

# Clausal Constituency and Historical Austronesian Morphosyntax\*

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## 1 In a nutshell

- We present evidence here that Austronesian languages may have had considerable syntactic differences between so-called “first generation” and “second generation” clauses, as sketched out in (1), which can plausibly be traced to their categorial status as verbs and nominalizations, respectively.<sup>1</sup>

	2 <sup>nd</sup> GENERATION	1 <sup>st</sup> GENERATION
	(*-ən, *-an, *Si-)	(*-aw, *-ay, *-anay)
(1)	<hr/>	
	NON-ACTOR-VOICE: [[Pred A] P]	[[Pred P] A]

- 1<sup>st</sup> generation clauses were argued by Starosta et al. (1981) to be the original verbs of Proto-Austronesian (PAn) while the 2<sup>nd</sup> generation forms were participant nominalizations required for relative clauses which became reanalyzed as main clause predicates (in their terms, verbalized).
- Verbal and nominal constructions can differ in their basic constituency and we might thus expect to find similar structural differences between first and second generation clauses in Austronesian.
- It has been noted by several authors that the genitive agent seems to form a constituent with the preceding predicate in a range of Malayo-Polynesian (MP) languages.
- Here we look at two languages that strictly use 1<sup>st</sup> generation forms as main clause predicates: Puyuma and Tsou.
- We find that the constituency structure of 1<sup>st</sup> generation clauses is markedly different from that commonly found in Philippine-type MP languages. Specifically, we find evidence for a (traditional) VP in the Non-Actor Voice (NAV), something which constituency diagnostics fail to reveal in Philippine-type languages.

## 2 Introduction

- A working assumption in almost all contemporary work in syntax is stated by Baker (2002) as the “Verb-Object Constraint”:<sup>2</sup>

(2) VERB-OBJECT CONSTRAINT (Baker 2002:93)  
A nominal that expresses the theme/patient of an event combines with the event-denoting verb before a nominal that expresses the agent/cause does.

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<sup>1</sup>These paradigms have also been termed DEPENDENT vs. INDEPENDENT (Wolff 1973), IRREALIS vs. REALIS (Ross 2002; Aldridge forthcoming, 2016), DENOMINAL VERBS versus (original) VERBS (Starosta et al. 1981), as well as other terms (Blust and Chen in press).

<sup>2</sup>This is, in fact, just the Universal Theta Assignment Hypothesis (Baker 1988) in a different guise.

- Apparent counter-evidence from VSO languages is argued to be illusory (see Sproat 1985; McCloskey 1983; Emonds 1980 for Welsh, Irish and Breton, respectively), being derived from SVO order (with a VP) by verb movement. Much work beginning in the 1980s argues that apparent “free word order” involves scrambling from a hierarchical structure that respects something like the VOC (Hale and Selkirk 1987; Bailyn 1995; Legate 2002 among many others).
- A key ingredient in the statement of the VOC is its restriction to event-denoting *verbs* (Kaufman 2009a,b, forthcoming).
- Nominalizations may compose with their arguments in other ways and this may account for the typologically unusual constituency in Philippine-type languages (as first noted by Starosta et al. 1982). Specifically, the possessor often forms a constituent with a nominalized head that excludes the object.
- This is familiar from nominalization in a wide range of languages.

(3) HEBREW DECLARATIVE CLAUSE  
 [ha-mankal] sagar [ha-mankal] et ha-misrad [ha-mankal]  
 DEF-director close.PST.3SM DEF-director ACC DEF-office DEF-director  
 ‘The director closed the office.’

(4) HEBREW CONSTRUCT STATE (NOMINALIZATION)  
 sgira-t [ha-mankal] et ha-misrad [\*ha-mankal]  
 closing-CONSTR DEF-director ACC DEF-office DEF-director  
 ‘the director’s closing of the office’

- Important differences in constituency between verbal and nominal domains, often glossed over in the wake of Abney’s (1987) influential DP=IP hypothesis, most likely stems from possessors having modifier-like properties, although the actual basis for this difference need not concern us here.
- Even the difference between when and where agents and patients are merged with a nominalized predicate may not be crucial to the Austronesian story since we are (at least historically) dealing with *participant* nominalizations in a (null) copular structure. The key structure is something like (5).

(5) a. [John [did this]]  
 b. [This is [John’s doing]]

- Starosta, Pawley and Reid’s (1982) landmark paper posited that the complex voice system of Austronesian languages derived historically from such participant nominalizations (extended in Kaufman (2009a,b, forthcoming)).
- Ross’s (2009; 2012) **Nuclear Austronesian Hypothesis** treats the historical reanalysis of nominalizations, schematized roughly below, as a subgroup defining innovation which excludes Tsou, Puyuma and Rukai. Puyuma is seen to reflect the Proto-Austronesian most closely, with “first generation forms” in matrix clauses and “second generation forms” (nominalizations) in relative clauses.

(6)	<b>Stage 1</b> NOMINALIZATIONS AS RELATIVE CLAUSES The book which was Mary’s writing.	→	<b>Stage 2</b> NOMINALIZATIONS AS MAIN CLAUSE PREDICATES The book was Mary’s writing.
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- At Stage 1 above, only “first generation” voice morphology (\*<um> ACTOR, \*-ay LOCATIVE, \*-aw PATIENT, \*-anay CIRCUMSTANTIAL) was used in matrix clauses while “second generation” morphology was used in relative clauses (\*<um> ACTOR, \*-an LOCATIVE, \*-en PATIENT, \*Si- CIRCUMSTANTIAL).
- At Stage 2, “second generation” clauses began to displace “first generation” ones in declarative matrix clauses.
  - As noted by Dixon and Aikhenvald (1999:9), nominalization is the most common pattern for relativization across the languages of South America. Also relevant are Turkic, Siberian (Malchukov 2013) and Tibeto-Burman (Matisoff 1972; Genetti et al. 2008; Yap and Wrona 2011) languages. DeLancey (2002) terms this the “nominalization-relativization syncretism” in Tibeto-Burman languages.
  - Reanalysis of a subordinate clause type as a matrix clause, i.e. Evans and Watanabe’s (2016) “insubordination”.
- The prediction explored here: “second generation” clauses (from reanalyzed nominalizations) should display the unusual V+Agt constituent while “first generation” clauses (based on the original verbal constructions of PAN) should not.

## 2.1 “Philippine-type” languages

- Evidence for a V+Agent constituent in Philippine-type languages has been noted before in the Austronesian literature (Starosta et al. 1982; Keenan 1976, 1995, 2000; Naylor 1980; Kroeger 1993) but largely obscured by recent syntactic analyses which derive surface orders from a putatively universal SVO base order (although, see Erlewine et al. forthcoming for an approach that attempts both).
- From a historical-typological perspective, Ross (2002:54-55) also notes the unusual constituency in an unspecified subset of Austronesian languages:

Some languages have undergone a further syntactic innovation. The noun phrase immediately following the verb has become strongly bound to it so that verb + noun phrase form a single constituent. The postverbal noun phrase is the patient with the actor voice and the actor with patient voice, i.e. the voice system is symmetrical. Similar observations have been made about Balinese (Artawa 1994; Arka 1998). For Toba Batak the bonding of verb + noun phrase is attested by pitch-accent behavior (Emmorey 1984), by the fact that an adverb cannot intervene between verb and noun phrase, by the fact that such ‘verb phrases’ can be co-ordinated, whether they are both AV or OV, and by the fact that post-verbal noun phrase cannot be fronted, whereas the pivot noun phrase can (Schachter 1984).

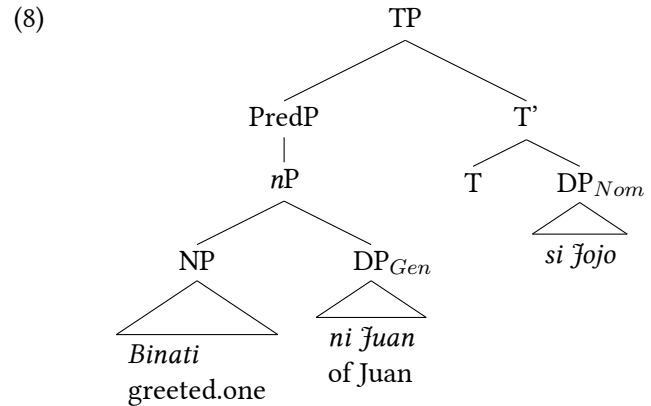
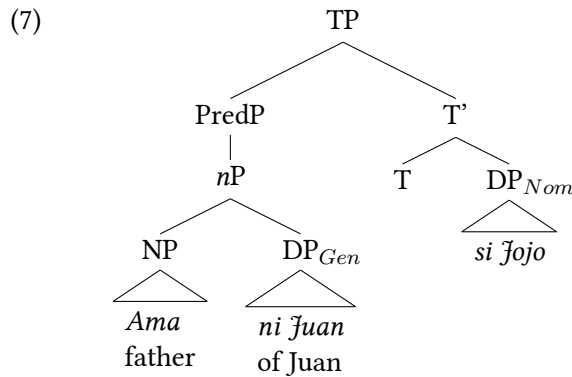
TOBA BATAK (Schachter 1984:123)

- Mang-ida si Ria si Torus  
AV-see PERS Ria PERS Torus  
‘Torus sees/saw Ria.’
- Di-ida si Torus si Ria  
PV-see PERS Torus PERS Ria  
‘Torus sees/saw Ria.’

We do not have direct evidence about how this innovation occurred, but it seems to represent the grammaticisation of frequently occurring (but not rule governed) constituent sequences resulting from the Philippine-type tendency to place the pivot noun phrase at the end of the clause. It was apparently motivated by the loss of phrase markers to indicate case.

- However, it was already implicit in Starosta, Pawley and Reid (1982) that this could also be a result of their proposed nominalization to verb (henceforth N>V) reanalysis.

- After the reanalysis, transitive agents now shared the syntax of possessors in nominal constructions, to exemplify with Tagalog:



- Standard descriptive work on Tagalog gives the impression of free word order (Schachter and Otnes 1982). In reality, there are sharp differences in markedness between orders.
- As Ross suggests (above), the unmarked order in NAV clauses is **Pred A P** across Philippine languages. In Tagalog this manifests itself as a relatively strong preference, as seen in (9).

(9) TAGALOG  
 D<in>akip-Ø (ni Bobong) si Dodong (?ni Bobong)  
 <PRF>arrest-PV GEN Bobong NOM Dodong GEN Bobong  
 ‘Bobong arrested Dodong.’

- Furthermore, languages that generally allow scrambling show freezing effects when case marking does not distinguish between A and P:

(10)	TAGALOG (Guilfoyle et al. 1992)	(11)	CHAMORRO (Chung 1990:565)	(12)	ILOKANO
	Kaka-kain ng leon ng tigre rcnt-eat GEN lion GEN tiger ‘The lion ate the tiger.’ NOT: ‘The tiger ate the lion.’		Ha-bisita si Dolores si Juan 3SG-visit PM Dolores PM Juan ‘Dolores visited Juan’ NOT: ‘Juan visited Dolores’		K<inn>an-Ø ti lalaki ti leon <PRF>eat-PV CORE man CORE lion ‘The man ate the lion.’ NOT: ‘The lion ate the man.’

- What is a preference in word order in a simple clause is felt more acutely in coordination structures because of the coordinate structure constraint (Ross 1967).

(13) a. ✓ N PossP & N PossP NomP      b. \* N NomP & N NomP PossP

(14) CONSTITUENT COORDINATION  
 [I-ni-hatid ni Paolo] at [s<in>undo-Ø ni Pedro] si Juan  
 CV-BEG-escort GEN Paolo and <BEG>pick\_up-PV GEN Pedro NOM Juan  
 ‘Paolo escorted and Pedro picked Juan up.’

- (15) NON-CONSTITUENT COORDINATION  
 ?\*[I-ni-hatid si Paolo] at [s<in>undo-∅ si Pedro] ni Juan  
 CV-BEG-escort NOM Paolo and <BEG>pick\_up-PV NOM Pedro GEN Juan  
 (For, ‘Juan escorted Paolo and picked up Pedro.’)
- (16) ?\*[[k<in>ain-∅ ang pansit] at [in-inom-∅ ang tubig] ni Juan]  
 <PRF>eat-PV NOM noodles and <PRF>drink-PV NOM water GEN Juan  
 For: ‘Juan ate the noodles and drank the water.’

### 2.1.1 Prosody

- Hsieh (2016) offers strong evidence gathered under experimental conditions that the Verb and the GEN phrase form a tighter constituent than the verb and the NOM phrase do (see also Tanangkingsing 2009:74).
- Hsieh’s experiment also confirmed that Tagalog speakers strongly prefer the order PV DP<sub>Gen</sub> DP<sub>Nom</sub> over PV DP<sub>Nom</sub> DP<sub>Gen</sub> (contra Schachter and Otnes’s 1982 frequently cited claim of free word order).

## 3 The clausal constituency of “first generation” clauses

- As exemplified by (17), main clauses in Tsou and Puyuma use the reflexes of “first generation” forms exclusively (argued by Ross’s (2009) to be a retention that excludes them from his Proto-Nuclear Austronesian subgroup).<sup>3</sup>

- (17) PUYUMA (Teng 2008:73)  
 tu=paDek-aw i temutaw  
 3.GEN=carry.on.back-PV SG.NOM his.grandparent  
 ‘He carried his grandmother on back.’

- Kaufman (2009b) and Ross (2009) note there is a serious problem with the Starosta et al. (1981) analysis when it comes to case marking: We expect reanalyzed nominalizations to assign genitive case to agents, but we do not expect genitive case on the agents of the “first generation” (original verbal) clauses.
- No Austronesian language seems to differentiate Agents case between first generation and second generation clauses.
- But Ross (2009) notes that Tsou makes no genitive/oblique distinction and that the historical (*n*-initial) genitive is not used for non-Actor Voice agents in the Nanwang dialect of Puyuma.

### 3.1 Puyuma

- If Puyuma main clauses lack the GENITIVE-ERGATIVE (or, more neutrally, the GENITIVE-AGENT CASE) syncretism, this would constitute strong evidence that the syntax of 1<sup>st</sup> generation forms is unrelated to the nominalizations posited to underlie the 2<sup>nd</sup> generation forms.

<sup>3</sup>The original glossing of the Puyuma examples has been made to conform to the glosses used here (AV, PV, LV, CV).

- Nanwang, the best studied dialect, is not informative here as the historical genitive case (*n*- initial) has been replaced by the oblique case (*k*- initial) almost everywhere.
- Teng (2009) offers a very detailed discussion of the case markers in three different dialects and leans towards concluding that the GENITIVE-ERGATIVE syncretism (on NP case markers) did exist in Proto-Puyuma for 1<sup>st</sup> generation clauses.
- But a shift from oblique towards the genitive cannot be entirely ruled out as the two cases appear to be falling together in different ways across dialects, cf. Ross (2009) "...we cannot tell whether the pre-Puyuma agent was case-marked as genitive (as in Katipul) or as oblique (as in Nanwang and Ulivelivek)."
- Preliminary data recently collected from the Pinaski dialect suggests that GEN/OBL optionality exists in the personal case markers too, unlike what is reported for Ulivelivek.
- Unlike Nanwang, Pinaski unambiguously uses the historical genitive case for possessors, as shown in (18). It does allow for NAV Agents to take either genitive or oblique cases, as shown in (19), without any obvious differences in interpretation.

(18) PINASKI PUYUMA  
 na tu-rumah ni/\*kani Senten  
 NOM 3SG-house GEN/OBL Senten  
 'Senten's house'

(19) PINASKI PUYUMA  
 tu-kan-aw na hunga' ni/kani Senten  
 3S-ate-UV:P NOM yam GEN/OBL Senten  
 'Senten ate the sweet potato.'

- Most interestingly, we find additional evidence from word order that 1<sup>st</sup> clauses have a considerably different clause structure. First of all:
  - Bona fide possessors cannot be separated from the possessum by the pivot.
  - This is true regardless of whether the possessor is expressed by (historically) genitive case, as in Pinaski (20), or by (historically) oblique case, as in Nanwang (21):

(20) PINASKI PUYUMA  
 i tinataw (ni senten) i panaway (\*ni senten)  
 P.NOM mother P.GEN Senten P.NOM Panaway P.GEN Senten  
 'Panaway is the mother of Senten.'

(21) NANWANG PUYUMA  
 i tinataw (kan sawagu) i senten (\*kan sawagu)  
 P.NOM mother P.OBL Sawagu P.NOM Senten P.OBL Sawagu  
 'Senten is the mother of Sawagu.' [VIDEO 9:31, skip 6:30]

- Uniquely, Puyuma displays an unmarked word order in main clauses that is otherwise unattested as an unmarked word order of Philippine-type languages: The Agent of an NAV clause follows the Patient.
- The order in (22)-(25) is found in nearly every single example in Teng (2008) containing both arguments of a transitive verb.

(22) NANWANG PUYUMA (Teng 2008:224)

- a. tu=Take-aw na paisu kan isaw      b. tu=Take-ay=ku Da paisu kan isaw  
 3S.AGT=steal-PV DF.NOM money SG.OBL Isaw      3S=steal-LV=1S.NOM ID.OBL money SG.OBL Isaw  
 "Isaw stole the money."      "Isaw stole money from me."

(23) NANWANG PUYUMA (Teng 2008:228)

tu=paDek-aw i temutaw kana walak  
 3S=carry.on.back-PV SG.NOM his.grandparent OBL child  
 "The child carried his grandmother on his back."

- (24) NANWANG PUYUMA (Teng 2008:94)  
 tu=reTa-anay nantu basak kana ma'iDang-an  
 3s=put.down-CV DF.NOM.3.PSR bag DEF.OBL old-NMZ  
 'The elders put down their bags.'
- (25) NANWANG PUYUMA (Teng 2008:319)  
 tu=beray-ay=ku Da paisu kan nanali  
 3s=give-CV=1s.NOM ID.OBL money SG.OBL my.mother  
 'My mother gave me some money.'

- We investigated this through a very simple pilot experiment with a single speaker of Nanwang Puyuma who was presented with different word orders for a single sentence in written form and asked to choose the one that sounded the most natural. The reactions and timings were recorded with video.

- Her reactions supported the most frequent order cited in the literature as the preferred order.
- In several cases where both orders were ultimately accepted, the speaker's reaction was markedly different to one of them.

- (26) tu=pulang-ay (✓i sawagu) kan senten (?i sawagu)  
 3s=help-LV NOM Sawagu OBL Senten NOM Sawagu  
 'Senten helped Sawagu.'

- In perfect contrast to Tagalog, V+Pat coordination such as (27) was accepted more quickly than V+Agt coordination, as in (28).

- (27) [tu-piDe'De'-aw na enay] aw [tu-deru-aw na bunga'] kan Pilay  
 3s-boil-PV NOM water and 3s-cook-PV NOM yam OBL Pilay  
 'Pilay washed the X and cooked the sweet potato.'

- (28) [tu-sabesab-ay kan Pilay] aw [tu-deru-aw kan Sawagu] na bunga'  
 3s-wash-LV OBL Pilay and 3s-cook-PV OBL Sawagu NOM yam  
 'Pilay washed and Sawagu cooked the sweet potato.'

- Interestingly, the preference for keeping the verb and object contiguous was only found in Non-Actor Voice clauses. Actor voice clauses (29) and passives (30), did not elicit a preferred order.

- (29) NANWANG PUYUMA  
 s<em>abesab (kana bunga') i pilray (kana bunga')  
 <AV>wash DEF.OBL yam P.NOM Pilray DEF.OBL yam  
 'Pilay washes the sweet potatoes.'

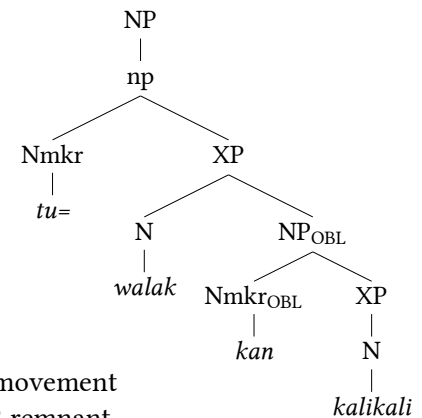
- (30) NANWANG PUYUMA  
 ki-pulrang (kan senten) i Sawagu (kan senten)  
 PASS-help OBL Senten NOM Sawagu OBL Senten  
 'Sawagu was helped by Senten.'

- As shown in (31), it also seems to be the unmarked order in Pinaski, which expresses the transitive agent with (historically) genitive case:

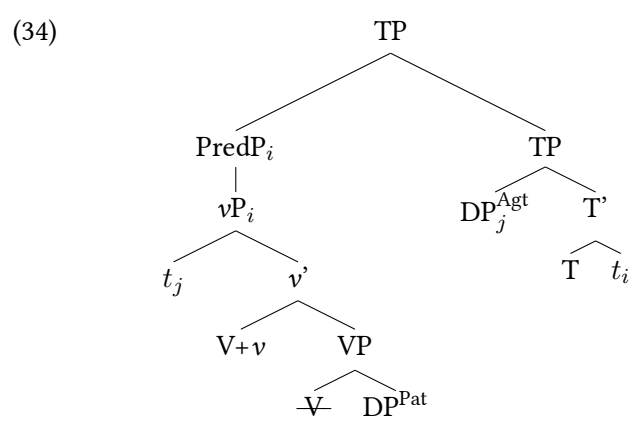
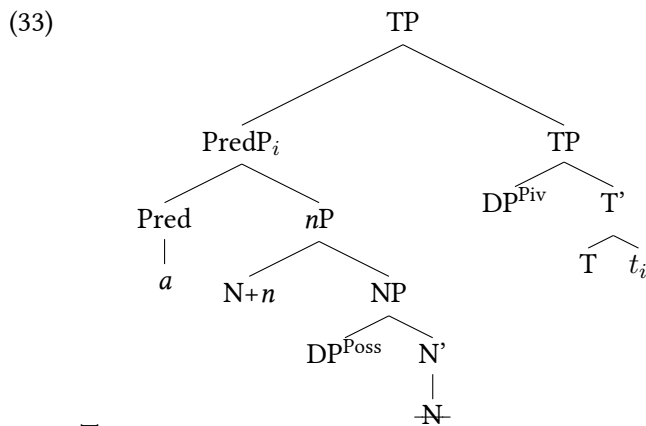
- (31) PINASKI PUYUMA  
 tu=pukpuk-aw (i panaway) ni senten (?i panaway)  
 3s=beat-PV P.NOM Panaway P.GEN Senten P.NOM Panaway  
 ‘Senten hit Panaway.’

- The Agent phrase is thus very distinct from the possessor, which Teng (2008:126) analyzes as a complement to N, as shown in (32).

- (32) tu=walak kan kalikali  
 3s.PSR=child SG.OBL Kalikali  
 ‘Kalikali’s child’



- This suggests a difference such as the following, where a nominal predicate containing a possessor moves to a clause initial position, as in (33). The pivot is merged in Spec,TP as the subject of a copular clause (headed by the copula *a*).
- In contrast, a verbal predicate could require Spec,TP to be filled via movement (of the Agt argument in this case), followed by fronting of the PredP remnant, yielding the attested unmarked order in (34).



3.2 Tsou

- Unlike Puyuma, Tsou does not display an Agt final order in NAV clauses.
- Crucially, however, NAV are positioned outside of themes and instruments as shown in (35).

- (35)a. mo t<m>oycu [to evi] [to p'εucungu] [o ak'i]  
 AV <AV>cut OBL tree OBL axe NOM grandpa  
 ‘Grandpa cut (down) a tree with an axe.’
- b. i=si tyoc-a [to p'εucungu] [to ak'i] [o evi]  
 UV-3S cut-PV OBL axe OBL grandpa NOM tree  
 ‘Grandpa cut (down) the tree with an axe.’
- c. i=si tyoc-neni [to evi] [to ak'i] [o p'εucungu]  
 UV-3S cut-CV OBL tree OBL grandpa NOM axe  
 ‘Grandpa cut (down) a tree with the axe.’ (Lin 2009:200)



- Recipients *must precede* the Non-AV agent in Tsou while this is generally a marked position in Philippine languages.

(36) i-si fa-eni (\*to Pasuya) to Mo'o (to Pasuya) 'o tposu-si  
 UV-3s give-CV OBL Pasuya OBL Mo'o OBL Pasuya NOM book-3s.GEN  
 'Pasuya gave his book to Mo'o.' (adapted from Chang 2011:803)

(37) TAGALOG  
 I-b<in>igay (ni Juan) kay Dodong (<sup>M</sup>ni Juan) ang libro  
 CV-<PRF>give GEN Juan OBL Dodong GEN Juan NOM book  
 'Juan gave Jun the book.'

- Additionally, we can coordinate the predicate head and the P argument while excluding the A argument:

(38) i-si [tonzovi 'o yoska] ho [pei'i 'o chumu] to Pasuya  
 UV.AUX-3s clean.LV NOM fish and cook.PV NOM water OBL Pasuya  
 'Pasuya cleaned the fish and boiled the water.'

- This suggests that the NAV Agent, while not clause final, does not occupy the same (predicate adjacent) position of NAV Agents in Philippine type languages.

## 4 The pattern reduction hypothesis

- A competing hypothesis which posits historical **Pattern Reduction** in Puyuma, Rukai and Tsou (Chen 2015; Blust and Chen in press) predicts that both clause types share a basic structure and differ only in Mood-sensitive voice morphology, as is the case in many modern Malayo-Polynesian languages.
- Under the Pattern reduction analysis,
  1. All Philippine-type languages, including Tsou and Puyuma, share the same origin of the "Pivot-only" constraint.
  2. The fact that modern Tsou and Puyuma employ no morphological distinction in their voice morphology between indicative and non-indicative moods is a product of independent pattern reductions—which eliminates the elaborate Mood-sensitive voice morphology attested in the majority of Formosan languages. A similar process is attested in Chamorro, where the Philippine-type voice morphology underwent extensive pattern reductions. The "2nd-generation affixes" are largely restricted to subordinate clauses, similar to that in Puyuma and Tsou.
  3. Under this analysis, morphological distinction between 1st/2nd generation voice morphology is the prototypical pattern, which is still attested in the majority of Formosan languages.
  4. Combining this analysis with the A'-agreement approach to Philippine-type voice affixes (Chung 1994, Richards 2000, Pearson 2001, Rackowski 2002, Chen 2016), canonical Philippine-type languages employ obligatory topic-indicating morphology on the verb, and this agreement morphology is sensitive to Mood (e.g. indicative vs. imperative vs. optative vs. projective). Languages that are more innovative, such as Tsou, Puyuma, and Chamorro, independently lost the Mood-sensitive morphological

distinction in their topic-indicating morphology. Therefore, clauses with different moods may synchronically show the same morphology, conventionally called the "1st-generation affixes". Across these languages, fossilized morphology is preserved in subordinated clauses (e.g. relative clauses, clefts), following the crosslinguistic generalization "root clauses are innovative, subordinate clauses are conservative" (Bybee 2001).

5. Under this approach, however, the marked word order preference attested in Tsou and Puyuma needs to be accounted for independently.

- In the case of Puyuma's NAV Agent, one could explore the possibility of Puyuma as a pronominal argument language, with the verbal proclitics being the "real" arguments and the clause final Agent being a type of right-dislocated phrase. This would bring it in line with Erlewine's (2016) analysis of right peripheral *ka/qu* phrases in Atayalic, e.g. *ka Pawan-ni* in (39). Note this has the added advantage of providing an explanation for the oblique case.

(39) SEEDIQ (Aldridge 2004:44-45)  
 Wada=na bube-un ka dangi=na ka Pawan-ni  
 AUX=3S.GEN hit-PV ka friend=3S.GEN ka Pawan-DEF  
 'Pawan hit his friend.'

- It also explains the seeming correlation between the clause final Agent and the presence of the proclitic in Puyuma. Recall that AV clauses and *ki*- passives have freer word order.
- On the other hand, unlike Atayalic, it is not unusual for PPs and adjuncts in Puyuma to follow the NAV Agt. This would be unexpected if the NAV Agt was a type of right dislocated phrase.

## 5 Conclusion

- Word order and constituency may tell us what morphological case cannot when it comes to the historical origin of the Austronesian voice system.
- Philippine-type languages show little to no evidence for a traditional VP (V+Patient) in the NAV clauses, and this is in fact predicted by Starosta et al.'s theory, as the erstwhile possessor Agent is still a dependent/modifier of the nominalized predicate.
- Suggestive syntactic evidence from Puyuma and Tsou points to the agents of "first generation clause" not being related to a possessor position.
- This bears on the proposals in Chen (2016) and Blust and Chen (in press) that "first generation" and "second generation" morphology only reflects a Mood category, unless there is a way to derive different case frames from those TAM categories.
- Further investigation of constituency diagnostics and unmarked word order should reveal whether Tsou differs significantly from other Formosan languages in the way suggested above or if "Nuclear Austronesian" languages show similar behavior in 2<sup>nd</sup> generation clauses.

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