-its’-ij ɭen-di*
   bucket[INAN₁][NOM] INAN₁-fill-PF water-INST
   ‘The bucket has filled up with water.’

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2 One has to exclude from this group verbs belonging to the semantico-syntactic class of A\textsubscript{ERG}-compatible movement verbs (e.g. tɭ’anni ‘pull’, qχ’elli ‘scrabble’, ruto ‘unfasten’, qχ’absfun ‘blink’, obi ‘touch’, b-ajʃo ‘unfasten’), which can form valency-preserving causatives with a ‘conative-intensive’ meaning. Indeed, their causative derivates are also ambiguous between a bivalent and a trivalent argument structure, but both versions are most likely derived from the transitive use of the verb (which is, for many of them, their only productive use).
c. \textit{jofu-di} $k^w\text{ eru}$ $b$-$its'$-\textit{ol-ij} $\text{ten-di}$

girl-ERG jug[\text{INAN}_1][\text{NOM}] \text{INAN}_1$-fill-CAUS-PF water-INST

(i) ‘The girl filled the basin with water.’

(ii) ‘The girl made [someone] fill the basin with water.’

d. \textit{jofu-di} $d$-$<b>o$ $k^w\text{ eru}$

girl-ERG I-AFF<\text{INAN}_1> jug[\text{INAN}_1][\text{NOM}]

$b$-$its'$-\textit{ol-ij} $\text{ten-di}$

\text{INAN}_1$-fill-CAUS-PF water-INST

‘The girl had me fill the basin with water.’

$\Rightarrow$ Test 4 divides table into two new categories, introducing classes 3 and 4 of conclusion table.
### 5. Conclusion: the Zilo Andi transitivity scale

<table>
<thead>
<tr>
<th>Test nb</th>
<th>CLASS 1</th>
<th>CLASS 2</th>
<th>CLASS 3</th>
<th>CLASS 4</th>
<th>CLASS 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) +/- A&lt;sub&gt;ERG&lt;/sub&gt; test</td>
<td>A&lt;sub&gt;ERG&lt;/sub&gt; licenced only by causative marker</td>
<td>A&lt;sub&gt;ERG&lt;/sub&gt; licenced without causative marker</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2) RFL test</td>
<td></td>
<td></td>
<td>A∅ licenced with both PASS &amp; ANTICAUS reading (b)</td>
<td>A∅ licenced only with PASS reading (a)</td>
<td></td>
</tr>
<tr>
<td>3) IMP test</td>
<td>Only ITR IMP form available</td>
<td>Both ITR &amp; TR IMP patterns (morphology + syntax) available</td>
<td></td>
<td>Only TR IMP pattern available</td>
<td></td>
</tr>
<tr>
<td>4) CAUS test</td>
<td>Causative applicable to ITR (=the only use)</td>
<td>Causative applicable to both ITR and TR uses</td>
<td>Causative applicable only to TR use</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>bat'ali ‘separate’</td>
<td>CL-iʔo ‘arrive/bring’</td>
<td>CL-&lt;i&gt;it’se&lt;/i&gt; ‘fill’</td>
<td>CL-&lt;i&gt;itfon&lt;/i&gt; ‘bring’</td>
<td>sasi-jd-i ‘heal’</td>
</tr>
<tr>
<td></td>
<td>tfurukiili ‘get soiled’,</td>
<td>ts’ik’‘uti ‘sour’, etc.</td>
<td>CL-&lt;i&gt;e3a&lt;/i&gt; ‘fry’</td>
<td>ummi ‘push’</td>
<td>CL-it’i-jd-i ‘straighten’</td>
</tr>
<tr>
<td></td>
<td>CL-uk:u ‘fall’</td>
<td>CL-&lt;i&gt;ats’i&lt;/i&gt; ‘stick’</td>
<td>CL-&lt;i&gt;iq’u&lt;/i&gt; ‘slaughter’</td>
<td>CL-&lt;i&gt;it’i&lt;/i&gt; ‘catch’</td>
<td>bari-jd-i ‘sharpen’</td>
</tr>
<tr>
<td></td>
<td>CL-edon ‘talk’</td>
<td>CL-&lt;i&gt;erfo&lt;/i&gt; ‘change’</td>
<td>CL-&lt;i&gt;itq’χan&lt;/i&gt; ‘saw’</td>
<td>q&lt;sub&gt;χi&lt;/sub&gt;uq’&lt;sub&gt;χan&lt;/sub&gt; ‘saw’</td>
<td>tjuruki-jd-i ‘stain’</td>
</tr>
<tr>
<td></td>
<td>CL-uits’o ‘melt’</td>
<td></td>
<td>ar&lt;sub&gt;χo&lt;/sub&gt; ‘open’, etc.</td>
<td></td>
<td>fobi-jd-i ‘neuter’, etc.</td>
</tr>
<tr>
<td></td>
<td>kiimmi ‘smile’</td>
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<td></td>
<td></td>
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<tr>
<td></td>
<td>turii ‘break down’, etc.</td>
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</tbody>
</table>

⊕ transitive  →  ⊕ transitive
Alignment in the Andic Languages: Towards a Definition of Transitivity in Zilo Andi

<table>
<thead>
<tr>
<th>AOR</th>
<th>AN</th>
<th>CAUS</th>
<th>CONT</th>
<th>DAT</th>
<th>EL</th>
<th>EMPH</th>
<th>ERG</th>
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<tr>
<td>aorist</td>
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<td>causative</td>
<td>contlocative case</td>
<td>dative</td>
<td>elative direction</td>
<td>emphatic particle</td>
<td>ergative case</td>
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<td>FUT</td>
<td>future</td>
<td>HAB</td>
<td>habitual</td>
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<tr>
<td>INCH</td>
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<td>LAT</td>
<td>lative direction</td>
<td>NOM</td>
<td>nominative case</td>
<td>PF</td>
<td>perfect</td>
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</table>

6. References