Transitivity harmony in Panoan and elsewhere

Roberto Zariquiey Biondi
(Pontificia Universidad Católica del Perú)

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Transitivity-related phenomena in Panoan

• Panoan languages are well-known because of their complex transitivity systems.
• Verbs are lexically transitive or intransitive and the transitivity class of verbs is encoded at multiple sites within the clause.
• These processes include two different phenomena:
  – Allomorphic/suppletive alternations based on transitivity, i.e. morphemes that change their form according to the transitivity class of a verb.
  – (proper) Transitivity harmony, i.e. two predicates in a multi-predicate construction must match their transitivity with each other in order to be combined.
This talk

- Similar phenomena are found in languages of different families and different regions of the world.
- This talk, first, illustrates allomorphic/suppletive alternations based on transitivity and transitivity harmony, showing their differences and their relations.
- Then, it attempts to offer a cross-linguistic study of transitivity harmony constructions, postulating some parameters of variation.
- The database includes 27 languages.
### Table 1: Languages exhibiting indirect transitivity marking included in this paper

<table>
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<th>Language</th>
<th>Language Family</th>
<th>Reference</th>
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<tr>
<td>Kakataibo</td>
<td>Panoan</td>
<td>Zariquiey (2011) and unpublished data</td>
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<td>Chakobo</td>
<td>Panoan</td>
<td>Prost (1962)</td>
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<td>Matses</td>
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<td>Kapanawa</td>
<td>Panon</td>
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<td>Ese Eja</td>
<td>Takanan</td>
<td>Vuillermont (2012)</td>
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<td>Cattvaena</td>
<td>Takanan</td>
<td>Guillaume (2008)</td>
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<td>Aruwak</td>
<td>Atkin (2006a)</td>
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<td>Bangla</td>
<td>Indo-Aryan</td>
<td>Dasgupta (1977)</td>
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<td>Dumo</td>
<td>Tibeto-Burman</td>
<td>Van Driem (1993)</td>
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<td>Wolaitta</td>
<td>Afro-Asiatic, Omotic</td>
<td>Azeb and Dimmendaal (2006)</td>
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<td>Wambaya</td>
<td>West Barkly</td>
<td>Nordlinger (1998)</td>
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<td>Wargamay</td>
<td>Pama–Nyungan</td>
<td>iron (1981)</td>
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<td>Wangganguuru</td>
<td>Pama–Nyungan</td>
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<td>Warrungu</td>
<td>Pama–Nyungan</td>
<td>Tsunoda (1988)</td>
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<td>Leivo</td>
<td>Austronesian</td>
<td>Early (1993)</td>
</tr>
<tr>
<td>Namakir</td>
<td>Austronesian</td>
<td>Sperlich (1993)</td>
</tr>
<tr>
<td>Hatam</td>
<td>Papuan</td>
<td>Staden and Roestink (2008), Roestink (1999)</td>
</tr>
</tbody>
</table>
Part I: Preliminary illustration
Allomorph/suppletive alternation based on transitivity

(1) Chakobo (Zingg 1998:10; also quoted in Valenzuela 2011)

(a) \textit{jab\-a-tsi-k\-i} \\
run-now(INTR)-IMPF \\
‘I am running now.’

(b) \textit{pi-tsa-w\-ë} \\
eat-now(TRAN)-IMPF \\
‘Eat now!’
Allomorph/suppletive alternation based on transitivity

(2)  Dulong/Rawang (LaPolla 2000: 293)

(a)  \textit{ang wa-apm-i}  \\
    3SG  say-one.day.to.one.year.ago-3.PAST(INTR)  \\
    ‘He said something’

(b)  \textit{a:ng-i wa-apm-a}  \\
    3SG-AGT  do-one.day.to.one.year.ago-3.PAST(TRAN)  \\
    ‘He did something’
Transitivity harmony

(3) Kakataibo (Zariquiey 2011)

<table>
<thead>
<tr>
<th>verb</th>
<th>case</th>
<th>action</th>
<th>morphemes</th>
</tr>
</thead>
<tbody>
<tr>
<td>uxi</td>
<td>kana</td>
<td>pëukutin</td>
<td>begin-REF-IMPF-1/2p</td>
</tr>
<tr>
<td>'uxi</td>
<td>kana</td>
<td>pëu-ukut-i-n</td>
<td></td>
</tr>
<tr>
<td>sleep-S/A&gt;S(SE)</td>
<td>NAR.1sg</td>
<td>begin-REF-IMPF-1/2p</td>
<td></td>
</tr>
</tbody>
</table>

‘I begin to sleep.’

[Red circles around specific words for emphasis]
(4) Kambaata (Treis 2008: 6)

(a) oroqq-i
leave-3MASC.PERF.CONVB \[ fajj-ee'u \]
go away-3MASC.PERF
‘He left (i.e. he will not return).’

(b) īchch
eat.3MASC.PERFCONVB \[ kamm-ee'u \]
remove-3MASC.PERF
‘He has eaten (it) up.’
From the database...

• Both transitivity harmony and Allomorph/suppletive alternation based on transitivity are attested in the world’s languages.

• However, they are widespread phenomena only in Panoan.

• Allomorphic/suppletive variation based on transitivity is by large more frequent than transitivity harmony.

• And...
They can appear in the same construction

(5) Kakataibo (Zariquey 2011)

\[
\begin{align*}
\text{pixunma} & \quad \text{ka} & \quad \text{‘atan} \\
\text{pi-xun=ma} & \quad \text{ka} & \quad \text{‘a-tan} \\
\text{eat-} & \quad =\text{NEG} & \quad \text{NAR} & \quad \text{TRAN.AUX-go.to.IMP} \\
\text{‘Don’t go to eat!’} \\
\text{‘uxaxma} & \quad \text{ka} & \quad \text{‘itan} \\
\text{‘ux-ax=ma} & \quad \text{ka} & \quad \text{‘i-tan} \\
\text{eat-} & \quad =\text{NEG} & \quad \text{NAR} & \quad \text{INTR.AUX-go.to.IMP} \\
\text{‘Don’t go to sleep!’}
\end{align*}
\]
They may be diachonically related

(6)  

\[
\begin{align*}
\text{kwanxun} & \quad \text{kana} & \quad \text{upiókin} & \quad \text{‘ën} & \quad \text{‘atsa} \\
\text{kwan-xun} & \quad \text{kana} & \quad \text{upit-o-kin} & \quad \text{‘è=n} & \quad \text{‘atsa} \\
\text{go-S/A>AS} & \quad \text{NAR.1sg} & \quad \text{good-FACT-S/A>A(SE)} & \quad \text{1sg=A} & \quad \text{manioc.ABS} \\
\text{pibëtsinin(*pi-kwatsin-)} & \\
\text{pi-bëtsin-i-n} & \\
\text{eat-coming.TRAN-IMPF-1/2p} &
\end{align*}
\]

‘Having gone, I am eating manioc beautifully while coming.’

\[
\begin{align*}
\text{kwanx} & \quad \text{kana} & \quad \text{upiti} & \quad \text{‘ëx} \\
\text{kwan-ax} & \quad \text{kana} & \quad \text{upit-i} & \quad \text{‘ë-x} \\
\text{go-S/A>AS} & \quad \text{NAR.1sg} & \quad \text{good-S/A>A(SE)} & \quad \text{1sg-S} \\
\text{tankkwantsinin(*tan-bëtsin-)} & \\
\text{tan-kwantsin-i-n} & \\
\text{rest-coming.INTR-IMPF-1/2p} &
\end{align*}
\]

‘Having gone, I am resting beautifully while coming.’
Part II: Some parameters of cross-linguistic variation in transitivity harmony
Parameter 1: Integration or clause union

(7) Kakataibo (Zariquiey 2011)
(a) ‘ux-i kana ‘ē=n xubu-nu pēu-ukut-i-n
   sleep-S/A>S(SE) NAR.1sg 1sg=GEN house-LOC begin-REF-IMPF-1/2
   I begin to sleep.’

(b) pi-kin kana ‘ē=n xubu-nu pēu-i-n
   eat-S/A>A(SE) NAR.1sg 1sg=GEN house-LOC begin-IMPF-1/2
   I begin to eat.’

(8) Ese ’Ejja (Vuillermet 2012: 419)
Majoya=se nekya-’okya-ka-ani
then=1INCL ABS stand(TRAN)-put.down-3A-sit/PRES
neki-’oke-ki-ani
stand-go.down-GO.TO.DO-sit/PRES
‘Then they make us go down (lit. in a standing position), we go down (off the truck which took us to the main city) (lit. in a standing position).’
Parameter 1: Integration or clause union

• Transitivity harmony is found in both poorly integrated and deeply integrated multiverb constructions.

• Transitivity harmony in poorly integrated constructions always implies transitivity harmony in more integrated ones.
Parameter 2: Strategy

• Selection (or “suppletion”): what we find is a pair of transitive/intransitive verbs/auxiliaries from which the construction selects one according to the transitivity of the controller (like in Kakataibo’s prohibitive construction).

• Adjustment (or affixation): the controllee exhibits an overtly expressed transitivity changing device, such as a transitivity increasing or decreasing morpheme (like in Kakataibo’s inchoative construction).
Parameter 3: Target

• Many two-verb transitivity harmony constructions may be understood as combining a more lexical predicate and a more functional one, similar to an auxiliary.

• The data strongly suggest that transitivity harmony disfavor marking on the lexical predicate.
Parameter 3: Target

(9) Wambaya (Nordlinger 1998:195)

(a) *guruburr-ardi ng-a daguma*
be.unconscious-CAUS 1SG.A-PAST hit
‘I knocked him out (by hitting).’

(b) *nawunawu ngu-ngg-u dirndiny-mi*
stretch 1SG.A-REF/REC-FUT straight-FACT
‘I will stretch my legs (by straightening them.’
Parameter 4: Paradigmatic distinctions

• Most languages exhibiting transitivity harmony follow a straightforward pattern based on a distinction between transitive/intransitive.

• However, there is one possible counterexample: Japanese, which also exhibits transitivity harmony and, according to Kageyama (1993), follows a different pattern: a three way-distinction between transitive, unergative and unaccusative.
Parameter 4: Paradigmatic distinctions

Table 2: Transitivity harmony principle in Japanese: possible verbal compounds (Kageyama 1993)

<table>
<thead>
<tr>
<th>Type of compound</th>
<th>Illustration</th>
</tr>
</thead>
<tbody>
<tr>
<td>transitive + transitive</td>
<td>kai-toru ‘buy-take’ -toru ‘wipe-take’</td>
</tr>
<tr>
<td>transitive + unergative</td>
<td>mati-kamaeru ‘wait-gird’, sagasi-mawaru ‘search-about’</td>
</tr>
<tr>
<td>unergative + transitive</td>
<td>naki-harasu ‘weep-one’s.eye.out’, hohoemi-kaesu ‘smile-return’</td>
</tr>
<tr>
<td>unergative + unergative</td>
<td>kake-ori ‘run-down’, abare-mawaru ‘get.violent-about’</td>
</tr>
<tr>
<td>unaccusative + unaccusative</td>
<td>kobore-otiru ‘spill-fall’, kuzure-otiru ‘collapse-fall’</td>
</tr>
</tbody>
</table>
Parameter 5: Obligatoriness

• Most constructions based on transitivity harmony are obligatory in the sense that the predicates in them must match their transitivity.

• A few potential instances of non-obligatory transitivity harmony, however, are found in the data.
Parameter 5: Obligatoriness

(10) Kakataibo (Zariquiey 2011: 600)

(a) ‘ux-i kana sēnē-a-n
sleep-INTR NAR.1sg finish-PERF-1/2
‘I finished sleeping’.

(b) *‘ux-kin kana sēnē-o-a-n
sleep-TRAN NAR.1sg finish-FACT-PERF-1/2
*‘(‘I finished sleeping’)

(11) Kakataibo (Zariquiey 2011: 600)

(a) pi-i kana sēnē-a-n
eat-INTR NAR.1SG finish-PERF-1/2
‘I just finished eating.’

(b) pi-kin kana sēnē-o-a-n
eat-TRAN NAR.1sg finish-FACT-PERF-1/2
‘I finished eating a long time ago.’
Parameter 6: Transitivity domain

• It seems to be the case that in most languages with transitivity harmony, we also find relatively fixed lexical transitivity classes and these lexical classes determine the behavior of transitivity harmony.

• But see the following examples of Tariana (Arawak):
Parameter 6: Transitivity domain

(12) Tariana (Aikhenvald 2006a: 186)

(a) \textit{di-ka} \textit{di-ruku-ita}
3SG.FEM-see 3SG.FEM-go.down-CAUS
‘He looked down (at something)’ or ‘He looked (at something) making (something) go down’

(b) \textit{di-ka} \textit{di-ruku}
3SG.FEM-see 3SG.FEM-go.down
‘He looked (intransitive) down’ or ‘He looked going down’
Conclusions

• Transitivity harmony and Allomorph/suppletive variation based on transitivity are two types of indirect transitivity encoding found in the languages of the world.
• However, they are widespread phenomena only in Panoan.
• Allomorph/suppletive alternation based on transitivity is by large more frequent than transitivity harmony.
• In particular languages, they may appear in the same construction and they may be diachronically related.
• Although it is less widespread, transitivity harmony exhibits interesting patterns of cross-linguistic variation.
## Conclusions

Table 3: Parameters of cross-linguistic variation in transitivity harmony-based constructions

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type 1</th>
<th>Type 2</th>
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<td>Integration</td>
<td>Integrated</td>
<td>Non-Integrated</td>
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<tr>
<td>Matching strategy</td>
<td>Adjustment</td>
<td>Selection</td>
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<td>Harmony target (when applicable)</td>
<td>Auxiliary</td>
<td>Lexical verb</td>
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<td>Paradigmatic distinctions</td>
<td>Transitive/Intransitive</td>
<td>Other</td>
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<tr>
<td>Obligatoriness</td>
<td>Obligatory</td>
<td>Non-Obligatory</td>
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<tr>
<td>transitivity domain</td>
<td>Lexical</td>
<td>Clausal</td>
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References


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<tr>
<th>Abbreviation</th>
<th>Gloss</th>
<th>Abbreviation</th>
<th>Gloss</th>
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<tr>
<td>1</td>
<td>'first person'</td>
<td>2</td>
<td>'second person'</td>
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<tr>
<td>S</td>
<td>'third person'</td>
<td>A</td>
<td>'transitive subject'</td>
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<td>TRAN</td>
<td>'transitive'</td>
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<td>U</td>
<td>'undergoer'</td>
<td>&gt;</td>
<td>'switch-reference tracking'</td>
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Thanks!