When Philippine-type voice meets Indo-European-style voice: Insights from Puyuma*

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1 Introduction

• Backdrop
  ○ Following the Voice/v division (e.g. Pyllkenen 2002; Alexiadou et al. 2006; Schafer 2008; Harley 2013; Legate 2014), the active-passive voice contrast has been captured via the postulation of different flavors of Voice⁰:
    - active voice: Voice⁰ capable of introducing an EA & Case-licensing the IA
    - passive voice: defective Voice⁰ incapable of introducing an EA & Case-licensing the IA
  ○ Western Austronesian languages with a four-way voice system (so-called the Philippine-type) have been analyzed as possessing a similar and more elaborate system. Under both traditional approaches, Philippine-type voice is hosted within VoiceP, similar Indo-European voice.

Approach A (Aldridge 2004 et seq.)
- actor voice: intransitive Voice⁰
- patient voice: transitive Voice⁰
- locative voice: High Appl⁰ (+ transitive Voice⁰)
- circumstantial voice: High Appl⁰ (+ transitive Voice⁰)

Approach B (Rackowski & Richards 2005)
- actor voice: Agr. relation btw. Voice⁰ & Nom DP
- locative voice: Agr. relation btw. Voice⁰ & Dat DP (licensed by Low Appl⁰)
- circumstantial voice: Agr. relation btw. Voice⁰ & Obl DP (licensed by High Appl⁰)

• We present new data from Puyuma (iso 639-3), an understudied Formosan language that possesses both a Philippine-type four-way voice system and a two-way voice contrast akin to the Indo-European-style active/passive alternation.

→ We show that these two types of voice can co-occur in a single language because Philippine-type ‘voice’ is fundamentally different from Indo-European-style voice – while the latter is valency-indicating morphology hosted within the core verbal projection (VoiceP), the former is best analyzed as topic agreement morphology hosted in the C domain.

2 Two voice systems in Puyuma

• Puyuma exhibits a prototypical Philippine-type four-way voice system (1a-d), similar to Tagalog, Seediq, Malagasy, and Chamorro.

(1) a. ACTOR VOICE (AV)
    S(êm)selap na walak kana ramaraman i dalran dra sweep(âv) [de.piv child] de.acc rubbish loc road id.obl saselap.
    broom
    ‘The child swept up the rubbish on the road with a broom.’

b. PATIENT VOICE (PV)
    Tu=selap-aw kana walak na ramaraman i dalran 3.nom=sweep-pv de.nom child [de.piv rubbish] loc road dra saselep.
    id.obl. broom
    ‘The child swept up the rubbish on the road with a broom.’

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c. Locative Voice (LV)

\[
\text{Tu}=\text{selap-} \text{ay} \quad \text{kana} \quad \text{walak} \quad \text{na} \quad \text{dalran} \quad \text{kana} \quad \text{ramaraman} \\
3.\text{nom}=\text{Sweep-} \text{LV} \quad \text{DF.Nom} \quad \text{child} \quad \text{DEF.PIV} \quad \text{road} \quad \text{DF.ACC} \quad \text{rubbish} \\
\text{id.OBL} \quad \text{broom} \\
\]
‘The child swept up the rubbish on the road with a broom.’

d. Circumstantial Voice (CV)

\[
\text{Tu}=\text{selap-} \text{anay} \quad \text{kana} \quad \text{walak} \quad \text{na} \quad \text{df.piv} \quad \text{dalran} \quad \text{kana} \quad \text{df.acc} \quad \text{ramaraman} \quad \text{rubbish} \\
\]
‘The child swept up the rubbish on the road with the broom.’

Core traits of Puyuma (Philippine-type) voice

→ Voice morphology on the verb (AV/PV/LV/CV) indexes the distribution of the pivot marker (\textit{na} for common nouns; \textit{i} for personal names), which is unique per clause.

→ ‘Pivot-only’ extraction restriction: only the pivot-marked phrase can be \textit{A} extracted.

• In addition to the four-way system shown in (1), Puyuma displays a two-way voice alternation akin to the Indo-European-style active-passive alternation (2a-b).

(2) a. Actor Voice; active

\[
\text{M}-\emptyset-\text{ekan na} \quad \text{walak kana} \quad \text{patraka.} \\
\text{DF.PIV} \quad \text{eat} \quad \text{DF.PIV} \quad \text{child} \quad \text{DF.ACC} \quad \text{meat} \\
\]
‘The child ate the meat.’

b. Actor Voice; \textit{u}-marked

\[
\text{M-u-ekan la} \quad \text{na} \quad \text{patraka.} \\
\text{AV-U} \quad \text{eat} \quad \text{PRF} \quad \text{DF.PIV} \quad \text{meat} \\
\]
‘The meat was eaten up.’

→ When a bivalent verb bears AV morphology (2a), both the external argument (EA) and the internal argument (IA) are obligatorily present.

→ With an additional affix \textit{u-} (2b), the EA is obligatorily absent. The IA bears pivot-marking, similar to unaccusative subjects (3).

3 The \textit{u}-construction as a rare type of detransitive

• Claim: The \textit{u}-construction represents a rare type of detransitive construction distinct from all four common types of derived intransitives (passives, middles, impersonals, anticausatives).

3.1 Against a passive analysis

• Passives are derived intransitives with a syntactically active EA (logical subject), evidenced by their ability to license (i) \textit{by}-phrases that optionally introduce an EA and (ii) agent-oriented adverbs (e.g. Marantz 1984; Levin & Rappaport Hovav 1995; Alexiadou et al. 2006; Legate 2014).

○ Diagnostic 1: Unlike passives, the \textit{u}-construction is incompatible with \textit{by}-phrases (agent-denoting PPs) (4)-(5); on the other hand, it occasionally allows an adjunct that embeds a cause:

\[
\text{(4) M-u-deru na} \quad \text{kuraw (*kandrina} \quad \text{walak/*dra} \quad \text{traw/*dra} \\
\text{DF.PIV} \quad \text{cook} \quad \text{DF.PIV} \quad \text{child} \quad \text{DF.ACC} \quad \text{fish} \\
\text{AV-U-COOK} \quad \text{DF.PIV} \quad \text{meat} \quad \text{DF.ACC} \quad \text{meat} \\
\text{kadaw/*dra} \quad \text{karayag).} \\
\text{sun/DF.OBL} \quad \text{foehn) \\
\text{The fish was cooked (*by that child/*by someone/\textit{from sunshine/\textit{from foehn).}} \\
\]

\[
\text{(5) M-u-sabsab na} \quad \text{palidring (*kana} \quad \text{walak/*kan} \quad \text{Isaw/*dra} \quad \text{udal).} \\
\text{DF.PIV} \quad \text{wash} \quad \text{DF.PIV} \quad \text{car} \quad \text{DF.ACC} \quad \text{car} \\
\text{AV-U-WASH} \quad \text{DF.PIV} \quad \text{meat} \quad \text{DF.ACC} \quad \text{meat} \\
\text{*DF.OBL} \quad \text{Isaw/DF.OBL} \quad \text{Isaw/ID.OBL} \quad \text{rain) \\
\text{The car was washed (*by the child/*by Isaw/\textit{from the rain).}} \\
\]

○ Diagnostic 2: Unlike passives (6)), the \textit{u}-construction is incompatible with agent-oriented adverbs, contra its active counterpart (7)-(8):

\[
\text{(6) a. The banana was eaten (secretly).} \\
\text{[English]} \\
\text{b. Die Banane wurde (heimlich) gegessen.} \\
\text{[German]} \\
\]

→ Note that AV morphology (\textit{m-}) is present in both (2a) and (2b) as well as in (3). We will return to this in §5.
3.2 Against a middle analysis

- Middles encode transitive events in intransitive syntax with an understood but unexpressed agent; the construction usually lacks a specific time reference and often denote a generic interpretation (Levin 1993; see also O’Grady 1980; Croft 1991; Kemmer 1993; Kaufmann 2007).

→ The u-construction does not fit well with a middle analysis, as it is usually episodic with a past-tense reference without perfective morphology (see, e.g., (4)-(8)).

3.3 Against an anticausative analysis

- Anticausatives are incompatible with agent-oriented semantics, and are restricted to verbs that involve a change of state which allow an inchoative counterpart that denotes a spontaneous event (Smith 1970; Haspelmath 1993; Levin & Rappaport Hovav 1995; Alexiadou et al. 2006).

→ The u-construction is distinct from an anticausative, given its compatibility with a wide range of agent-oriented verbs that disallow an inchoative counterpart (e.g. bury, carve, catch, cheat (11a), cleave, collect, comb (8), cook (4), cut, eat (2b), fill, fold, lock, pack, sell, take).

3.4 Against an impersonal analysis

- Impersonals are characterized by an expletive subject and an object remaining as such (e.g. Polish impersonal with an accusative object (9a), cf. subject-marking on the IA in Polish passive (9b)) (e.g. Woolford 1993; Blevins 2003; Levine 2005; Legate 2014).

→ The u-construction is not an impersonal, given the mandatory subject-marking on the internal argument ((10a), cf. (10b)).

Intermediate conclusion:
The affix u- marks a rare type of derived intransitive which (i) does not allow an EA to be syntactically realized, (ii) is episodic, (iii) is compatible with verbs with agent-oriented semantics, and (iv) does not allow an impersonal interpretation.
4 Claim: \textit{u-} is the morphological reflex of \textit{Voice}^0

\begin{itemize}
  \item **Theoretical assumption:** the functional projection of verb phrase contains at least three layers:
  \begin{itemize}
    \item \textit{Voice} (the locus of voice (active vs. passive)); introducing the EA;
    \item \textit{v}: verbalizing the root; encoding event type; introducing causative semantics
    \item \textit{V:} introducing and theta-licensing the IA
  \end{itemize}

  (Pyllkanen 2002; Alexiadou et al. 2006; Schafer 2008; Harley 1995, 2013; Legate 2014)

  \item \textit{The Mirror Principle} (Baker 1985)

  Morphological derivations must directly reflect syntactic derivations (and vice versa).
\end{itemize}

4.1 Claim: \textit{u-} is the spell-out of \textit{Voice}^0

\begin{itemize}
  \item **Observation:** \textit{u-} is a valency-decreasing affix that correlates with the presence or absence of the EA.

  \item **Proposal.** \textit{u-} is the morphological reflex of a deficient \textit{Voice}^0 above \textit{v} (11), which is incapable of introducing an EA and Case-licensing its IA.
\end{itemize}

(11) \[
\begin{array}{c}
\text{VoiceP} \\
\widehat{\partial} \\
\text{Voice'} \\
\text{Voice}^0 \\
vP \\
\text{VP} \\
V \\
\text{DP}_{1a}
\end{array}
\]

→ Consequently, the \textit{u-} construction cannot contain an external argument and has no object case-marking available (12a); the IA checks Case with T, hence its shared case-marking with unaccusative subjects (e.g. (12b)).

(12) \begin{align*}
a. & \quad \textit{u-construction} \quad \textit{M-\textit{u-}sabana la na bangsaran} (*dra traw/*kandrina} \\
& \quad \text{AV-\textit{U}} \quad \text{cheat} \quad \text{PRF DE.PIVOT young.man} (*\text{ID.OBL person}/*\text{DF.OBL.that bulr} ybulr) \\
& \quad \text{young.lazy} \\
& \quad \text{‘The young man was cheated (*by someone/*by that young lady).’} \\

b. & \quad \textit{Unaccusative} \\
& \quad \text{M-\textit{a-}ladu na bangsaran.} \\
& \quad \text{AV-\textit{A}} \quad \text{stat-slip} \quad \text{DE.PIVOT young.man} \\
& \quad \text{‘The young man slipped.’}
\end{align*}

\begin{itemize}
  \item We assume that the active counterpart (e.g. (13)) of the \textit{u-} construction (e.g. (14)) contains an unmarked active \textit{Voice}^0 (15), which is capable of introducing an EA and Case-licensing its IA.
  \item Note: unmarked active voice is crosslinguistically common.
\end{itemize}

(13) \quad \textit{M-\textit{O-}ekan na walak kana bu}\textit{a}.
\quad \text{AV-AC} \quad \text{eat} \quad \text{DE.PIVOT child} \quad \text{DF.ACC yam}
\quad \text{‘The child ate the yam.’} \quad \text{[Active]}

(14) \quad \textit{M-\textit{u-}ekan la na bu}\textit{a} (*kandrina walak).
\quad \text{AV-\textit{U}} \quad \text{eat} \quad \text{PRF DE.PIVOT yam} (*\text{DF.OBL child})
\quad \text{‘The yam was eaten up (*by that child).’} \quad \text{[Detransitive]}

\begin{itemize}
  \item We assume that the active counterpart (e.g. (13)) of the \textit{u-} construction (e.g. (14)) contains an unmarked active \textit{Voice}^0 (15), which is capable of introducing an EA and Case-licensing its IA.
\end{itemize}

4.2 \textit{u-} is encoded in a projection below \textit{aspect}^0 and above \textit{v}

\begin{itemize}
  \item **Prediction:** If \textit{u-} is indeed the spell-out of \textit{Voice}^0, it should be hosted below \textit{aspect}^0 and above \textit{v}.
  \item **Evidence for \textit{u-} as hosted above \textit{v}**
\end{itemize}
• **Argument 1:** *u-* can co-occur and surface to the left of* the causative affix *pa-*, as seen in detransitivized causatives (16):

(16) *u*-marked causatives


b. M-u-pa-depe’ na tamaku (*kandrina maitrang).

→ Under the VP analysis of restructuring infinitives (Wurmbrand 2001 *et seq*., this contrast is predicted if *u-* is the spell-out of Voice⁰.

• **Evidence for *u-* as hosted below **aspect⁰**

• **Argument:** In Puyuma, irrealis morphology surfaces as an infix <a> only when attached to vowel-initial stems (Teng 2008:41) (compare (19a) (V-initial bases) with (19b) (C-initial bases), whose progressive form is formed by Ca-reduplication).

(19) a. V-initial stem b. C-initial stem

u-<a>arak ‘be dancing’ sa-senary ‘be singing’

i-<a>natray ‘going to die’ da-deru ‘be cooking’

i-<a>edreng ‘be sleeping’ ka-kawang ‘be walking’

i-<a>walak ‘being pregnant’ ga-garatr ‘be biting’

→ That the progressive form of all *u*-marked verbs obligatorily employ the infix <a> (and not Ca-reduplication) even if the stem is a C-initial (20a-b) indicates that *u-* is encoded into morphology before the insertion of aspect morphology, hence *u+VERB* is treated as a vowel-initial stem.

• **Argument 2:** *u-* cannot appear inside restructuring infinitives, which can host causative morphology (*pa-* (18):

(18) T<em>alam=ku *[ins adri (m-)u-sebana]/√[ins pa-senary kan Isaw].

try<AV>=1SG.PIVOT *[ins NEG (AV-)u-cheat]/√[ins CAU-sing PN.ACC Isaw]

I tried (*not to be cheated/√ to make Isaw sing).

→ Assuming that the Mirror Principle holds, this suggests that *u-* is hosted in a projection below **aspect⁰**.
5 Philippine-type ‘voice’ does not mark Voice\(^0\)

\(\rightarrow\) Assuming the Mirror Principle holds, that AV morphology \(m\)-surfaces to the left of the reflex of Voice \((u-)\) and \(v\) (\(pa\)-) (repeated below) suggests that it is hosted in a projection higher than Voice\(^0\) and outside of the core verbal projections.

(21) **M-u-pa-dep’ na tamakun.**

\[AV-\text{U-CAT} \text{ infame} \text{ DE.PIVOT} \text{ cigarette} \]

‘The cigarette was made inflamed.’

\textbf{Evidence for AV morphology as hosted above aspect}\(^0\): In Puyuma, AV morphology is obligatory inserted into \textbf{progressive morphology} (\(Ca\)-reduplication; first syllables in (22b)); and \textit{not} the stem (second syllables in (22b)).

<table>
<thead>
<tr>
<th>a. AV form</th>
<th>b. AV form (progressive)</th>
</tr>
</thead>
<tbody>
<tr>
<td>d&lt;em&gt;enu</td>
<td>d&lt;em&gt;a-deru</td>
</tr>
<tr>
<td>g&lt;em&gt;esigis</td>
<td>g&lt;em&gt;a-gisgis</td>
</tr>
<tr>
<td>k&lt;em&gt;artr</td>
<td>k&lt;em&gt;a-kartr</td>
</tr>
<tr>
<td>s&lt;em&gt;absab</td>
<td>s&lt;em&gt;a-sabsab</td>
</tr>
<tr>
<td>t&lt;em&gt;nun</td>
<td>t&lt;em&gt;a-tenun</td>
</tr>
</tbody>
</table>

\(\rightarrow\) This suggests that AV is encoded into morphology after that of aspect\(^0\), revealing that it is hosted in a projection \textbf{higher than aspect}\(^0\).

- As Puyuma is a tenseless language, this observation suggests that AV morphology is hosted in the C domain.

- **Evidence for AV morphology as hosted at C:** In Puyuma (as well as other morphosyntactically conservative Philippine-type langauges), AV morphology \textbf{inflicts for mood} – which is standardly assumed to be encoded in the C domain (e.g. Rivero & Terzi 1995; Han 2001; Noonan 2007, a.o.). Consider the realis vs. irrealis alternation of \(u\)-verbs (23a-b):

(23) a. \textbf{Realis AV morphology: m-}  

\[M-u-sapana’ la i Akang.\]

\[AV-\text{REAL} \text{ u-cheat PRF PN.PIVOT} \text{ Akang} \]

‘Akang was cheated.’

\[D<em>eru \text{ (pro)} \dra \text{ abay}.\]

\[<AV>\text{cook (3SG.PIVOT) id.acc} \text{ rice.ball} \]

‘She cooked rice balls’.

b. \textbf{Irrealis AV morphology: }\(\varnothing\)-  

\[\varnothing-u<\text{a-sapana’} \ i \ Akang.\]

\[AV\text{-IRR} \text{ u-imp-cheat PN.PIVOT} \text{ Akang} \]

‘Akang will be cheated (someday in the future).’

- This is in line with a family of \(\text{\`A-}\text{-agreement approaches}\) to Philippine-type voice (e.g. Chamorro: Chung 1994, 1998; Malagasy: Pearson 2001, 2005; Tagalog: Chen 2017, 2020), according to which \textbf{Austronesian voice morphology marks topic-} (or \(wh\)-)\textbf{agreement hosted in the C domain}.

(24) **Previous \(A’\)-approaches to AV morphology**

Chung (1994): agreement morphology between [\(uwh\)] and a nom \(wh\)-word

Pearson (2005): \(A’\)-extraction morphology of the nom topic

Chen (2017): the bundle of topic agreement and subject (\(\phi\)-)agreement

- **Evidence for AV morphology as associated with topic**

- In Puyuma question-answer sequence with a clear discourse topic that serves as the subject of the answer (25a), the subject must be pivot-marked with the sentence marked in AV morphology (25b). An answer that does \textit{not} put the topic in pivot-marking is considered unnatural (25c), revealing a tight connection between AV morpholgy and subject (nom) topic.

(25) a. Q: Discourse topic: Pilay  

\[\text{Makakuta i Pilay uninan?} \]

\[AV\text{-what.happen PN.PIVOT Pilay today} \]

‘What did Pilay do today?’

b. A1: The discourse topic (subject) is pivot-marked with AV morphology  

\[D<em>eru (pro) \dra \text{ abay}.\]

\[<AV>\text{cook (3SG.PIVOT) id.acc} \text{ rice.ball} \]

‘She cooked rice balls’.

c. A2: The discourse topic (subject) is not pivot-marked  

\[*Tu=\text{deru-aw na abay}.\]

\[3.GEN=\text{cook}\text{-}PV \text{ DE.PIVOT} \text{ rice.ball} \]

(intended: ‘She cooked \textit{rice balls}’).

\(\rightarrow\) \textbf{Intermediate conclusion:} AV morphology is hosted in the C domain; its linear ordering with progressive morphology and the reflex of Voice\(^0\) follows consistently from the prediction of the Mirror Principle.

\(^1\)AV morphology in Puyuma has three allomorphs: \(m\) (pre-V); \(<em\> (pre-C\text{-}non-bilabial); \text{me-} \text{(pre-liquid);} \text{<en> (pre-bilabial).} \)
6 Rethinking the Voice\(^0\)/Appl\(^0\) approach to Philippine-type voice

- Both traditional approaches to Philippine-type voice maintain that \textit{Philippine-type voice is hosted within the core verbal domain associated with Voice\(^0\)/Appl\(^0\)} (e.g. Aldridge 2004 et seq; Rackowski 2002; Rackowski & Richards 2005, a.o.).
- On one analysis (i.e. the ergative approach), Philippine-type AV and PV affixes are the spell-out of \textit{different flavors of Voice}\(^0\); LV and CV affixes each mark an Appl\(^0\) that licenses an applied object (i.e. the pivot-marked phrase) as the \textit{highest IA} (26):

\begin{align*}
\text{(26)} \\
\begin{array}{ll}
\text{a. Actor Voice (AV)} & \text{intransitive Voice}\(^0\) \\
\text{b. Patient Voice (PV)} & \text{transitive Voice}\(^0\) \\
\text{c. Locative Voice (LV)} & \text{High Appl}\(^0\) (+ transitive Voice\(^0\)) \\
\text{d. Circumstantial Voice (CV)} & \text{High Appl}\(^0\) (+ transitive Voice\(^0\))
\end{array}
\end{align*}

- The case-agreement approach to Tagalog voice holds a similar assumption: Philippine-type voice is hosted within Voice\(^P\) (as the spell-out of an Agree relation between Voice\(^0\) and its goal, which inflects for the Case of the goal) (27):

\begin{align*}
\text{(27)} \\
\begin{array}{ll}
\text{a. AV} & \text{Agr. relation btw. Voice & NOM DP} \\
\text{b. PV} & \text{Agr. relation bw. Voice & ACC DP} \\
\text{c. LV} & \text{Agr. relation btw. Voice & DAT DP (licensed by Low Appl\(^0\))} \\
\text{d. CV} & \text{Agr. relation btw. Voice & OBL DP (licensed by High Appl\(^0\))}
\end{array}
\end{align*}

6.1 Against the AV/PV morphology as hosted within Voice\(^P\)

- We have seen in §4 that \textit{AV morphology is hosted above Aspect}\(^0\).
- Under the traditional view (26), AV-marked bivalent clauses like (28) are \textit{antipassives} that bears an intransitive subject and an oblique object – under the assumption that AV affix is the spell-out of \textit{intransitive Voice}\(^0\) (26a) (Aldridge 2004 et seq.).

\begin{align*}
\text{(28) } & \text{AV-marked bivalent clause (the alleged antipassive)}
\end{align*}

\begin{align*}
\text{M-ekan na } & \text{walak kana } \text{buña.} \\
\text{AV-eat} & \text{DF.PIVOT child DF.ACC yam} \\
\text{‘The child ate the yam.’}
\end{align*}

- \textit{Counterargument 1}: that the alleged antipassive (28) may undergo external-argument detransitivization (e.g. (30)) casts doubt on its being an antipassive – as derived intransitives such as antipassives are incompatible with valency-decreasing operations across languages.

\begin{align*}
\text{(29) } & \text{Detransitive version of (28)}
\end{align*}

\begin{align*}
\text{M-u-ekan la na } & \text{buña.} \\
\text{AV-U-eat PRF DF.PIVOT yam} \\
\text{‘The yam was eaten up.’}
\end{align*}

- \textit{Counterargument 2}: AV morphology can appear on Puyuma \textit{unaccusatives}, which in principle does \textit{not contain a Voice}\(^0\) layer given that the construction neither possesses an EA nor contains an IA in object case-marking (30).

\begin{align*}
\text{(30) } & \text{AV-marked unaccusative}
\end{align*}

\begin{align*}
\text{Me-redek na } & \text{walak i renarenadran.} \\
\text{AV-arrive} & \text{DF.PIVOT child LOC playground} \\
\text{‘The child arrived at the playground.’}
\end{align*}

- \textit{Counterargument 3}: AV morphology may also appear on causative of unaccusative (transitive counterpart of (30)), which is incompatible with an intransitive/antipassive analysis.

\begin{align*}
\text{(31) } & \text{AV-marked causative of unaccusative (transitive counterpart of (30))}
\end{align*}

\begin{align*}
\text{P<en>a-redek na } & \text{walak kana ladru i renarenadran.} \\
\text{CAU-CAV>arrive DF.PIVOT child DF.ACC mango LOC playground} \\
\text{‘The child threw (lit. made arrive at) the mango to the playground.’}
\end{align*}

\rightarrow \text{Intermediate conclusion}. \text{ The compatibility of AV morphology with both intransitives and transitives indicates that Philippine-type AV and PV morphology are not transitivity-indicating affixes hosted in Voice}\(^0\) (26a-b).
6.2 Against the Appl⁰ analysis of LV/CV morphology

- Consistent with the observation with AV/PV morphology, Puyuma’s LV/CV morphology also behaves like agreement morphology, rather than applicative markers (i.e. reflex of Appl⁰).

- Both previous approaches to Philippine-type voice (26)-(27) rely crucially on the assumption that the pivot-marked phrase (e.g. locative, instrument) in LV/CV clauses is an applied object introduced in the highest IA position by a High Appl⁰, illustrated in (32).

→ The pivot phrase is then free to access the VoiceP phrase edge and raise out VoiceP due to EPP on Voice⁰ (Aldridge 2004, 2017; Rackowski & Richards 2005; Nie 2019 for Tagalog).

**Counterargument 1 (Binding facts):** In Puyuma CV-marked ditransitives, the recipient asymmetrically bind into the pivot-marked theme (33a-b):

(33) a. CV-ditransitive: recipient > theme

Ku=beray-anay kana [kan tinataw kana 1s.gen=give-cv [3.poss.pivot=wages] [acc 3s.poss.mother lk kia karun d'riy a]. laborer every]

‘I gave every laborer’s_c_k> mother his/her_c_k> wages.’ (distributed reading available)

b. CV-ditransitive: theme > recipient

Ku=beray-anay [kantu=walak] [tu=libun kana 1s.gen=give-cv [3.poss.acc=child] [3.poss.pivot=wages lk kiabarun d'riy a]. laborer every]

‘I gave his_c_k> child every laborer’s_c_k> wages.’ (distributed reading not available)

→ This points to a DOC analysis for CV-ditransitives (34), whereby the recipient c-commands the theme and not vice versa.

→ The present binding fact indicates that the pivot is not licensed in the highest IA position in the CV-clauses (33a-b), but rather an internal argument c-commanded by the recipient, contra the baseline assumption of the Appl⁰ analysis for CV morphology (26)-(27).

**Counterargument 2 (Mood inflections):** Just like AV/PV morphology, Puyuma’s LV/CV morphology inflects for mood (35):

<table>
<thead>
<tr>
<th></th>
<th>AV</th>
<th>PV</th>
<th>LV</th>
<th>CV</th>
</tr>
</thead>
<tbody>
<tr>
<td>realis</td>
<td>M-√</td>
<td>√-aw</td>
<td>√-ay</td>
<td>√-an</td>
</tr>
<tr>
<td>imperative</td>
<td>⊗-Ca-√</td>
<td>Ca-√-i</td>
<td>Ca-√-i</td>
<td>Ca-√-an</td>
</tr>
<tr>
<td>negative</td>
<td>⊗-√</td>
<td>√-i</td>
<td>√-i</td>
<td>√-an</td>
</tr>
</tbody>
</table>

**Counterargument 3 (LV/CV affixes behaving like agreement morphology):**

LV/CV morphology obligatorily cliticizes to the highest predicate of a clause, even if the highest predicate is an adverb ((36b), (37b)). This argues against analyzing them as applicative markers.
8 Implications

1. Puyuma presents new evidence for the presence of the external argument-introducing head (i.e. $\text{Voice}^0$) in derived intransitives (see Legate 2014 for a similar claim).

2. Puyuma's typologically unusual four-way voice morphology is not the spell-out of functional heads ($\text{Voice}^0$/Appl$^0$) hosted within VoiceP. This motivates a re-examination of Austronesian-style voice systems in similar languages.

3. The Austronesian-type ‘pivot-only’ constraint in $\text{\`A}$ extraction cannot be treated on a par of a ‘absolutive-only’ or ‘subject-only’ condition. → $\text{\`A}$-extraction restrictions can be independent of syntactic ergativity.

4. The presence of same detransitivizer $u$- in three other Philippine-type Austronesian languages (Bunun, Thao, Saaroa) (Chen to appear) indicates that the current conclusion is not specific to only Puyuma.

5. Austronesian/Philippine-type voice is more similar to the so-called ‘voice’ in Dinka (Nilotic) and Kilega (Bantu), which realizes topic-agreement hosted in the C domain (Dinka: van Urk 2015; Kilega: Miyagawa 2010, 2017; see Erlewine et al. 2017 for a similar claim for Dinka).

9 References


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7 Conclusion

Philippine-type voice is fundamentally different from voice in the traditional sense (i.e. valency-indicating morphology hosted in the core verbal domain). While the latter is the morphological realization of different flavors of $\text{Voice}^0$, the former is best analyzed as $\text{\`A}$-(topic)-agreement morphology hosted in the C domain, hence the compatibility of these two types of “voice” in a single language.


