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

Puyuma, an understudied indigenous language of Taiwan, features the compatibility of Philippine-type and Indo-European–type voice alternations within the same clause. Co-occurrence of these two alternations is surprising under the traditional view of Austronesian literature, where Philippine-type voice is considered as valency-indicating morphology located in Voice and predicted to be incompatible with Indo-European–type voice (Payne 1982; Mithun 1994; Aldridge 2004; a.o.). Novel evidence from Puyuma argues against this view, demonstrating instead that Philippine-type "voice" is hosted high in the left periphery, akin to a similar type of Ā-agreement found in Western Nilotic. Its compatibility with Indo-European–type voice is therefore unsurprising. Not only does the current observation from Puyuma shed new light on a central debate in Austronesian syntax, lending new support to the accusative approach to Philippine-type languages and against the ergative analysis, but it also highlights the importance of approaching the divergent uses of the term "voice" in the literature with caution. The case of Puyuma thus reinforces the need to re-examine existing claims and conventional labels with data from understudied languages.

Keywords: Austronesian-type voice ∘ Philippine-type voice ∘ Ā-agreement ∘ Voice ∘ Puyuma ∘ detransitivization

Contents

1   Introduction

Puyuma, an understudied Austronesian of Taiwan, features the compatibility of two distinct types of voice alternations within the same clause. Like many other neighboring Austronesian languages, Puyuma exhibits a four-way voice system known as "Philippine-type voice," whereby the sole phrase of a given clause eligible for relativization is indexed both by four-way verbal morphology (conventionally termed "voice") as well as by a specific marker labeled as PIVOT throughout the paper. Following terminology common in Austronesian literature, the use of Actor Voice (AV), Patient Voice (PV), Locative Voice (LV), and Circumstantial Voice (CV) in a simple clause correlates with the pivot-marked agent (1a), theme (1b), locative (1c), and instrumental (1d), respectively. [1]

(1)   *Philippine-type voice alternation in Puyuma*

    a.   S⟨**em**⟩elap na   walak kana   ramaraman i   dalran dra   saselap.
        sweep⟨**AV**⟩ DEF.PIVOT child DEF.ACC rubbish   LOC road INDF.OBL broom
        '*The child* swept up the rubbish on the road with a broom.'   **(Actor Voice)**

    b.   Tu=selap-**aw**   kana   walak na   ramaraman i   dalran dra   saselap.
        3.NOM=sweep-**PV** DEF.NOM child DEF.PIVOT rubbish   LOC road INDF.OBL broom
        'The child swept up *the rubbish* on the road with a broom.'   **(Patient Voice)**

    c.   Tu=selap-**ay**   kana   walak na   dalran kana   ramaraman dra   saselap.
        3.NOM=sweep-**LV** DEF.NOM child DEF.PIVOT road   DEF.ACC rubbish   INDF.OBL broom
        'The child swept up the rubbish on *the road* with a broom.'   **(Locative Voice)**

    d.   Tu=selap-**anay**   kana   walak na   saselap kana   ramaraman i   dalran.
        3.NOM=sweep-**CV** DEF.NOM child DEF.PIVOT broom   DEF.ACC rubbish   LOC road
        'The child swept up the rubbish on the road with *the broom*.'   **(Circumstantial Voice)**

On top of this four-way alternation, Puyuma displays an Indo-European–style voice alternation. Where a bivalent verb is marked in Philippine-type AV morphology (*m-*), both the agent and the theme are obligatorily present (2a).[2] Where the same verbal complex bears an additional affix *u-*, the agent must be absent, and the undergoer takes on pivot-marking, as in (2b).

(2)   *Indo-European–type voice alternation in Puyuma*

    a.   **M**-ekan **na**   **walak** kana   patraka.
        AV-eat **DEF.PIVOT child** DEF.ACC meat
        'The child ate the meat.'   (Philippine-type Actor Voice + active voice)

    b.   **M-u**-ekan=la **na**   **patraka**.
        AV-U-eat=PFV **DEF.PIVOT meat**
        'The meat was eaten up.'   (Philippine-type Actor Voice + detransitive voice)

The co-occurrence of Philippine-type voice with Indo-European–style voice alternation raises important theoretical questions. With both traditionally analyzed as valency-indicating morphology hosted within VoiceP (e.g., Blake 1925; Wolff 1973; Payne 1982; Mithun 1994; Ross 2002; Aldridge 2004 et seq.; a.o.), their compatibility not only calls into question the well-adopted view in the literature that Philippine-type voice constitutes a similar and more elaborate system of Indo-European–type voice (Mithun 1994; Ross 2002; Aldridge 2004 et seq.), but it also casts doubt on the standard assumption in Minimalist syntax that voice alternation is encoded in a *single, specific* functional head—Voice—within the core verbal domain (e.g., Kratzer 1994, 1996; Pÿlkkanen 2002, 2008, Harley 2009, 2013; Legate 2014). Examples like (2b) where these two types of voice co-occur thus suggest two possible analyses:

(3)   a.   **Hypothesis A**: Puyuma employs a crosslinguistically unusual verb phrase structure that contains more than one Voice layer.

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[1] List of abbreviations: ACT: active; CAUS: causative; DEF: definite; DEFV: default voice; DETR: detransitive; DOM: differential object marking; IMP: imperative; IND: indicative; INDF: indefinite; IPFV: imperfective; IRR: irrealis; LOC: locative; LK: linker; MOT: motion; OBL: oblique; PASS: passive; PN: personal name; POSS: possessive; PFV: perfective; STAT: stative; TOP: topic.

[2] The formal variation of AV morphology in (1)–(2) is phonetically conditioned. See the specific allomorphic rule in (10).

b. **Hypothesis B**: Only one of the two types of "voice alternation" in (2b) constitutes a genuine case of voice alternation located in Voice.

In this paper, I show that Puyuma provides clear empirical evidence for Hypothesis B—that only the *u*-marked two-way alternation in (2) is hosted in Voice; the four-way alternation in (1) is located high in the left periphery as topic-indicating morphology, as has been proposed for typologically similar Philippine-type languages (Chung 1994; Pearson 2005; Chen 2017). In approaching this conclusion, I present specific evidence that the detransitivizer *u-* is the morphological reflex of Voice—the functional head is distinct from, and higher than, *v* (e.g., Pÿlkkanen 2002, 2008; Harley 2009, 2013; Legate 2014). I then discuss independent pieces of evidence that Philippine-type voice alternation in Puyuma is hosted above Aspect and best analyzed as Ā-agreement morphology.

The current observation from Puyuma has important broader implications. Not only does it offer a simple account for the co-occurrence of Philippine-type voice and Indo-European–type voice in a single language, but it also contributes to a central question in Austronesian syntax. Much debate over the past five decades has revolved around the nature and locus of Philippine-type voice alternation. While the ergative approach to Philippine-type languages places it within VoiceP as valency-indicating morphology (Payne 1982; Mithun 1994; Aldridge 2004 et seq.), the accusative approach analyzes it as topic agreement located in the left periphery (Richards 2000; Pearson 2005; Chen 2017). The Puyuma facts discussed in this paper thus provides new evidence for the accusative approach. Finally, the Puyuma data presented in the paper also provides novel evidence for the division of Voice and *v*, lending new support to the tripartite approach to verb phrase structure (e.g., Pÿlkkanen 2002, 2008; Harley 2009, 2013; Legate 2014)

The remainder of the paper is organized as follows. Section 2 demonstrates that the *u*-marked agentless construction (2b) is a specific type of passive characterized by the complete elimination of the external θ-role (initiator). Section 3 turns to the locus of Philippine-type voice morphology, presenting three independent pieces of evidence that this four-way morphology is encoded external to the core verbal domain (VoiceP) and is best analyzed as Ā-agreement. Section 5 concludes and highlights several broader implications of the current findings.

2 Indo-European–type voice in Puyuma

Puyuma (ISO 639-3 *pyu*) is a severely endangered indigenous language of Taitung, Taiwan. Like many other western Austronesian languages, it is verb-initial, tenseless, and possesses a typical Philippine-type voice system. For general information about the language, see Teng (2008) and Cauquelin (2015). Except where otherwise indicated, the data presented in this paper come from primary fieldwork on Nanwang Puyuma over a period between 2015 and 2022.

Before entering the core discussion, a brief discussion of Puyuma's argument-marking mechanism is in order. Puyuma possesses a nominative–accusative case system and allows flexible word order among nominals.[3] Its case system is partially obscured by pivot/topic-marking: where a phrase is in pivot status (as indicated by appropriate voice morphology on the verb), its case-marking is overridden by pivot-marking. Puyuma's case pattern in simple clauses is presented in (4). Asterisks in the table indicate where a specific voice/case combination is inapplicable. The abbreviations P_1 and P_2 stand for two types of prepositional case that mark specific types of adjuncts (locative vs. non-locative).

(4) *Mapping of voice-marking, clause type, and case in Puyuma*

	a. AV		b. PV		c. LV		d. CV	
	unerg./tran.	unacc.	tran.	unacc.	unerg./tran.	unacc.	unerg./tran.	unacc.
external argument	**PIVOT**	–	NOM	*	NOM	–	NOM	–
internal argument	ACC	**PIVOT**	**PIVOT**	*	ACC	NOM	ACC	NOM
locative	P_1	P_1	P_1	*	**PIVOT**	**PIVOT**	P_1	P_1
instrument/benefactor	P_2	P_2	P_2	*	P_2	P_2	**PIVOT**	**PIVOT**

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[3]This analysis draws on the distributional restrictions of Puyuma's basic case markers. See Chen (2017) for a detailed discussion. The labels "PIVOT," "NOM," and "ACC" adopted throughout this paper correspond to the traditional labels "ABS/NOM," "ERG/GEN," and "OBL," respectively, adopted in previous work that analyzes Puyuma as an ergative language. As Chen (2017) shows, these new labels better reflect the distributional properties of these markers—pivot-marking as a marker that is free in distribution yet tied to topic placement, "NOM" available to transitive agents and unaccusative themes, and "ACC" available to transitive objects and ECM subjects. See also Chung (1994), Richards (2000), and Pearson (2005) for a similar nominative–accusative treatment of the case systems of Chamorro, Tagalog, and Malagasy.

In Actor Voice (4a), pivot-marking falls on the phrase equivalent to the *subject* in accusative languages (i.e., transitive agents and unaccusative themes). This is seen in (5).

(5) a. Tr**<em>**akaw **na**   **bangsaran** kantu   bunga.
         steal**<AV>**   **DEF.PIVOT young.man** PN.ACC.POSS yam
         'The young man stole my yams.'   (pivot-marked agent)

    b. T**<em>**abaw **na**   **kawi** i   laliyaban.
        float**<AV>**   **DEF.PIVOT wood** LOC sea
        'The wood floats on the sea.'   (pivot-marked unaccusative theme)

In Patient Voice (4b), pivot-marking falls on the second-highest DP (usually the transitive theme) of a given finite clause. The nominative external argument is realized as a proclitic. When in third–person, the proclitic can be cross-referenced by a full DP, as in (6).

(6) **Tu**$_i$=trakaw-aw ku-bunga   **(kan   Senten)**$_i$.
     3.NOM=steal-PV 1SG.PIVOT.POSS-yam **(PN.NOM Senten)**
     'She/Senten stole my yams.'   (Patient Voice)

In Locative Voice (6c) and Circumstantial Voice (6d), the nominative argument (regardless of being a transitive agent or an unaccusatives theme) must also be realized as a proclitic. Depending on the actual voice morphology, pivot-marking falls on the locative (LV) (7a) or the instrument/benefactive phrase (CV) (7b).

(7) a. **Tu**$_i$=trakaw-ay **(kan   Senten)**$_i$ kantu   bunga i   Sawagu.
         3.NOM=steal-LV **(PN.NOM Senten)** 1SG.ACC.POSS yam   PN.PIVOT Sawagu
         'She/Senten stole my yams from Sawagu.'   (Locative Voice)

    b. **Tu**$_i$=trakaw-anay **(kan   Senten)**$_i$ kantu   bunga i   Sawagu.
        3.NOM=steal-CV **(PN.NOM Senten)** 1SG.ACC.POSS yam   PN.PIVOT Sawagu
        'She/Senten stole my yams for Sawagu.'   (Circumstantial Voice)

Puyuma's case paradigm is summarized in (8). As seen below, pivot-marking distinguishes between singular proper names (i.e., *i*) and common nouns/plural proper names (i.e., *na* for definite; *a* for indefinite). An example is given in (9).[4]

(8) *Basic argument-marking in Puyuma*

	Common noun		Personal name		Pronouns		
	definite	indefinite	singular	plural	1st singular	2nd singular	3rd singular
PIVOT	*na*	*a*	*i*	*na*	*=ku*	*=yu*	–
NOMINATIVE	*tu= ... kana*	*tu= ... dra*	*tu= ... kan*	*tu= ... kana*	*ku=*	*nu=*	*tu=*
ACCUSATIVE	*kana*	*dra*	*kan*	*kana*	*kanku*	*kanu*	*kantu*
OBLIQUE	*kana*	*dra*	*kan*	*kana*	*kanku*	*kanu*	*kantu*

(9) a. Tr<em>ima {**i   senten / na   bangsaran**} dra   bunga.
         <AV>buy {**SG.PIVOT Senten / DEF.PIVOT young.man**} INDF.ACC yam
         '{Senten / the young man} bought some yams.'

Finally, note that AV morphology in the language is sensitive to the phonetic value of the onset of the stem (Teng 2008; Cauquelin 2015). The specific allomorphic rule is in (10). All four allomorphs – *m-*, *me-*, *<en>*, and *<em>*—occur in the data cited in this paper, and their variation is purely phonologically conditioned.

(10) *AV allomorphic rule in Puyuma (Teng 2008; Cauquelin 2015)*

$$\text{AV morphology} \rightarrow \begin{cases} \textit{m-} \; \_\_V \\ \textit{me-} \; \_\_C_{liquid} \\ \textit{<en>} \; \_\_C_{bilabial} \\ \textit{<em>} \; \_\_C_{elsewhere} \end{cases}$$

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[4]As seen in (8), nominative and accusative DPs in Nanwang Puyuma (the dialect which this paper is based on) are distinguished solely by the presence or absence of a co-referential proclitic, due to case syncretism occurring to this specific dialect (Teng 2009). The accusative/oblique distinction is also not transparent in Nanwang's case-marking system and is inferred by the valency of the verb and the phrase's optionality.

2.1 The *u*-construction basics

I begin by clarifying the structure of the agentless *u*-construction, demonstrating that it is neither a canonical passive nor any other common type of derived intransitive, such as impersonal, middle, or anticausative. The construction's alternation with the two-place active construction is illustrated in (11).

(11) a. **M**-(∅)-apit=ku   dra   inupidran.
       AV-(ACT)-pile.up =1SG.PIVOT INDF.ACC garland.
       'I piled up the garlands.' (Cauquelin 2015:60)   (Philippine-type AV + active voice)

     b. **M-u**-apit(*=ku)   na   inupidran.
       AV-U-pile.up (=1SG.PIVOT) DEF.PIVOT garland.
       'The garlands are piled up.'   (Philippine-type AV + detransitive voice)

(11a) is an Actor Voice active sentence where both the agent and the undergoer are obligatorily present (unless in a context that allows pro-drop). In the *u*-marked counterpart (11b), the agent must be absent. I refer to this construction as the *u*-construction hereafter.

The *u*-construction has been reported in previous descriptions of Puyuma. *The Nanwang Puyuma Dictionary* (Cauquelin 2015) lists 245 verbs compatible with the detransitivizer *u-*. The Puyuma reference grammar (Teng 2008) also includes 25 *u*-marked verbs, with a note that 60 out of 400 verbs in the author's corpus display an AV vs. *u-* alternation (Teng 2008: 180). The construction has also been attested in naturally occurring data. A short narrative in Teng (2008) contains five instances of *u*-marked detransitivized verbs. The Puyuma Pear Story and Frog Story collected by the author also have five and four uses, respectively. This construction has also been analyzed in three recent publications. Chen (2017, 2020) analyzes it as a crosslinguistic rare type of derived intransitive. Teng (2020) analyzes it as an anticausative. A literature review of these works will be presented in the following subsections. Due to a lack of crosslinguistic comparison with detransitive constructions outside Austronesian, the nature of this construction and its typological classification remains unclear.[5]

In what follows, I first show that the *u*-construction is a specific type of passive akin to the anti-agentive passive in Sakha (Turkic) (section 2.1). I will then argue that the detransitivizer *u-* is located in Voice—the functional head that is distinct from, and located above, *v* (section 2.2).

For the sake of clarity, I use the term "agent" to refer to event participants that are agentive and volitional, in contrast to inanimate phrases that denote change-of-state events, which I refer to as "cause". In describing causatives of transitives, the terms "causer," "causee," and "theme" are used in their conventional senses. Finally, for the sake of simplicity, I follow Ramchand (2008) and Legate (2014) and use the term "initiator" to refer to an inclusive θ-role that abstracts away from the thematic distinctions among external arguments.

2.1.1 Against an impersonal analysis

The *u*-construction differs from impersonals in fundamental ways. In an AV-marked *u*-construction, the undergoer must bear pivot-marking; accusative-marking yields ungrammaticality (12a), as do unaccusative themes (and other types of intransitive subjects) in AV-marked clauses (12b). This obligatory change in case-marking indicates that there is no null thematic subject involved, following the well-accepted generalization that the highest argument in a Philippine-type AV clause must bear pivot-marking (Aldridge 2004; Rackowski and Richards 2005; Pearson 2001; Chen 2017).

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[5]Puyuma possesses a homophonous motion prefix *u-* that combines exclusively with locative nouns (Teng 2008; Cauquelin 2015; Chen 2020), as in (i). As this prefix has a distinct lexical subcategorization from the detransitivizer *u-*, I do not discuss it further. See Chen (2020) for a dedicated discussion of the diachronic relationship between these two affixes and their chronology.

     (i)   M-u-ruma'=yu,   asua?
         AV-MOT-house=2SG.PIVOT when
         'When did you come back home?' (Cauquelin 2015:437)

(12) *Puyuma*

    a. M-**u**-aleb   **{na / *kana}**   **aleban**.
       AV-U-close **{DEF.PIVOT / *DEF.ACC} door**
       'The door was closed.'   (*u*-construction)

    b. Me-redek=la   **{na / *kana}**   **sinsi**.
       AV-arrive=PFV **{DEF.PIVOT / *DEF.ACC} teacher**
       'The teacher has arrived.'   (unaccusative)

An impersonal analysis can thus be quickly ruled out. Impersonals are characterized by the absence of argument structure alternation following agent demotion, whereby the theme remains in the internal argument position and bears object-marking morphology, as observed in Icelandic (13) and Polish (14) (e.g., Maling 1993, 2010; Maling and Sigurjonsdottir 2002; Blevins 2003; Legate 2014; MacDonald 2017; Legate et al. 2020). The mandatory change in the theme's case-marking thus distinguishes the *u*-construction from impersonals.

(13) *Icelandic*

Það var lamið   stúlkuna   í klessu.
it_EXPL was hit-NEU.PN the.girl-F.PN.ACC in a.mess

'The girl was badly beaten.'   (Maling and Sigurjónsdóttir 2002: 104)

(14) *Polish*

Jana   obrabowano   po   pijanemu.
Jan.ACC robbed.IMPERS while drunk

'They robbed Jan while (they were) drunk.'   (Maling and Sigurjónsdóttir 2012: 104)

2.1.2 Against an anticausative analysis

The *u*-construction also differs from anticausatives in fundamental ways.[6] Anticausativization is standardly defined as compatible only with verbs that allow an inchoative counterpart that denotes a *spontaneous event* (Haspelmath 1993: 90). This is illustrated with the English examples (15)–(17).

(15)   a. Par broke the window.
     b. The window broke. (without external cause)

(16)   a. Antonia opened the door.
     b. The door opened. (without external cause)

(17)   a. Tracy sank the ship.
     b. The ship sank. (without external cause)   (Levin and Rappaport Hovav (RH) 1995: 79)

Accordingly, an anticausative should not be compatible with verbs of agent-oriented semantics, as the event denoted by such verbs cannot be spontaneous and require an animate and volitional agent (see Smith 1970; Haspelmath 1993: 93; Levin and Rappaport Hovav 1995: 105–6; Alexiadou, Anagnostopoulou, and Schäfer 2006: 6). In English, for example, verbs with agent-oriented semantics, such as 'assassinate' and 'write,' cannot undergo anticausativization (Levin and Rappaport Hovav 1995), (18)–(19).

(18)   a. The terrorist assassinated/murdered the senator.
     b. *The explosion assassinated/murdered the senator.   (Levin and RH 1995: 102 (43))

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[6]Two earlier descriptions of Puyuma both refer to this construction as an anticausative but do not specify the reasoning for this analysis (Teng 2008; Cauquelin 2015). Teng (2020) maintains the same view, based on the observation that the construction is compatible with a wide range of change-of-state verbs (Teng 2020: 42–44).

(19)   a. Anita Brookner just wrote a new novel.

     b. *A new novel wrote.   (Levin and RH 1995: 102 (44))

Conversely, the *u*-construction is productive with a wide range of agent-oriented bivalent verbs that do not allow an inchoative/spontaneous interpretation. Consider, for example, (20) and (21), where the construction contains the activity verbs 'catch' and 'comb,' both having low affectiveness on the undergoer. Neither of the two sentences can be interpreted as a spontaneous change-of-state result.

(20)   *Alternation with 'catch'*

     a. Dr<em>imutr=la i   Isaw kana   babuy.
        catch<AV>=PFV PN.PIVOT Isaw DEF.ACC boar

        'Isaw caught the boar.'

     b. **M-u**-drimutr=la na   babuy.
        AV-U-catch=PFV DEF.PIVOT boar

        'The boar (was) caught.'

(21)   *Alternation with 'comb'*

     a. G<em>arutr=ku   tu-ukak   dra   kuraw.
        comb<AV>=1SG.PIVOT 3.POSS-head INDF.ACC fish

        'I comb their head (hair) with fish-bones.' (Cauquelin 2015: 154)

     b. **M-u**-garutr=la na   'arbu.
        AV-U-comb=PFV DEF.PIVOT hair

        'The hair has been combed.' (Cauquelin 2015: 14)

A systematic search of existing descriptions reveals a wide range of prototypical agent-oriented verbs allowing an *u*-form, as do typical causative-inchoative verbs. A sample list of verbs reported in the literature (Teng 2008; Cauquelin 2015) to allow an *u*-form is presented below. Note that this is not an exhaustive list. See section 2.1 for a general discussion of the number of *u*-compatible verbs reported in the Puyuma literature.

(22)   *Selected list of Puyuma verbs compatible with the u-construction*

Agent-oriented verbs that disallow an inchoative counterpart	Causative-inchoative verbs
wrap, comb, catch, push, scratch, carve into a certain form, carry on one's back, prepare, light, weave, cut with a tool, handcuff, tie an animal's four legs together, kick, scald, bolt, catch with a rope, rake, lift up, shave, latch, deceive, violently beat a person, lie on the ground, squeeze, rub	melt, burn, drown, break into pieces, extinguish, dry up, crack, break, fall, overturn, scatter, bend, lean, float, ferment, derail, peel off, rust, melt in fire, fall down because rotten, sprain, untie, splash, roll, (colors) fade away, shrink, open, close

Given the *u*-construction's compatibility with verbs that disallow an inchoative counterpart, an anticausative analysis is disfavored.[7]

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[7]An anonymous reviewer asked whether the *u*-construction denotes a result or activity. A search of existing descriptions suggests that both interpretations are possible. When attached to change-of-state verbs, an *u*-construction may, but does not necessarily, denote a result interpretation. Example (ia), for instance, denotes a change-of-state result, whereas (ib) depicts an ongoing activity where the affix *u*- co-occurs with progressive morphology.

(i)   a. **M-u**-belritu' na   ukak.
        AV-U-break DEF.PIVOT bone

        'The bone is broken.' (Cauquelin 2015: 93)

     b. **M-u**-tra-trerag   tu-busisi   kana dulidul.
        AV-U-PROG-fall.down 3.POSS.PIVOT bud POSS   dulidul

        'The buds of the dulidul are falling off at the moment.' (Cauquelin 2015: 506)

When combined with agent-oriented verbs, however, only the activity interpretation is possible—consider (ii).

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2.1.3 Against a middle analysis

The *u*-construction also shows characteristics distinct from a middle voice. Although the construction may occasionally denote middle-like interpretation, as in (23a–b), it is distinguished from middles in productively allowing episodic interpretation and aspect marking (24)–(25).[8]

(23) *Middle semantics compatible with the u-construction*

    a. Salaw m-u-trima idri na   tilrin.
        very   AV-U-buy this PIVOT book

        'This book sells well.'

    b. Mames m-u-sabana' idri na   traw.
        easily   AV-U-cheat this PIVOT person

        'This person cheats easily.'

(24) a. **M-u**-disdis na   kiping.
         AV-U-tear   DEF.PIVOT clothes

        'The clothing was torn.'   (perfective)

    b. **M-u\<a\>**disdis   na   kiping.
         AV-U\<PROG\>-tear DEF.PIVOT clothes

        'The clothing is being torn now.'   (present progressive)

(25) a. **M-u**-sabana'=la i   Akang.
         AV-U-cheat=PFV PN.PIVOT Akang

        'Akang was cheated.'   (perfective)

    b. ∅**-u\<a\>**sabana'=yu   an   ma-trima=yu.
         AV.IRR-U\<PROG\>cheat=2SG.PIVOT when STAT.be.big=2SG.PIVOT

        'You will be cheated when you grow up.'   (future imperfective)

(ii) a. Tu='etr'etranay 'i,   **m-u**-sulud na   katengadrawan.
        3.NOM=jostle   TOP **AV-U**-push DEF.PIVOT chair

        'He jostled and so the chair was pushed away.' (Cauquelin 2015: 411)

    b. **M-u**-sabana'=ku.
        AV-U-cheat=1SG.PIVOT

        'I was fooled.' (Teng 2008: 190)

One other question raised by the reviewer is whether the *u*-construction could be an adjectival passive. This analysis turns out to also be disfavored for two reasons. First, adjectival passives typically denote *states* resulting from the events described by the corresponding active verbs (Doron 2014). The *u*-construction, in contrast, can denote activity, as seen earlier in 2.1.2. Second, Puyuma possesses a stative affix *ma-*—which, when attached to typical change-of-state verbs, may denote change-of-state results. This construction therefore fits better with the adjectival passive definition. Consider the following pairs of examples reported in Cauquelin (2015).

(iii) a. **M-a**-bu'ut   na   lawlaw.
        AV-STAT-extinguish DEF.PIVOT lamp

        'The lamp gets extinguished.' (Cauquelin 2015: 112)

    b. **M-u**-bu'ut=la   na   lawlaw.
        AV-U-extinguish=PFV DEF.PIVOT lamp

        'The lamp went out.' (Cauquelin 2015: 112)

According to primary fieldwork, the *u*-marked clause allows cause-denoting phrases such as 'due to wind' (iv). The same adjunct is, however, highly disfavored for the *ma*-marked construction, as seen in (46a). This suggests that the *ma*-marked clauses denotes a state, while the *u*-construction may denote an activity.

(iv) a. **M-a**-bu'ut   na   lawlaw (??dra   balri).
        AV-STAT-extinguish DEF.PIVOT lamp   INDF.OBL wind

        'The lamp gets extinguished (??due to wind).'

    b. **M-u**-bu'ut=la   na   lawlaw (dra   balri).
        AV-U-extinguish=PFV DEF.PIVOT lamp   INDF.OBL wind

        'The lamp went out *due to wind*.' (Cauquelin 2015: 112)

[8]Degree adverbs in Puyuma, such as *salaw* in (23a), do not carry voice morphology or license voice alternation. The same applies with manner adverbs such as *mames* 'easily' that are not adverbial verbs (which carry voice-marking). It remains unclear what conditions the compatibility between specific adverb-like elements and voice-marking, a question that is beyond the scope of this paper and awaits future investigation.

This characteristic clearly distinguishes the *u*-construction from middles across languages, which are incompatible with temporal expressions, as in (26), and grammatical aspect marking, as in (27) (Keyser and Roeper 1984; Fagen 1988). A middle analysis therefore does not fit well either.

(26) a. ?Yesterday, the mayor bribed easily, according to the newspaper.
      b. ?At yesterday's house party, the kitchen wall painted easily. (Keyser and Roeper 1984:384))

(27) a. *Chickens are killing.
      b. *Bureaucrats are bribing.
      c. *The walls are painting. (Keyser & Roeper 1984:385 (14b))

2.1.4 Against a canonical passive analysis

The *u*-construction also differs from canonical passives in three important regards. Canonical passives feature a syntactically active external argument, hence their compatibility with (i) agent-denoting PPs (*by*-phrases) (e.g., Zubizarerreta 1982; Roberts 1985; Jaeggli 1986; Baker et al. 1989), (ii) agent-oriented adverbial verbs (e.g., Jackendoff 1972; Zubizarreta 1982), and (iii) purpose clauses with an implicit subject (Keyser and Roeper 1984; Baker et al. 1989). These properties are illustrated below with examples from English, German, and Afrikaans in (28)–(30).

(28) a. *English*
          The door was opened (✓by Mary).
      b. *German*
          Die Vase wurde (von Peter) zerbrochen.
          the vase was   (✓by Peter) broken

          'The vase was broken (by Peter).' (Alexiadou et al. 2006: 184–5)

(29) a. *English*
          The banana was eaten (*secretly*).
      b. *German*
          Die Banane wurde (*heimlich*) gegessen.
          the banana was   secretly   eaten

          'The banana was eaten secretly.'

(30) a. *English*
          The buildings were burned to collect insurance. (Keyser and Roeper 1984: 407 (79a))
      b. *Afrikaans*
          Die skip is gesink om die vyand se   aandag   af te lei.
          DET ship is sunk   to the enemy POSS attention off to lead

          'The ship was sunk to lead away the enemy's attention.' (Lennox p.c.)

The *u*-construction behaves differently in all three regards. To begin with, it is incompatible with agent-denoting adjuncts (*by*-phrases), as seen in (31).

(31) *Incompatibility of the u-construction with agent-denoting PPs*
      a. **M-u**-sabsab na   palridring (*kana   traw/*dra   traw/*kan   Isaw).
          AV-U-wash DEF.PIVOT car   (*DEF.OBL person/*INDF.OBL person/*PN.OBL Isaw)
          'The car was washed (*by the person/*by someone/*by Isaw).'
      b. **M-u**-deru na   kuraw (*kandrina traw/*dra   traw).
          AV-U-cook DEF.PIVOT fish   (*that.OBL person/*INDF.OBL someone)
          'The fish was cooked (*by that person/*by someone).'

This constraint (informed by grammaticality judgement tests) has also been noted by other researchers. Teng (2008) notes that adjuncts containing an animate DP are possible for an *u*-construction only if the action was carried out unintentionally (in which case the animate DP is not a genuine agent). One of such examples given in her work is quoted in (32), with a supplemental note that the flowers were stepped on accidentally (Teng 2008: 180).

(32) Ku=s<in>alrem   na   'aputr i, **m-u**-dupa' dra   gung.
      1SG.POSS=plant<PV.NMLZ> DEF.PIVOT flower TOP **AV-U-**step INDF.OBL ox
      'The flowers I planted, they were stepped on *by an ox*.' (Teng 2008: 180)

In line with this observation, all adjuncts occurring in *u*-constructions reported by Teng (2008) and Cauquelin (2015) (40 total instances) contain an inanimate DP that denotes a cause (and not a volitional agent). The only exception is (33), in which the human DP 'the chief' is arguably not a typical agent and may be interpreted as an indirect cause (i.e., the one who asks the villagers to gather, rather than who physically gathers them).[9]

(33) M-u-adruk   na   drinekalanan kana   yawan.
      AV-U-gather DEF.PIVOT villager   DEF.OBL chief
      'The villagers have been gathered *by the chief*.' (Cauquelin 2015: 48)

The *u*-construction also contrasts with passives in its incompatibility with agent-oriented adverbial verbs. While adverbial verbs such as 'secretly' and 'deliberately' can freely modify an active sentence marked in any voice type (e.g., AV and PV), (34b–c) and (35b–c), they cannot occur in an *u*-construction, as in (34a) and (35a).[10]

(34) *Puyuma*[11]
      a. (***Tr<em>akatrakaw**) **m-u**-ekan na   kuraw.
         (**secretly<AV>**)   AV-U-eat DEF.PIVOT fish
         'The fish was eaten (*secretly).'   (*u*-construction)

      b. (✓**Tr<em>akatrakaw**) **m**-ekan na   ngiyaw kana   kuraw.
         (**secretly<AV>**)   AV-eat DEF.PIVOT cat   DEF.ACC fish
         'The cat ate the fish (secretly).'   (AV counterpart of (41a))

      c. (✓**Tu=trakatrakaw-ay**) **m**-ekan kana   ngiyaw na   kuraw.
         (3.NOM=**secretly-LV[PV]**) AV-eat DEF.NOM cat   DEF.PIVOT fish
         'The cat ate the fish (secretly).'   (PV counterpart of (41a))

(35) *Puyuma*
      a. (***Paleteng**)   **m-u**-disdis na   katrakatr.
         (**deliberately.AV**) AV-U-tear DEF.PIVOT pants
         'The pants were torn (*deliberately).'   (*u*-construction)

      b. (✓**Paleteng**)   d<em>isdis na   walak kantu-katrakatr.
         (**deliberately.AV**) <AV>tear DEF.PIVOT child 3.POSS.ACC-pants
         'The child tore his pants (deliberately).'   (AV counterpart of (42a))

      c. (✓**Tu=paleteng-ay**)   d<em>isdis kana   walak tu-katrakatr.
         (3.NOM=**deliberately-LV[PV]**) <AV>tear DEF.NOM child 3.POSS.PIVOT-pants
         'The child tore his pants (deliberately).'   (PV counterpart of (42a))

---

[9] Note that the ungrammaticality of the *by*-phrases in (31) has nothing to do with definiteness. AV clauses in Puyuma can contain definite objects or obliques, although definite and topical objects tempt the use of Patient Voice. See Teng (2008) and Cauquelin (2015) for specific examples.

[10] Many but not all adverbial verbs in Puyuma function as manner adverbs, carry voice morphology, and display the same four-way voice alternation observed on activity verbs. This is different from degree adverbs such as 'very' (23a), which do not participate in voice alternation.

[11] In Puyuma, a number of Patient Voice verbs take LV morphology. The verb 'buy' *trima* (37)-(38) and the adverbial verbs 'secretly' and 'deliberately' in (35) are three of such examples—they select a pivot theme instead of a typical locative phrase as the pivot. Here and throughout the paper, such verbs are glossed as LV[PV].

This asymmetry highlights the difference between canonical passives and the *u*-construction, suggesting that the latter does not possess a syntactically active external argument.

Finally, the *u*-construction is also unable to license adjunct clauses that contain an implicit subject, unlike passives (36a–b).

(36) a. Bureaucrats were bribed to keep them happy.　　　　(Keyser and Reoper 1984: 407 (78a))

　　 b. The buildings were burned to collect insurance.　　　(Keyser and Reoper 1984: 407 (79a))

Consider below the purpose clauses in (37) and (38). While the adjunct clauses 'to give to Atrung' and 'to cook tomorrow' can freely occur with an active construction (in either AV or PV), (37b–c) and (38b–c), they cannot modify an *u*-construction. The grammatical PV examples (37c) and (38c) are particularly important, as they show that an agent need not be the pivot to be able to grammatically control the adjunct clause.

(37) a. M-u-trima na　　　　kuraw (**dra ba-beray-an　　kan　　Atrung**).
　　　 AV-U-buy DEF.PIVOT fish　 LK　 IRR-give-NMLZ PN.ACC Atrung
　　　 'The fish was bought (*to give to Atrung).'　　　　　　　　　(*u*-construction)

　　 b. Tr<em>ima=ku　　　　dra　　　kuraw (**dra ba-beray-an　　kan　　Atrung**).
　　　 <AV>buy=1SG.PIVOT INDF.ACC fish　 LK　 IRR-give-NMLZ PN.ACC Atrung
　　　 'I bought fish (to give to Atrung).'　　　　　　　　　　　　(Active, AV)

　　 c. Ku=trima-ay　　　　na　　　　kuraw (**dra ba-beray-an　　kan　　Atrung**).
　　　 1SG.NOM=buy-LV[PV] DEF.PIVOT fish　 LK　 IRR-give-NMLZ PN.ACC Atrung
　　　 'I bought this fish (to give to Atrung).'　　　　　　　　　(Active, PV)

(38) a. M-u-trima na　　　　patraka (**dra da-deru-an　　andaman**).
　　　 AV-U-buy DEF.PIVOT meat　 LK　 IRR-cook-NMLZ tomorrow
　　　 'This fish was bought (*to cook tomorrow).'　　　　　　　(*u*-construction)

　　 b. Tr<em>ima=ku　　　　dra　　　kuraw (**dra da-deru-an　　andaman**).
　　　 <AV>buy=1SG.PIVOT INDF.ACC fish　 LK　 IRR-cook-NMLZ tomorrow
　　　 'I bought fish (to cook tomorrow).'　　　　　　　　　　　(Active, AV)

　　 c. Ku=trima-ay　　　　na　　　　patraka (**dra da-deru-an　　andaman**).
　　　 1SG.NOM=buy-LV[PV] DEF.PIVOT meat　 LK　 IRR-cook-NMLZ tomorrow
　　　 'I bought the meat (to cook tomorrow).'　　　　　　　　　(Active, PV)

We can thus conclude that the *u*-construction lacks a syntactically active external argument, and is distinct from canonical passives.

2.1.5 The *u*-construction as an anti-agentive construction

To sum up, the *u*-construction is a rare type of derived intransitive characterized by (i) high productivity with bivalent verbs (both causative-inchoative verbs and verbs of agent-oriented semantics) and (ii) absence of a syntactically active initiator θ-role. It differs from impersonals in requiring the theme to bear the morphological marking typically found on subjects (2.1.1). It also differs from anticausatives in its compatibility with bivalent verbs that cannot denote spontaneous inchoative events (2.1.2). It is distinct from middles in allowing grammatical aspect-marking and an episodic interpretation (2.1.3). It is also not a canonical passive, which should be compatible with agent-denoting adjuncts (*by*-phrases), agent-oriented adverbs, and adjunct clauses that contains an implicit agent (2.1.4). Key traits of this construction are summarized in (39).

		the *u*-construction	Canonical passives	Anticausatives	Middles
(39)	Compatible with agent-oriented bivalent verbs	✓	✓	✗	✓
	Compatible with causative-inchoative verbs	✓	✓	✓	✓
	Compatible with agent-denoting PPs	✗	✓	✗	✗
	Compatible with cause-denoting PPs	✓	✓	✓	✗
	Compatible with agent-oriented adverbs	✗	✓	✗	✗
	Able to license purpose clauses	✗	✓	✗	✗

When Philippine-type voice meets Indo-European–type voice

Given this observation, the *u*-construction closely resembles a special type of passive reported in Sakha (Turkic) that can be termed "anti-agentive".[12] According to Ebata (2013) and Tan and Kühlert (2020), this construction also features incompatibility with *by*-phrases (i.e., adjuncts encoding specific human agent DPs) and is highly productive with cause-denoting PPs, as in (40)–(41).

(40) *Sakha*

    a. tynnyk **mah-ɨnan** alʃat-illi-bit.
        window **tree-INS** break-PASS-R.PST.3SG
        'The window was broken *using wood*.'

    b. oju:r-ga   uol **mah-ɨnan** tarba-nɨlli-b.
        forest-LOC boy **tree-INS** scratch-PASS-R.PST.3SG
        'In the forest, the boy was scratched *using wood*.' (Tan & Kühlert 2020:143)

(41) *Sakha*

    *tynnyk **uol-unan** alʃat-illi-bit.
    window **boy-INS** break-PASS.R.PST.3SG

    '(intended: 'The window was broken by the boy.') (Ebata 2013: 23)

The *u*-construction, similarly, is highly compatible with cause-denoting adjuncts. According to existing descriptions, such adjuncts may encode causes ranging from natural forces (42a–e), inanimate cause (42f–g) and pure instruments (42h) (i.e., instruments conceived as strictly auxiliary to the action of the agent), to instrument causers (42i) (i.e., instruments conceived as acting on their own once the agent has applied them; see definition discussed in Kamp and Rossdeutscher 1993 and Alexiadou and Schäfer 2006).

(42) a. M-u-ba'itr na   ruma' (✓dra   apuy).
        AV-U-burn DEF.PIVOT house INDF.OBL fire
        'The house was burned *with fire*.'

    b. M-u-deru na   patraka (✓dra   kadaw).
        AV-U-cook DEF.PIVOT meat   (INDF.OBL sun)
        'The meat (was) cooked *with sunshine*.'

    c. M-u-truwal na   aleban (✓dra   balri).
        AV-U-open DEF.PIVOT door   (INDF.OBL wind)
        'The door opened *due to wind*.'

    d. M-u-sabsab na   palridring (✓dra   udal).
        AV-U-wash DEF.PIVOT car   (INDF.OBL rain)
        'The car (was) washed *by rain*.'

    e. M-u-trukul kana   bariwan na   kulrang.
        AV-U-bend DEF.OBL typhoon DEF.PIVOT vegetable
        'The vegetables are bent over *by the typhoon*.' (Cauquelin 2015: 513)

    f. M-u-lrelrep dra   kualrengan i   nanali.
        AV-U-chase INDF.OBL disease   DEF.PIVOT my.mother
        'My mother was infected *with a disease*.' (Teng 2008: 94)

    g. **M-u**-puar   na   suan dra   paletrutrukan.
        AV-U-escape DEF.PIVOT dog INDF.OBL firecracker
        'The dog was frightened away *because of firecrackers*.' (Teng 2008: 179)

    h. M-u-alrangatrip na   kulrabaw kana   petrir.
        AV-U-pinch   DEF.PIVOT rat   DEF.OBL trap
        'The rat has been caught *by the trap*.' (Cauquelin 2015: 52)

---

[12]Thanks to an anonymous reviewer for bringing this up.

13

    i. M-u-bakenan=la   na   ’aleban.
                 AV-U-barbed.arrow=PFV DEF.PIVOT door

          ‘The door is closed *with the bamboo bar.*’ (Cauquelin 2015: 71)

    j. M-u-paresi na   beras kana   pararesian.
                AV-U-water DEF.PIVOT rice   DEF.OBL watering.sprinkler

          ‘The rice has been watered *with the watering sprinkler.*’ (Cauquelin 2015: 295)

Different from the *u*-construction, however, in Sakha's anti-agentive constructions, PPs containing nonspecific humans may be overtly expressed as *by*-phrases, as seen in (43).

(43) *Sakha*

žie-m   **saxa uus-tar-ɯ-nan**   tut-ullu-but.
house-PASS.1SG **Sakha craftsman-PL-POSS.3SG-INST** build-PASS-PASS:3SG

‘My house was built by Sakha craftsmen.’ (Ebata 2013: 23)

In light of this phenomenon, a dialectal variation in Puyuma deserves a note. While all available data suggests that agent-denoting adjuncts are banned from Nanwang Puyuma's *u*-construction and cause-denoting adjuncts are usually indefinite, the equivalent construction in Katripul Puyuma is reported to allow both definite *by*-phrases and definite cause-denoting adjuncts (Teng 2020: 45–46). This suggests that the *u*-construction may be in the process of developing into a full-fetched canonical passive.

A similar type of anti-agentive construction has also been reported in several other language families. Mandarin, for example, exhibits a similar activity-denoting one-place construction compatible with agent-oriented bivalent verbs (Martin et al. 2020), (44).

(44) *Mandarin*

Nei wazi xi-le,   dan genben mei   xi-ganjing.
that sock wash-PFV but at.all   NEG.PFV wash-clean

‘These socks washed, but they didn't get clean at all!’ (Martin et al. 2020: 18)

Salish (Davis and Demirdache 2000) and Hindi Urdu (Bhatt and Embick 2017) also possess a similar agentless construction formed with unmarked bivalent verbs (45)–(46). Note, however, that these three constructions are all morphologically unmarked, distinct from the *u*-construction and the anti-agentive passive in Sakha.

(45) *Hindi Urdu*

makan jal rahaa hai.
house.M burn PROG.M be.PRS

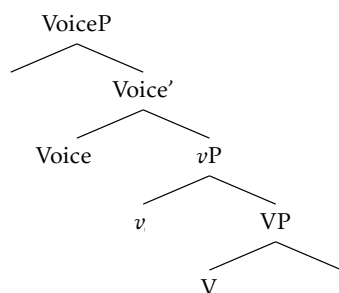‘The house is burning.’ (Bhatt and Embick 2017: 105)

(46) *Salish*

qam't ti   sqáycw-a.
hit   DET man-DET

‘The man was hit (with something thrown).’ (Davis and Demirdache 2000: 100)

To conclude, the *u*-construction is a special type of anti-agentive passive that features (i) high productivity with bivalent verbs, (ii) high productivity with cause-denoting adjuncts, and (iii) the complete absence of a syntactically active initiator θ-role, as reflected by incompatibility with *by*-phrases.
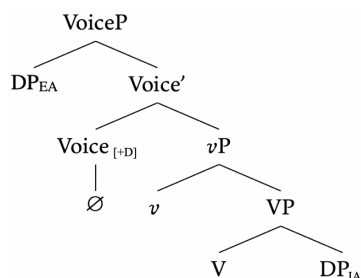
2.2 *u*- marks defective Voice

I turn now to the structure of the *u*-construction, focusing on the locus of the detransitivizer *u*-. Following recent tripartite approaches to verb phrase structure, I assume that a verb phrase contains three layers (47)—Voice, which is responsible for introducing the external argument and accusative Case assignment; *v*, which is responsible for verbalizing the root and encoding event types; V, which introduces and θ-licenses the internal argument (see Kratzer 1994, 1996; Pylkkänen 2002; Alexiadou et al. 2006; Harley 2009, 2013; and Legate 2014 for the theoretical and empirical grounding for this approach).

(47)   *Verb phrase structure with a Voice/v distinction*

```
        VoiceP
          \
          Voice'
          /    \
      Voice      vP
              /    \
             v      VP
                     \
                      V
```
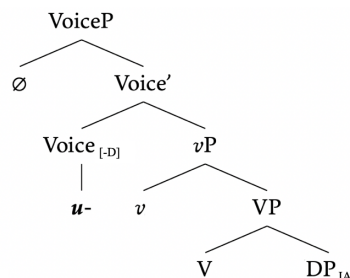
I propose that the *u*-construction contains a deficient, non-agentive Voice head spelled out as *u*-, schematized as Voice[-D] below in (48b). This Voice head is incapable of introducing an external argument. Nor can it case-license the internal argument. Consequently, the *u*-construction has no accusative case available to the theme and disallows an external argument. The active counterpart of the *u*-construction, I propose, contains an active Voice head that is morphologically null (48b), as it is in most other languages. This head is free to introduce an external argument and assigns structural accusative case to the internal argument. See Schäfer (2008) and Wood (2015), as well as Kastner (2020), Nie (2020), Oseki (2017), and Tyler (2020) for a similar Voice[-D] approach to detransitive Voice.

(48)   *a. active voice*   *b. deficient voice*

```
        VoiceP                              VoiceP
        /    \                              /    \
   DP_EA     Voice'                       ∅      Voice'
             /    \                              /    \
      Voice_[+D]   vP                      Voice_[-D]   vP
          |       /  \                         |       /  \
          ∅      v    VP                      u-      v    VP
                     /  \                              /  \
                    V   DP_IA                         V   DP_IA
```

One key trait of the *u*-construction—that it can freely combine with cause-denoting adjuncts (2.1.5) but not agent-denoting ones (2.1.4)–follows from this analysis. Agentivity and causation have been argued to be syntactically represented in distinct functional heads (Pylkkänen 2002; Alexiadou et al. 2005 et seq.), according to which different types of adjunct PPs are also licensed by different structural layers that host the relevant semantic features. Specifically, agent-denoting PPs (*by*-phrases) are attached to the Voice layer and cause-denoting PPs to the *v* layer, where causative semantics are introduced (Alexiadou et al. 2006 et seq.). The *u*-construction's (in)compatibility with agent-denoting vs. cause-denoting adjuncts follows from this assumption. Under the current analysis, *by*-phrases are incompatible with the proposed defective Voice layer given the [-D] feature on Voice (48b), which semantically restricts the initiator θ-role. Cause-denoting adjuncts are predicted to be freely compatible with the construction, as causation is licensed in a distinct, non-defective, functional head (*v*), hence its ability to license adjuncts.

The current analysis makes a testable prediction: *u*- should be compatible with anticausative and prototypical unaccusative interpretations, as such verbs should be compatible with Voice[-D]. This prediction is borne out. As seen earlier in 2.1.2, this affix is productive with causative-inchoative verbs. A considerable number of

unaccusative verbs have also been reported to allow an *u*-form (e.g., *m-u-lemes* 'to disappear,' *m-u-banban* 'to rise,' *m-u-atel* 'to fall,' and *m-u-ra'ut* 'to drown'), many of which employ an unmarked two-place counterpart, as in (49)–(50). Puyuma therefore displays an alternation that can be termed *anticausative alternation* (Haspelmath 1993), where the causative verb form is basic and the inchoative form is derived.

(49) *Anticausative alternation with 'fall'*

    a. M-u-trerag   tu-busisi   kana lratru'.
       AV-U-fall.down 3.POSS.PIVOT-bud POSS mango
       'The buds of the mango tree have fallen off.' (Cauquelin 2015: 506)

    b. Tr\<em>erag=ku   dra   paysu.
       fall.down\<AV>=1SG.PIVOT INDF.ACC money
       'I throw money to the winds.' (Cauquelin 2015: 468)

(50) *Anticausative alternation with 'sink'*

    a. M-u-tenep na   sasudang i   ine'.
       AV-U-sink DEF.PIVOT boat   LOC sea
       'The boat sank in the sea.' (Cauquelin 2015: 468)

    b. T\<em>enep=ku   dra   barasa' i   dinun.
       sink\<AV>=1SG.PIVOT INDF.ACC stone   LOC jar
       'I threw a stone in the jar.' (Cauquelin 2015: 468)

2.2.1 *u-* is hosted above *v*

If *u-* is indeed the spell-out of Voice, there should be independent evidence that this affix is located immediately above *v* and below any functional projection external to VoiceP (the core verbal projections), such as Aspect. Below I present specific evidence for this using the Mirror Principle (Baker 1985; Harley 2013) in the following discussion. As is well–known, the Mirror Principle assumes a direct correspondence between syntax and morphological derivations (51).

(51) *The Mirror Principle* (Baker 1985: 375)

    Morphological derivations must directly reflect syntactic derivations (and vice versa).

Let us begin with evidence for *u-* as hosted above *v*. Consider the below examples of detransitivized causatives, where the detransitivizer *u-* obligatorily surfaces to the left of the causative affix *pa-* and the lexical verb. I take the causative affix to be the morphological reflex of v_{CAUS}, given that the affix is used productively in productive causatives.[13]

(52) a. M-**u-pa**-resis   na   raman.
        AV-U-CAUS-intersperse DEF.PIVOT weed
        'The weed was made interspersed.' (Cauquelin 2015: 380)   (detransitivized causative)

    b. M-**u-pa**-garasgas   na   aloutr'.
       AV-U-CAUS-poke.around.in.something DEF.PIVOT bag
       'The bag has been searched.' (Cauquelin 2015: 153)   (detransitivized causative)

---

[13]The use of this affix in a productive causative is illustrated below in (ia–c).

(i) a. Me-resis   a   kipikiping i   kiyaedrengan.
       AV-spread.out INDF.PIVOT clothes   LOC bed.
       'The clothes scattered on a/the bed .'

    b. ∅-**pa**-resis=**ku**   dra   bira' i dadare.
       AV-CAUS-spread.out=**1SG.PIVOT** INDF.ACC leaf LOC ground
       'I spread the leaves on the ground.'

    c. Ku=**pa**-resis-aw   **na**   **bira'** i dadare.
       1SG.NOM=CAUS-spread.out-PV **DEF.PIVOT leaf** LOC ground
       'I spread the leaves on the ground.'

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   c. M-**u-pa**-depe'   na   tamaku.
      AV-U-CAUS-inflame DEF.PIVOT cigarette
      'The cigarette was made inflamed.'   (detransitivized causative)

Assuming the Mirror Principle holds, Voice should be encoded into morphology after V and v are incorporated. This predicts that the detransitivizer u-—if it is the morphological reflex of Voice—should surface farther from the lexical verb than causative morphology, whereby the order of the three should be *u-pa*-verb (i.e., Voice-v-V), as exactly observed in (52a–c). The data above thus suggest that u- is indeed hosted in a projection above v and V. Notice also that the Philippine-type AV morphology surfaces to the left of this detransitivizer. We will return to this in Section 3.

The second argument for u- as hosted above v comes from the affix's unavailability in restructuring infinitives. Puyuma possesses a type of infinitival clause selected by aspectual and *try*-type verbs that shows the hallmarks of restructuring infinitives (Wurmbrand 2001 et seq.). A lack of clause boundedness effects observed with this type of infinitive includes clitic climbing, long-distance case-licensing, and the absence of the complementizer, as in (53).

(53)   *Infinitive vs. finite CP complement in Puyuma*

     Tu=talam-ay=*(**ku**)   [INF (*****dra**) ∅-pa-uka   (*****kanku**) i   Balangaw].
     3.NOM=try-LV[PV]=*(1SG.PIVOT) [INF (*C)   AV/DEFV-CAUS-go (*1SG.ACC) LOC Taitung   ]

     'S/he tried to send me (make me have been) to Taitung.'

As seen above, the internal argument of the embedded clause obligatorily surfaces in the matrix clause as an enclitic. This enclitic must surface in pivot form, indicating that it is case-marked as a matrix element. As predicted, such infinitives cannot carry a complementizer, in contrast to finite CP complements (54).

(54)   Ma-ladram=ku   [CP *****(**dra**) d⟨em⟩a-deru i   isaw dra   bitrenum].
     AV-know=1SG.PIVOT [CP *(C) ⟨AV⟩RED-cook PN.PIVOT Isaw INDF.ACC egg   ]
     'I know that Isaw is cooking eggs now.'

Following the standard analysis, I assume the lack of clause boundedness effects shown in (53) results from the infinitive's lack of a Voice layer (Wurmbrand 2001 *et seq*.). This analysis predicts that the reflex of v should be available inside the infinitive, while the reflex of Voice should not. This prediction is borne out exactly by (55)–(56): while the causative affix *pa-* (reflex of v) can freely occur in the infinitive (55), u- cannot, as seen in (56). This asymmetry thus reinforces the current claim that u- is the spell-out of Voice.[14]

(55)   T⟨em⟩alam=ku   ✓ [INF ∅-**pa**-senay   kan   Senten].
     try⟨AV⟩ =1SG.PIVOT ✓ [INF AV/DEFV-**CAUS**-sing PN.ACC Senten]

     'I tried to make Senten sing.'

(56)   *T⟨em⟩alam=ku   [INF adri (m-)**u**-sabana'   ].
     try⟨AV⟩ =1SG.PIVOT [INF NEG (AV/DEFV)-**U**-cheat]
     (intended: 'I tried to not get cheated.')

Note that the ungrammaticality of (56) is not due to the use of negation. Consider (57), where negation is used within the infinitive selected by the same matrix verb.[15]

(57)   T⟨em⟩alam=ku   [INF adri m-ekan   dra   tamaku].
     try⟨AV⟩ =1SG.PIVOT [INF NEG AV/DEFV-eat INDF.ACC cigarette]
     (intended: 'I tried not to smoke.').

---

[14]See Legate (2014: 16–17) for a similar diagnostic for Acehnese, where the third-person politeness affix *geu-* (as well as the third-person familiar affix *ji-*) are analyzed as the reflex of Voice given their unavailability within restructuring infinitives.

[15]The embedded AV morphology in these examples is labeled as AV/DEFV following a common assumption in the Formosan literature that the apparent AV morphology is a type of post-syntactic insertion due to a ban on unmarked lexical verbs. The reason that the embedded verbal complex *pa-senay* in (55) is unmarked is that AV/default voice morphology is often exceptionally null when attached to stems with a bilabial onset (e.g., *p-* in (55)). See Teng (2008) and Cauquelin (2015) for details. See Levin (2015) for a detailed discussion. See also Chung (2004) for a similar analysis of the voice-marking constraints on Chamorro's restructuring infinitives.

2.2.2 *u-* is hosted below grammatical aspect

I turn now to the empirical support for the Voice-indicating affix *u-* being located *below* grammatical aspect (viewpoint)—assuming grammatical aspect is encoded outside the core verbal projections (e.g., Demirdache and Uribe-Etxebarria 1997, 2000, 2004; Cinque 1999).

Progressive morphology in Puyuma surfaces as an infix <*a*> when attached to vowel-initial stems (58a). When attached to consonant-initial bases, it is encoded as *Ca*-reduplication, i.e., iteration of the onset of the base following by an epenthesized vowel *a* (Teng 2008: 41), such as the syllables *sa, da, ka*, and *ga* in (58b).

	a. VOWEL-INITIAL STEMS		b. CONSONANT-INITIAL STEMS	
(58)	u<*a*>arak	'be dancing'	*sa*-senay	'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'

All *u*-marked detransitivized verbs in Puyuma obligatorily employ the infix <*a*> in the progressive, regardless of whether their lexical verb is consonant-initial or vowel-initial, as seen in (59). This observation indicates that *u-* is encoded into morphology before the insertion of progressive morphology, so the verbal complex *u*+VERB is treated as a vowel-initial stem.

(59)	a. m-u<a>disdis	'being torn'
	b. m-u<a>lriyus	'be turning around'
	c. m-u<a>deru	'being roasted/cooked'
	d. m-u<a>atel	'being falling'

Assuming the Mirror Principle holds, this indicates that *u-* is hosted in a projection *below* grammatical aspect, in line with the current claim that it is the spell-out of Voice. Notice also that the current fact also places AV morphology—which surfaces to the left of the verbal complex *u*<*a*>ROOT—above at least this AspP, the locus of which will be discussed further in Section 3.

2.3 Interim conclusion

I have argued that the *u*-construction is a crosslinguistically rare type of anti-agentive construction that features the complete absence of the initiator θ-role. The affix *u-* is the reflex of a defective Voice head (proposed Voice[-D]) located above *v* and below Aspect. Accordingly, the two-way alternation marked by *u-* is a true case of *voice alternation* hosted within VoiceP, akin to Indo-European–type active–passive alternation.

3 Philippine-type voice in Puyuma does not mark Voice

I turn now to the locus of Philippine-type voice alternation. Recall that this alternation co-occurs and intertwines with the *u*-marked two-way alternation. In sentences marked in Philippine-type Actor Voice, a bivalent verb can take either an unmarked active structure (60a), or an *u*-marked agentless structure (60b).

(60)   a.   **M-∅**-a<a>piyar   i   Atrung dra   bira' i   dadare.
        AV-ACT-<PROG>spread PN.DEF Atrung INDF.ACC leaf   LOC ground
        'Atrung is spreading leaves on the ground.'   (Philippine-type AV + active voice)

       b.   **M-u**-apiyar   na   bira' i   dadare.
        AV-U-spread DEF.PIVOT leaf   LOC ground
        'The leaves (were) spread on the ground.'   (Philippine-type AV + detransitive voice)

The *u*-marked alternation can also occur in LV and CV clauses. Without the detransitivizer, a simple clause with an LV-marked bivalent verbs must contain an agent/external argument (61a). Where the detransitivizer is present, the agent must be absent. The clause changes from three-place to two-place, with only the theme 'mango' and the location present (61b). In this example, the nominative proclitic *tu*= cross-references the theme 'mango.'

(61) *Voice alternation with Philippine-type Locative Voice*

    a. Tu=∅-atel-**ay**   dra   ladru ku-aleban.
        3.NOM=ACT-drop-LV INDF.ACC mango 1SG.PIVOT.POSS-door

        'He threw a mango to my door.'   (Philippine-type LV + active voice)

    b. Tu$_i$=u-atel-**ay**   ku-tranguru   kana   ladru$_i$.
        3.NOM=U-drop-LV 1SG.PIVOT.POSS-head (DEF.NOM mango)$_i$

        'The mango dropped on my head.'   (Philippine-type LV + passive voice)

CV morphology may also co-occur with the *u*-marked alternation, as in (62). The suffix *-an* in (62b) is the imperative form of Puyuma's CV morphology. See (67) for Puyuma's complete voice paradigm.[16]

(62) a. Ku=∅-aleb-**anay**   dra   aleban i   sawagu.
        1SG.NOM=ACT-close-CV INDF.ACC door   SG.PIVOT Sawagu.

        'I closed a/the door for Sawagu.'   (Philippine-type CV + active voice)

    b. U-aleb-**an**   i   sawagu! (Context given by the consultant: Magician speaking to a door)
        U-close-**CV.IMP** SG.PIVOT Sawagu

        '(You) close for Sawagu!'   (Philippine-type CV + passive voice)

3.1   Previous debates on the locus of Philippine-type voice

That Philippine-type voice can co-occur with true cases of voice alternation raises renewed interests towards a longstanding question in Austronesian syntax. Over the past few decades, the locus of Philippine-type voice has triggered a central debate (see, e.g., McKaughan 1958; Ramos 1974; Schachter and Otane 1972; Keenan 1976; Payne 1982; Ramos and Bautiste 1986; Foley and Van Valin 1984; Kroeger 1991; Mithun 1994; Richards 2000; Aldridge 2004; Rackowski and Richards 2005; Pearson 2001, 2005; a.o.). Existing analyses have either located the four-way morphology within VoiceP (as valency-indicating morphology) or placed it high in the left periphery (as Ā-agreement morphology). Due to a general lack of systematic diagnostics and inter-language comparison, however, the debate remains unsettled (see Chen and McDonnell 2019 for an overview).

A key assumption associated with the VoiceP approach to Philippine-type voice is that these langauges exhibit an ergative case alignment. In this view, Philippine-type voice affixes realize individual Voice and applicative heads, which promote the highest internal argument to the absolutive (e.g., Blake 1925; Wolff 1973; Payne 1982; Mithun 1994; Maclachlan 1996; Chang 1997; Ross 2002; Aldridge 2004, 2012, 2017; Teng 2008). The main assumptions of this analysis are summarized in (63) (Maclachlan 1996; Chang 2013; Aldridge 2004, 2012, 2017).

(63) *The ergative/valency-changing approach to Philippine-type voice (Aldridge 2004 et seq.)*

a. ACTOR VOICE AFFIX	intransitive Voice
b. PATIENT VOICE AFFIX	transitive Voice
c. LOCATIVE VOICE AFFIX	high APPL (with null transitive Voice)
d. CIRCUMSTANTIAL VOICE AFFIX	high APPL (with null transitive Voice)

A well-adopted analysis known as the case agreement approach also places Philippine-type voice within VoiceP (Rackowski and Richards 2005). The central proposal is that Philippine-type voice is a type of inflectional morphology that realizes the case status of the DP agreeing with Voice: nominative ("AV"), accusative ("PV"), dative ("LV"), and oblique ("CV"). This analysis is summarized in (64).[17]

(64) *The case agreement approach to Philippine-type voice (Rackowski and Richards 2005)*

a. ACTOR VOICE AFFIX	NOM agreement
b. PATIENT VOICE AFFIX	ACC agreement
c. LOCATIVE VOICE AFFIX	DAT agreement (inherent case from low APPL)
d. CIRCUMSTANTIAL VOICE AFFIX	OBL agreement (inherent case from high APPL)

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[16] Unlike the other three voices, PV morphology cannot occur with *u-*. This asymmetry is expected given that PV constructions require a direct object in pivot status (see (6b) in Section 2) while a direct object is absent in derived intransitives. Ditransitive verbs in Puyuma are incompatible with the *u*-construction for independent reasons. Recall that the construction allows neither an external argument nor agentive *by*-phrases. This restricts its compatibility with prototypical ditransitive verbs, all of which select a human/animate agent.

[17] The label 'Voice' in (64) correlates with *v* in Rackowski & Richards (2005), as the authors do not draw a distinction between Voice (the external argument-introducing head) and *v* (the verbalizer).

In contrast, the accusative approaches to these languages place Philippine-type voice in the left periphery (Chung 1994, 1998; Richards 2000; Pearson 2001, 2005; Chen 2017, 2021a). A shared view among these works is that Philippine-type voice is a type of Ā-agreement that inflects for the grammatical role of an Ā-phrase (topics and relativized phrases)—"AV" morphology constitutes topic agreement with the grammatical subject, "PV" topic agreement with the direct object, and "LV" and "CV" morphology the same type of Ā-agreement with the locative and a phrase that is none of the above, respectively. The table below summarizes the analysis proposed by Chen (2017, 2021a). See also Pearson (2001, 2005) for a similar approach.

(65) *The topic agreement approach to Philippine-type voice (Chen 2021a)*

a. ACTOR VOICE AFFIX	bundle of the Agree relation with [uTOP] and [uφ] on T
b. PATIENT VOICE AFFIX	bundle of the Agree relation with [uTOP] and [uφ] on matrix Voice
c. LOCATIVE VOICE AFFIX	bundle of the Agree relation with [uTOP] and a locative-selecting P
d. CIRCUMSTANTIAL VOICE AFFIX	spell-out of the Agree relation with [uTOP]

A broader point of contention between these two competing approaches is the typological status of Philippine-type voice. If the ergative analysis is on the right track, Philippine-type voice would be typologically similar to Indo-European–type voice. Conversely, if the accusative analysis is correct, Philippine-type voice should not be termed "voice morphology," and is better treated on par with a similar type of Ā-agreement morphology found in western Nilotic (e.g., Kurmuk: Anderson 1991, 2007, 2015; Dinka: van Urk 2015). See van Urk (2015), Erlewine, Levin, and van Urk (2017), and Chen (2021b) for comparisons of these two types of "voice" systems.

3.2   Philippine-type voice is hosted above Aspect

Three independent pieces of evidence from Puyuma confirm that the apparent "voice" morphology is best analyzed as Ā-agreement. This observation thus offers a straightforward account for the co-occurrence of Philippine-type voice and the *u*-marked voice alternation.

3.2.1   Evidence from the Mirror Principle

Recall that Philippine-type AV morphology surfaces to the left of the detransitivizer *u*- and causative morphology (Section 2). An example is repeated below in (66).

(66) **M-u-pa**-depe'   na   tamaku.
      AV-U-CAUS-inflame DEF.PIVOT cigarette
      'The cigarette was made inflamed.'   (detransitivized causative)

Assuming the Mirror Principle holds, this order suggests that Philippine-type voice is encoded *above* the reflex of Voice and *v*. Below, I outline further evidence for this view. We have seen evidence in 2.2.2 that the detransitivizer *u*- is hosted in a position below grammatical aspect. This claim draws on the affix's insertion *before* that of progressive infixation <*a*>, as seen in (67).

(67)
a. m-*u*<a>disdis   'being torn'
b. m-*u*<a>lriyus   'be turning around'
c. m-*u*<a>deru   'being roasted/cooked'
d. m-*u*<a>atel   'being falling'

Consider now the relative order between progressive morphology and Philippine-type AV morphology. As (68) shows, AV morphology (i.e., infixation of <*em*>) is obligatorily inserted into progressive morphology (i.e., the reduplicated syllable) and not the verb stem (68b).

(68)

a. AV DEFAULT		b. AV PROGRESSIVE	
d<em>eru	'to cook'	d<em>a-deru	'to be cooking'
g<em>isgis	'to shave with a razor'	g<em>a-gisgis	'to be shaving with a razor'
k<em>aratr	'to bite'	k<em>a-karatr	'to be biting'
s<em>absab	'to wash'	s<em>a-sabsab	'to be washing'

20

This affixation pattern thus suggests that Actor Voice is encoded into morphology *after* that of Aspect, indicating that it is hosted in a projection higher than grammatical aspect. Note, importantly, that this conclusion follows from the fact that AV morphology surfaces to the left of the reflex of Voice (*u-*) and *v* (*pa-*) (69), which suggests that Philippine-type voice is hosted external to VoiceP.[18]

(69)   **M-u**-pa-dunun   tu-pinidrayaran.
        AV-U-CAUS-reconcile 3.PIVOT.POSS-argument
        'Their argument has been reconciled.'

3.2.2 Philippine-type voice morphology inflects for Mood

Further evidence for Philippine-type voice being located above Aspect comes from its interactions with mood morphology. Like in other morphologically conservative Austronesian languages, Philippine-type voice morphology in Puyuma bundles with three grades of mood inflections.[19] Its complete voice paradigm is given in (70).

(70)   *Table 2: Mood inflections in Puyuma's voice paradigm*

	a. AV	b. PV	c. LV	d. CV	
REALIS	M-√	√-aw	√-ay	√-anay	(e.g. (1a-d))
IRREALIS	∅-Ca-√	Ca-√-i	Ca-√-i	Ca-√-an	
IMPERATIVE	∅-√	√-u	√-i	√-an	
NEGATIVE	M/K-√	√-i	√-i	√-an	

As seen above, AV morphology, for example, surfaces as a prefix *m-* in the realis but is null in the irrealis, as illustrated in (71a). Conversely, the detransitivizer *u-* does not inflect for mood and remains present throughout. Their asymmetry in inflectability follows from the conclusion in Section 3.1 that Philippine-type voice is hosted high above grammatical aspect, while the detransitivizer *u-* is located low within VoiceP.

(71)   *Mood inflections in Puyuma AV morphology*

     a.   **M-u**-sanga'=la   na   padrekan.
        AV.(PFV)-U-make=PFV DEF.PIVOT basket
        'The basket has been (finished) made.'   (AV realis)

     b.   ∅-**u**<a>sanga'   na   padrekan andaman.
        AV.IRR-U<IPFV>make DEF.PIVOT basket   tomorrow
        'The basket will be (finished) made tomorrow.'   (AV irrealis)

LV and CV morphology in Puyuma also inflects for mood, as seen in (72)–(73).

(72)   a.   Ku=beray-**ay**   kana pangudral i   Sawagu.
        1SG.NOM=give-CV_{def.acc} pineapple PN.PIVOT Sawagu
        'I gave Sawagu the pineapple.'   (LV realis)

     b.   Beray-**i**   kana   pangudral i   Sagagu!
        give-LV.IMP DEF.ACC pineapple PN.PIVOT Sawagu
        'Give the pineapple to Sawagu!'   (LV imperative)

(73)   a.   Ku=beray-**anay**   na   pangudral kan   Sawagu.
        1SG.NOM=give-CV DEF.PIVOT pineapple PN.ACC Sawagu
        'I gave Sawagu the pineapple.'   (CV realis)

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[18] The same type of diagnostics cannot apply to PV, LV, and CV morphology, as these affixes all surface as a suffix and hence do not interact with progressive morphology. I assume that these affixes have a similar nature to AV morphology. See further evidence for this view in the next subsection.

[19] This phenomenon is attested in the majority of Formosan languages and some Philippine languages. See Ross (2012), Chen (2017), and McDonnell and Chen (2022) for a specific discussion about mood inflections in Philippine-type voice morphology and its reconstructability to early Austronesian morphology.

    b. Beray-**an**   na   pangudral kan   Sagagu!
       give-CV.IMP DEF.PIVOT pineapple PN.ACC Sawagu
       'Give the pineapple to Sawagu!'   (CV imperative)

Since Mood is standardly analyzed as belonging to the C domain (e.g., Rivero and Terzi 1995; Han 2001; Noonan 2007; a.o.), the fact that Philippine-type voice inflects for mood further suggests that it is located in the left periphery and has no direct correlation with valency-changing operations.

    All observations so far thus point to the conclusion that Philippine-type voice is fundamentally different from true cases of voice alternation hosted within VoiceP. Its compatibility with the *u*-marked voice alternation follows from this conclusion.

3.2.3 Further evidence for Philippine-type voice as Ā-agreement morphology

I turn now to specific evidence that Philippine-type voice constitutes topic-indicating agreement morphology. Setting aside differences in details, a consensus among researchers advocating for the Ā-agreement approach is that Philippine-type voice indexes the selection of the topic, which is indicated by pivot-marking (Pearson 2001, 2005; Chen 2017, 2021a; see also Chung 1994 for a similar Ā-approach for Chamorro, as well as Foley and Van Valin 1984, Shibatani 1988, and Richards 2000 for a similar assumption). See Schachter and Otanes (1972), Shibatani (1988), Richards (2000), and Chen (2017) for specific arguments for analyzing pivot-marking as a topic marker.

    New data from Puyuma indeed reveal a close correlation between topichood and voice designation. Consider the following question-answer sequence, which contains a clear discourse topic *Atrung*. Where the discourse topic constitutes the *subject* of the answer sentence, AV morphology is obligatorily used to place the topic in pivot status (74b). An answer not constructed with AV morphology is considered unnatural and improper, as in (74c).

(74)   a.   *Q: Discourse topic: Atrung*

         Makakuda   **i**   **Atrung** uninan?
         AV.what.happen **PN.PIVOT Atrung** today

         'What did *Atrung* do today?'

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

         D⟨**em**⟩ eru (**pro**)   dra   abay.
         ⟨**AV**⟩cook   (**3SG.PIVOT**) INDF.ACC rice.ball

         '*She* cooked rice balls.'

      c.   *A2: Answering with a non-AV clause with the topic not pivot-marked*

         *Tu=deru-**aw**   na   abay.
         3.NOM=cook-PV DEF.PIVOT rice.ball

         (intended: 'She cooked *rice balls*.)'

This observation suggests that voice morphology in Puyuma is sensitive to topic selection and tied to information structure, in line with the Ā-agreement approaches to Philippine-type voice cited above.

    These "voice" affixes do behave like agreement morphology. In Puyuma, this morphology obligatorily cliticizes to the highest predicate of a clause, with the rest of the lexical verbs carrying default voice-marking—even when the highest predicate is an adverbial verb that cannot stand alone without a main verb, as in (75c) and (76c). This suggests that the so-called "voice" morphology does behave like agreement morphology and is unlikely to be the spell-out of individual Voice/applicative head as traditionally assumed, (63), as such affixes are predicted to be attached fixedly to the verb stem.

(75)   a.   Ku=beray-**ay**   **na**   **walak** kana   aputr.
         1SG.NOM=give-LV DEF.PIVOT **child**   DEF.ACC flower
         'I gave the child the flowers.'   (LV morphology on the lexical verb)

b. Ku=talam-**ay** ∅-beray **na** **walak** kana aputr.
1SG.NOM=try-LV AV/DEFV-give DEF.PIVOT child DEF.ACC flower

'I ***tried*** to give the child the flowers.' (LV morphology cliticized onto the highest verb)

c. Ku=trakatrakaw-**ay** t<em>alam ∅-beray **na** **walak** kana aputr.
1SG.NOM=secretly-LV try<AV/DEFV> give.AV/DEFV **DEF.PIVOT child** DEF.ACC flower

'I *secretly* tried to give the child the flowers.' (LV morphology cliticized onto an adverbial verb)

(76) a. Ku=beray-**anay** kana walak **na** **aputr**.
1SG.NOM=give-CV DEF.ACC child **DEF.PIVOT flower**

'I gave the child the flowers.' (CV morphology on the lexical verb)

b. Ku=talam-**anay** ∅-beray kana walak **na** **aputr**.
1SG.NOM=**try-CV** AV/DEFV-give DEF.ACC child **DEF.PIVOT flower**

'I ***tried*** to give the child the flowers.' (CV morphology cliticized onto the highest verb)

c. Ku=trakatrakaw-**anay** t<em>alam ∅-beray kana walak **na** **aputr**.
1SG.NOM=secretly-CV try<AV/DEFV> AV/DEFV-give. DEF.ACC child **DEF.PIVOT flower**

'I *secretly* tried to give the child the flowers.' (CV morphology cliticized onto an adverbial verb)

Along with the conclusion from 3.1–2.3 that this voice morphology is inserted after that of aspect morphology, the Puyuma facts discussed here reinforce the view that Philippine-type voice is typologically similar to a type of topic-indicating Ā-agreement found in the western Nilotic languages Kurmuk (Anderson 1991, 2007, 2015) and Dinka (van Urk 2015). Like Puyuma, Dinka also displays an independent voice alternation (transitive vs. antipassive) that co-occurs with its topic-indicating Ā-agreement. Similar to Puyuma's detransitivizer *u-*, antipassive morphology in Dinka is also tied to the lexical verb, whereas its topic-indicating morphology must appear on the highest head, as is observed in Puyuma. See Anderson (1992) and Erlewine, Levin, and van Urk (2017) for details.

We can thus conclude that the term Philippine-type "voice" should only be viewed as a pre-theoretical label and not be confused with true cases of voice alternation.

4 Conclusion

One well-known fact of Philippine-type Austronesian languages is that voice alternation in these languages is not accompanied by agent demotion (e.g., Foley and Van Valin 1984; Foley 2008; Himmelmann 2002). Although this characteristic strongly suggests that Philippine-type voice is fundamentally different from Indo-European–type voice, the voice morphology found in these languages is still commonly treated on par with Indo-European–type voice and labeled as transitivity/valency-indicating morphology.

The new observation from Puyuma reported in this paper has shed new light on the nature of this type of verbal morphology. With clear evidence that the *u*-marked two-way alternation is a genuine case of voice alternation located in Voice, the fact that Philippine-type voice co-occurs with this alternation and inserts after aspect morphology indicates that this type of verbal affix is in fact hosted high in the left periphery and fundamentally different from "voice" in the traditional sense.

Importantly, the conclusion made here is not specific to Puyuma. Recent research has shown that the detransitivizer *u-* is attested in at least five other Philippine-type languages under six different Austronesian primary branches and is thus reconstructable to Proto-Austronesian (Chen 2020). This suggests that this true case of voice alternation is likely to be part of the design of Philippine-type syntax, rather than a secondary innovation that exists only in Puyuma. The conclusion here that Philippine-type voice is hosted high in the left periphery also coincides with previous analyses of typologically similar languages.

The Puyuma data presented in this paper also lends new empirical support to recent refinements of verb phrase structure. First, the co-occurrence of the detransitivizer Voice and causative morphology (2.2.1) in Puyuma offers independent evidence that the functional project responsible for the licensing of the external argument (i.e., Voice) is independent from, and higher than, *v*, the functional head responsible for encoding event types. The

availability of the Voice-indicating affix *u-* in derived intransitive constructions also lends support to existing claims based on evidence from typologically distinct languages that constructions without an external argument may still possess a Voice layer (Harley 2013; Legate 2014).

Finally, the *u*-construction's incompatibility with agent-denoting adjuncts—in contrast to canonical passives— also adds to the known variation in the flavor of Voice. It suggests that deficient Voice heads contain at least two subtypes: one present in canonical passives, where the initiator θ-role is existentially bound and may be present as a *by*-phrase (agent-denoting adjunct) (Legate 2014: 42), and another that features the complete absence of the initiator θ-role, as observed with Nanwang Puyuma's *u*-construction. Future investigation of similar constructions in other understudied languages would shed more light on how (un)common this type of anti-agentive construction is.

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