Ergativity from Subjunctive in Austronesian Languages

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Abstract

This paper proposes a diachronic analysis of the origin of the unusual alignment found in Formosan and Philippine languages commonly referred to as a "focus" or "voice" system. Specifically, I propose that Proto-Austronesian (PAn) was an accusative language, an alignment which is preserved in modern Rukai dialects, while the non-accusative alignment found in Puyuma and Tsou resulted from the reanalysis of an embedded irrealis clause type as a basic transitive clause. This reanalysis took place in a primary subgroup of PAn, which I term "Ergative Austronesian". Modern Rukai dialects belong to the other primary subgroup and do not reflect the innovation. The main theoretical claim of the proposal is that ergative alignments (non-accusative systems, generally) arise from accusative ones when *v* is unable to structurally license the object in a transitive clause, but the subject can receive inherent case (generally from *v*). Since the external argument is licensed independently, T is able to probe past it and exceptionally value nominative case on the object. I propose that irrealis *v* in Proto-Ergative Austronesian lost the inability to license structural accusative case on an object, and this resulted in the emergence of ergative alignment in irrealis clauses. The embedded irrealis clause type, which I take to be a kind of subjunctive, was later reanalyzed as the basic transitive clause type in Puyuma and Tsou.

Keywords: Ergativity, alignment change, irrealis, diachronic syntax;

1. Introduction

Philippine and Formosan languages are characterized by a typologically mysterious "voice" or "focus" system in which affixes on the verb seem to signal the thematic role or case position of the nominal with nominative case. In the perfective aspect in Tagalog, the infix *<um>* appears on the verb when the nominative subject[1] has nominative case. The infix *<in>* occurs when an internal argument in a transitive clause has nominative case. No additional voice or focus affix appears if the nominative DP is the theme or patient in a simple transitive clause. The suffix *–an* appears when a goal or locative argument has nominative case. And the prefix *i-* occurs with a range of other nominative arguments, including instruments, beneficiaries, and transported themes in ditransitive clauses.

		Tagalog			
(1)	a.	D<**um**>ating	*ang*	*babae*.	
		<INTR.PRV>arrive	NOM	woman	
		'The woman arrived.'			
	b.	B<**in**>ili	ng	babae	*ang* *isda*.
		<TR.PRV>buy	GEN	woman	NOM fish
		'The woman bought the fish.'			

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[1] "Subject" here refers to the highest nominal in the argument structure and not the NP or DP with nominative case.

	c.	B\<**in**>ilh-**an**	ng	babae	ng	isda	*ang*	*tindahan=ko*.
		\<TR.PRV>buy-APPL	GEN	woman	GEN	fish	NOM	store=1.SG.GEN
		'The woman bought a/the fish at my store.'						
	d.	**I**-b\<**in**>ili	ng	babae	ng	isda	*ang*	*lalaki*.
		APPL-\<TR.PRV>buy	GEN	woman	GEN	fish	NOM	man
		'The woman bought the fish for the man.'						

The paradigm for Tagalog verbs inflected for perfective aspect is summarized in (2). The correspondences listed above are labelled "actor", "patient", "location", and "circumstance".
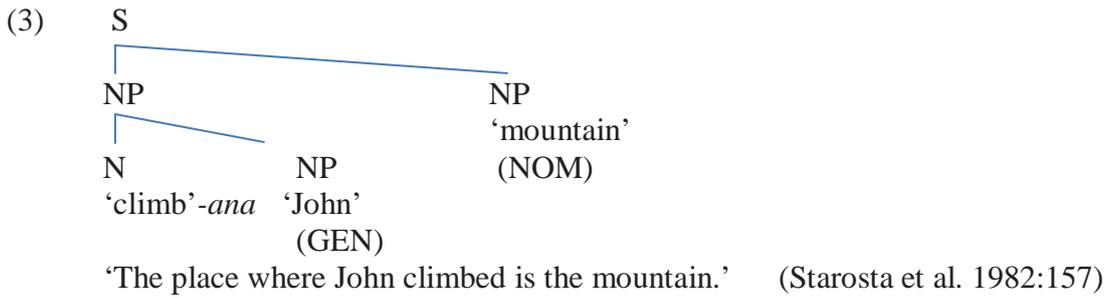
(2)	**Tagalog**	Actor	Patient	Location	Circumstance
	(Perfective)	*\<um>*V	*\<in>*V	*\<in>*V-*an*	*i-\<in>*V

As mentioned above, in the actor focus, nominative case appears on the subject, typically the single argument of an intransitive verb or the external argument in a transitive clause. In contrast, all non-actor focus clauses contain two or more arguments, but nominative case appears on an internal argument. For this reason, non-actor focus clauses bear superficial resemblance to passives, but Schachter (1976), Payne (1982), Gerdts (1988), de Guzman (1988), Shibatani (1988), Himmelmann (1999), and many others have argued convincingly that non-actor focus clauses in Philippine languages are transitive and not passive. Accordingly, the case-marking pattern exhibited in (1) cannot be understood as accusative, since it is not the case that subjects uniformly receive the same case in both intransitive (1a) and transitive (1b-d) clauses.

Given that the alignment in (1) is not of the typologically common accusative variety, the question that should be considered is how to characterize this system and explain how it could have developed. This system is frequently described in the literature as "symmetrical voice", in that the affixes on the verb do not signal demotion of the external argument, as would be the case in an asymmetrical voice language with a passive construction (cf. Himmelmann 2005 and references therein). However, characterizing this system in terms of voice presupposes that the nominative argument is a subject, which is a dubious claim since the nominative DP does not perform the expected subject functions in the areas of binding, raising, or control.[2] Instead, I follow Payne (1982), Gerdts (1988), de Guzman (1988), Mithun (1994), Liao (2002), Aldridge (2004, 2008a), Chang (2011b), and others in treating the "focus/voice system" as a type of ergative or split-ergative alignment but will continue to use the term "focus (system)" as a descriptive term.

The primary goal of the current work is to investigate the diachronic origin of this "focus system", with the concomitant goal of accounting for the synchronic mechanisms involved in generating this case-marking pattern and licensing of nominal arguments. The historical origin of the focus system in Philippine and Formosan languages has been argued to be the reanalysis of clausal nominalizations as root clauses, for instance in a type of cleft construction (Starosta et al. 1981, Ross 2009, and others). In the earlier historical stage, the nominative DP was the subject of a copula construction predicated of a headless relative clause in which nominalizing morphology appears on the embedded verb. Given that the embedded clause is nominalized, the external argument in the relative clause is marked with genitive case, like a possessor.

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[2] The only purported subject property clearly exhibited by nominative DPs is the ability to undergo relativization (Keenan and Comrie 1977). However, the restriction that only nominative DPs can undergo relatization and other types of A'-movement is a characteristic of syntactic ergativity and not of subjects in accusative languages. See Aldridge (2004, 2008) for discussion.

(3)   S
       ╱   ╲
     NP   NP
    ╱ ╲   'mountain'
   N   NP   (NOM)
'climb'-*ana* 'John'
            (GEN)
'The place where John climbed is the mountain.'   (Starosta et al. 1982:157)

This approach readily accounts for the syncretism observed in all Philippine languages and most Formosan languages between the case for an external argument in a non-actor focus clause and that of a possessor in a noun phrase. The nominalizing affix *-ana* in (3) also bears resemblance to the locative focus suffix in (1c).

<u>Tagalog</u>

(4) a. B<in>ili   **ng**   babae   *ang*   isda.
         <TR.PRV>buy   GEN   woman   NOM   fish
         'The woman bought the fish.'

     b. isda   **ng**   babae
         fish   GEN   woman
         '(the) woman's fish'

     c. Gusto=ko   ang   b<in>ili   **ng**   babae
         like=1SG.ERG   NOM   <TR.PRV>buy   GEN   woman
         'I like what the woman bought.'

(4c) shows further that no special verbal morphology appears on the main verb in a relative clause. This contrasts with some Formosan languages, in which relative clauses formed on internal arguments in transitive clauses are nominalized. One such language is Puyuma. Verbs in root clauses exhibit the following set of focus affixes. These affixes are not cognate with nominalizing morphemes.

(5) **Puyuma**   <u>Actor</u>   <u>Patient</u>   <u>Location</u>   <u>Circumstance</u>
                  *<em>*V   V-*aw*   V-*ay*   V-*anay*

The following examples show that these affixes are found in verbal contexts.

<u>Puyuma realis</u> (Teng 2008:147)

(6) a. tr**<em>**akaw dra   paisu *i*   *isaw*
         <INTR>steal   INDEF.OBL   money SG.NOM   Isaw
         'Isaw stole money.'

     b. tu=trakaw-**aw**   *na*   *paisu* kan   isaw
         3.GEN=steal-TR1   DEF.NOM   money SG.OBL   Isaw
         'Isaw stole the money.'

     c. tu=trakaw-ay=*ku*   dra   paisu kan   isaw
         3.GEN=steal-TR2=1SG.NOM   INDEF.OBJ   money SG.OBL   Isaw
         'Isaw stole money from me.'

     d. tu=trakaw-**anay**   *i*   *tinataw*   dra   paisu
         3.GEN=steal-TR3   3.SG.NOM   his.mother   INDEF.OBL   money
         'He stole money for his mother.'

The contrast in (7) demonstrates that the focus affixes shown in (5) and (6) are not found on verbs projecting relative clauses. Rather, relative clauses formed on objects in this language are nominalized. Note the appearance of the nominalizing suffix –*an* on the embedded verb in (7b). The *<in>* perfective marker, which is uncontroversially cognate with the Tagalog perfective infix *<in>*, also appears on the embedded verb in (7b). This infix is strictly limited to nominalizations and never appears on verbs in root clauses in Puyuma.

Puyuma

(7) a. | tu=trakaw-**aw** | na | paisu | kan | isaw |
| 3.GEN=steal-TR1 | DEF.NOM | money | SG.OBJ | Isaw |

'Isaw stole the money.' (Teng 2008:147)

b. | ala | amuna | sadru | [[tu=tr<**in**>ekelr-**an**] | na | asi] |
| maybe | because | many | 3.PSR=<PRV>drink-NMLZ | DEF.NOM | milk |

'Maybe because the milk he drank is a lot.' (Teng 2008:105)

The affixes employed in the focus system in Tsou also do not bear any obvious resemblance to the erstwhile nominalizers in Tagalog. In fact, they are much more similar to the Puyuma set, albeit with some simplification. In both languages, the actor focus form employs a bilabial nasal, which reflects the Proto-Austronesian realis verbal affix. I will also argue below that the -*a* patient focus suffix in Tsou is related to the pre-glide /a/ found in the non-actor focus forms in Puyuma. And once the pre-glide /a/ in Puyuma is accounted for, the locative and circumstantial forms correspond almost perfectly in the two languages.

(8)
Tsou	Actor	Patient	Location	Circumstance
Nonfinite	*m*-V	V-*a*	V-*i*	V-*(n)eni*

(9) shows examples of the Tsou focus system. One important fact about this language is that the full focus system is never found on a finite verb form. The finite verbal form is always an auxiliary verb, and these show only a dichotomy between actor and non-actor focus.

Tsou (Zeitoun 2000:93-4)

(9) a. | mo | **mo**-si | ta | pangka | to | emi | 'o | amo |
| AF | AF-put | OBL | table | OBL | wine | NOM | father |

'Father put the wine on the table.'

b. | i-si | si-**a** | ta | pangka | to | amo | 'o | emi |
| NAF-3.SG | put-PF | OBL | table | OBL | father | NOM | wine |

'Father put the wine on the table.'

c. | i-si | si-**i** | ta | amo | ta | emi | 'e | pangka |
| NAF-3.SG | put-LF | OBL | father | OBL | wine | NOM | table |

'Father put the wine on the table.'

d. | i-si | si-**eni** | ta | emi | ta | amo |
| NAF-3.SG | put-BF | OBL | wine | OBL | father |

'Father put the wine on the table (for someone).'

Rukai does not have a focus system, but rather is a straightforward nominative/accusative language. (10) shows that subjects in both transitive and intransitive clauses appear with the same nominative case.

Tanan Rukai

(10) a. uduri=**aku**   sa   bɨlbɨl
       plant=1SG.NOM   INDEF banana
       'I plant bananas.'

     b. labuwal=**aku**   kɨla
       walk=1SG.NOM   come
       'I come walking.'

But Rukai shares with Puyuma the requirement that object relative clauses be nominalized. The embedded verb in (11c) takes the nominalizing suffix *-anɨ*. The embedded verb in (11b) is also clearly nominalized, since the subject is genitive rather than nominative.

Tanan Rukai

(11) a. w-aga=su   sa   aga   sa   [**a-kanɨ-anɨ**=ta
       PAST-cook=2.SG   INDEF food   INDEF IMPRV-eat-NMLZ=1.PL.INC
            ki   maum]
            P   night
       'Did you cook dinner (the food that we will eat tonight)?'

     b. [kuaDa   **a-dalu'u**=li   na   rulay kuaDa ki'ing]
       DEM   CAUS-make=1.SG.GEN   DEF   child DEM   clothes
            ka   mailas
            TOP   torn
       'The clothes that I had the child make are torn.'

Incidentally, subject relative clauses in Rukai are not nominalized. Note the lack of nominalizing morphology in (12b). The verb in (12b) also shows the same reduplicative inflection for aspect as the root level verb in (12a). Teng (2008) shows that the same subject/object asymmetry can be found in Puyuma relative clauses.

Tanan Rukai

(12) a. kuDa lalakɨ-li   ka   yakay tayhuk   **turavaravay**
       DEM   child-1.SG.GEN   TOP   there   Taipei   work
       'My child is working in Taipei.'

     b. kuani [**turavaravay** aka   iniya] ka   sakacɨkɨlɨ-li
       DEM   work   over   there   TOP   spouse-1.SG.GEN
       'The one working over there is my husband.'

Given the above similarities in the focus affixes shared by Puyuma and Tsou, on the one hand, and asymmetry between verbal and nominalizing morphology seen in Puyuma and Rukai, on the other, Ross (2009) identifies Puyuma, Tsou, and Rukai as Austronesian languages which have not undergone the reanalysis of nominalization to non-actor focus clause type. He further reconstructs Proto-Austronesian (PAn) with the type of focus system observed in modern Puyuma. The other type of focus system was the result of the reanalysis of clausal nominalizations as root level categories, in agreement with Starosta et al. (1981).

(13)   Proto-Austronesian (Ross 2009:316)
                    Puyuma
                    Rukai
                    Tsou
                    Nuclear Austronesian
                            Kanakanavu, Saaroa
                            Northwest Formosan: Saisiyat, Kulon-Pazih
                            Atayalic: Atayal, Seediq
                            Western Plains: Thao, Taokas, Favorlang-Babuza, Papora, Hoanya
                            Bunun
                            Paiwan
                            East Formosan: Basay-Trobiawan, Kavalan, Amis, Siraya
                            Malayo-Polynesian: all extra-Formosan, including Yami and Tagalog

I also adopt the Nuclear Austronesian hypothesis and the analysis of focus affixes in these languages as erstwhile nominalizers. However, I do not accept the reconstruction of PAn with accusative alignment. One obvious shortcoming of Ross' proposal is the methodological problem of reconstructing PAn with a typologically unusual type of alignment, even if we characterize this system as ergative rather than a "symmetrical voice" system. Another shortcoming of Ross' decision to reconstruct a focus system for PAn is empirical, given that Rukai is an accusative language and does not have a focus system. Consequently, Ross is forced to stipulate the wholesale loss of the non-accusative alignment in this language. But he offers neither evidence for the earlier existence of such a system nor any motivation or pathway for the change. More importantly, he offers no explanation for the origin of the typologically marked non-accusative alignment reconstructed for PAn.

The solution to these problems that I offer in this paper is to propose that PAn was an accusative language and that this alignment is retained in Rukai. As for the focus system found in Puyuma and Tsou, I propose a diachronic reanalysis of an irrealis clause type, specifically an embedded irrealis clause which I take to be a type of subjunctive. The alignment change in this clause type was effected by detransitivization of the irrealis v, which resulted in the loss of accusative case licensing for an internal argument. Objects in these clauses were consequently forced to enter into an Agree relation with T and be licensed with nominative case instead. The external argument, on the other hand, received inherent case in its base position in [Spec, vP]. In this way, bivalent irrealis clauses assumed the guise of transitive clauses in ergative languages: nominative case on the object and inherent case on the subject.

In subsequent developments, the subjunctive was reanalyzed in Puyuma as a realis root clause type through the loss of the subjunctive-introducing auxiliary verb which is retained in Tsou. Since Tsou retains the auxiliaries, it reflects the embedded subjunctive forms more directly, but the irrealis modality has been lost, and the subjunctive forms have been extended to realis clause types.

The first-generation focus affixes are retained in irrealis clauses in many Nuclear Austronesian languages, especially those spoken in Taiwan. As mentioned above, Proto-NAn reanalysed nominalized verbs as root-level categories, with the result that there is a now dichotomy between realis and irrealis focus affixes in these languages. As one example, the realis paradigm are erstwhile nominalizers and are cognate with their counterparts in Philippine languages. This is true even of the CF prefix, which Ross (2009) reconstructs as *Si-. Most Formosan languages reflect the consonant, while Philippine languages reflect only the vowel. In the irrealis paradigm, a clear resemblance can be discerned between –i and –ani and the LF and CF affixes in Puyuma and Tsou.

(14)   <u>Seediq realis vs irrealis</u> (Holmer 1996:38[3])

	<u>AF</u>	<u>PF</u>	<u>LF</u>	<u>CF</u>
Realis	*<m>/m*-V	V-*un*	V-*an*	*s*-V
Imperative	V	V-*i*	V-*ani*	…
Negative	V	V-*i*	V-*ani*	…

Given the reconstruction of PAn with accusative alignment and the hypothesis that ergative alignment first emerged in the other languages as the result of a single innovation, an additional subgroup must be posited between PAn and Nuclear Austronesian. Since Rukai is the only language which retains the accusative alignment of PAn, I posit that Rukai is a first-order subgroup[4] and that it was in Rukai's sister where (split-)ergative alignment first emerged. I call this language "Proto-Ergative Austronesian". Regarding the Nuclear Austronesian subgroup, I follow Ross (2009) in assuming that the origin of that focus system in these languages resulted from the reanalysis of embedded nominalizations (specifically reduced relative clauses in cleft constructions) as root level transitive clauses.

(15)   Proto-Austronesian
            Rukai[5]
            Ergative Austronesian
                    Puyuma
                    Tsou
                    Nuclear Austronesian

2.   Realis vs. irrealis in extra-Nuclear Austronesian morphosyntax

This section summarizes Ross' (2009) reconstruction of PAn verbal inflection and also sketches the reconstructions and innovations that I propose in this paper.

(16) shows Ross' (2009:306) reconstruction of Proto-Austronesian verbal inflection.[6] There are two features worth pointing out at this time. First, he reconstructs a full focus system for all verb forms. Secondly, nominalizing affixes are distinct from verbal affixes. The third point to note is the distinction in the verbal forms between realis, progressive, and hortative affixes on the one hand and imperative, dependent, and future affixes on the other. These two categories fall roughly along the realis and irrealis divide, respectively.

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[3] The chart on page 38 does not show the forms for negation but Holmer (1996:62) points out that the negator *ini* is followed by imperative verb forms.
[4] This proposal is in agreement with Starosta's (1995, 2001) claims that Rukai is a primary subgroup of PAn, though there are significant differences between the bases for the two claims.
[5] This proposal is in agreement with Starosta's (1995, 2001) claims that Rukai is a primary subgroup of PAn, though there are significant differences between the bases for the two claims.
[6] In order to clarify the divide between realis and irrealis mood, I have made some changes to Ross' terminology, using 'progressive' and 'future' for his 'imperfective' and 'irrealis', respectively.

(16)

	AF	PF	LF	CF
Realis (N)	*M-V	*V-en	*V-an	*(Sa-/)*Si-V
Perfective (N)	*M-<in>V	*<in>V	*<in>V-an	*<in>Si-V
Future (N)	*RED-V	*RED-V-en	*RED-V-an	*(Sa-/)*Si-V
Realis (V)	*M-V	*V-aw	*V-ay	*an-ay+V
Progressive (V)	*M-RED-V	*RED-V-aw	*RED-V-ay	*an-ay+RED-V
Hortative (V)	*M-V-a	*V-aw	*V-ay	*an-ay+V
Imperative (V)	*V	*V-u	*V-i	*an-i+V
Dependent (V)	*M-V	*V-a	*V-i	*an-i+V
Future (V)	*RED-V	*RED-V-a	*RED-V-i	*an-i+V

Ross' reconstructions are informed in large part by Puyuma. Puyuma shows a distinction between nominalizing and verbalizing affixes, which is not surprising, given the contrast noted above between (7a) and (7b). Another interesting fact about Puyuma is that, like many Formosan languages, it employs different affixes in realis and irrealis mood. (17) shows an array of focus affixes employed in imperative sentences: actor focus (17a), patient focus (17b), and locative focus (17c). These forms differ (albeit only slightly) from the realis suffixes summarized in (5) in the preceding section.

Puyuma imperatives (Teng 2008:216)

(17)   a.   trekelr
            drink
            'Drink!'

       b.   pilang-**u**   i   temuu   m-uka
            take-TR1.IMP   SG.NOM   your.grandmother   INTR-go
                        i   drena-drenan
                        LOC   RED-mountain
            'Take your grandmother to the mountains.'

       c.   puka-**i**   dra   tidrul   dra   samaya
            put-TR2.IMP   INDEF.OBL   wasp   INDEF.OBL   some
            'Put some wasps (in).'

(18) shows the full inflectional paradigm for Puyuma. As noted above, realis and irrealis affixes take distinct forms in this language. However, closer examination reveals striking parallels between the realis affixes and their irrealis counterparts. For example, the off-glides in the realis patient and locative suffixes bear striking resemblance to the corresponding imperative suffixes. The final glide in the circumstantial form also matches the locative irrealis suffix. Further examination reveals that the realis suffixes all contain an /a/ component before the final glide. In fact, all of the realis forms can be derived by adding –a to the verb root or to the CF base V-an and subsequently affixing either –u (for PF) or –i (for non-PF).[7]

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[7] See also Ross (1995, 2002) for a similar (though not identical) idea.

(18)   Puyuma verbal inflection (adapted from Ross 2009:304)

	AF	PF	LF	CF
Realis (N)	*\<em>*V	*\<in>*V	*\<in>*V-*an*	*i*-V
Future (N)	RED-V	RED-V-*en*	RED-V-*an*	*i*-RED-V
Realis (V)	*\<em>*V	V-*aw*	V-*ay*	V-*anay*
Hortative (V)	*\<em>*V-*a*	V-*aw*	V-*ay*	V-*anay*
Progressive (V)	*\<em>*RED-V	RED-V-*aw*	RED-V-*ay*	RED-V-*anay*
Imperative (V)	V	V-*u*	V-*i*	V-*an*
Negative (V)	*\<em>*V	V-*i*	V-*i*	V-*an*
Future (V)	RED-V	RED-V-*i*	RED-V-*i*	RED-V-*an*

In this paper, I pursue precisely such a derivational relationship between the realis and irrealis suffixes in Puyuma. To this end, a key question that must be addressed is the origin and function of the pre-glide /a/ in the realis non-actor focus forms. Ross (2009) reconstructs an *–a suffix as the PAn dependent patient focus suffix. This is understandable, given the role of this affix in Tsou. As shown above in (8) and (9), –a is the patient focus suffix in Tsou. But this suffix only surfaces on nonfinite verbs. Only auxiliary verbs are finite in Tsou, and these show a focus distinction between actor and non-actor focus. Crucially, –a does not appear on auxiliaries.

The direction I pursue in this paper is similar to Ross' in that I also take *–a to attach to embedded nonfinite verb forms. However, I specifically propose that *–a was an embedded irrealis suffix, specifically a type of subjunctive, in PAn. The subjunctive *–a is retained in Rukai as the imperative suffix. Note that Rukai imperatives employ both the suffix and the nonfinite reflex of the verbal prefix *M-, which is *\<u>* on verbs beginning with a consonant and the vowel /a/.[8]

Tanan Rukai

(19)   a.   k\<u>anɨ-a
        \<M>eat-IMP
        'Eat!'

    b.   t\<u>akaynun-a
        \<M>sit-IMP
        'Sit!'

I further propose that the subjunctive form was used in PAn root clauses as a hortative. This usage survives in Puyuma, Mayrinax Atayal, and Taroko Seediq. In addition to Rukai, it is also used in imperative clauses in Kanakanavu and Saaroa (Ross 2009:317-320).

I propose the reconstructions in (20) for PAn verbal morphology. The most obvious difference between my reconstructions and Ross (2009) is that I take PAn to be an accusative language like Rukai. Consequently, there are no non-actor focus forms in the verbal paradigm. The AF verbal forms that I reconstruct are largely identical to Ross' (2009) reconstructions of the corresponding forms, with a few exceptions. I do not reconstruct a separate dependent or hortative form. I assume that realis mood nonfinite verbs also took *M-, as is the case in nearly all Formosan languages today. My reconstruction of the subjunctive is identical to Ross' hortative form. Subjunctive is an embedded form, but I assume that it can be used in root clauses as a hortative form. As mentioned above, several Formosan languages retain this form in hortative clauses.

As for the nominalizing forms, I propose two additional revisions to Ross' (2009) reconstructions. First, I do not reconstruct AF nominalizing forms. As shown above in (12), there is convincing evidence that relative clauses formed on subjects were clausal, as opposed to relative clauses formed

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[8] Li (1973) labels the Tanan infix *\<u>* the "nonfinite" form. Zeitoun (2007) treats the corresponding form in Mantauran as "subjunctive". Ross (2009) analyses *\<u>* as a reflex of *M-.

on internal arguments in transitive clauses, which were nominalized.[9] Accordingly, I posit only non-actor focus forms as relativizing affixes. Furthermore, I assume a single form for PF and LF, evidence for which comes from Rukai, to be discussed in section 4.

(20)   PAn reconstruction (Proposal)

	AF	PF	LF	CF
Realis (N)	---	*V-*an*	*V-*an*	*Si-*V
Perfective (N)	---	*<*in*>V	*<*in*>V-*an*	*<*in*>Si-*V
Future (N)	---	*RED-V-*an*	*RED-V-*an*	*(Sa-/)*Si-*V
Realis_FIN (V)	*M-*V	---	---	---
Realis_NONFIN (V)	*M-*V	---	---	---
Progressive (V)	*M-*RED-V	---	---	---
Subjunctive (V)	*M-*V-*a*	---	---	---
Imperative (V)	*V	---	---	---
Future (V)	*RED-V	---	---	---

   In this paper, I propose that the non-accusative alignment found in Puyuma and Tsou today was the result of a reanalysis which took place in irrealis clauses. Specifically, I propose that irrealis clauses were detransitivized in PEAn, with the result that structural accusative licensing on the irrealis *v* was lost. The affixes *-u*, *-i*, and *-an* were pressed into service in order to license internal arguments in semantically transitive clauses. I discuss this process in detail in section 4. To summarize briefly, I propose that the distinction between *–u* and *–i* lies in their aspectual properties. *–u* appeared in (potentially) telic events, while *–i* was associated with atelic events. Since irrealis clauses are generally atelic, it is not surprising that *–i* appears across several different focus categories. *-u* is confined to hortative and imperative patient focus forms, which is unsurprising given that that PF is employed in Formosan and Philippine languages in telic events with definite objects. Hortative and imperative are also exceptional irrealis clauses in that they allow a telic interpretation.

(21)   PEAn reconstruction (Proposal)

	AF	PF	LF	CF
Realis (N)	---	*V-*en*	*V-*an*	*Si-*V
Perfective (N)	---	*<*in*>V	*<*in*>V-*an*	*<*in*>Si-*V
Future (N)	---	*RED-V-*en*	*RED-V-*an*	*(Sa-/)*Si-*V
Realis_FIN	*M-*V	---	---	---
Realis_NONFIN	*M-*V	---	---	---
Progressive	*M-*RED-V	---	---	---
Subjunctive	*M-*V-*a*	*V-*a*	*V-*a-i*	*V-*an-a-i*
Hortative	*M-*V-*a*	*V-*a-u*	*V-*a-i*	*V-*an-a-i*
Imperative	*V	*V-*u*	*V-*i*	*V-*an-i*
Future	*RED-V	*RED-V-*i*	*RED-V-*i*	*RED-V-*an-i*

---

[9] The details of the syntactic analysis of this asymmetry are beyond the scope of the current study, but put simply this is the result of an EPP restriction on *v*. Only the relativizing *v* could project an extra specifier and hence allow extraction from the embedded VP. But verbal clauses did not allow extraction from inside *v*P. Subject extraction is unaffected, since no phase boundary intervenes between the base position of the subject and a probe on C. This is true not only for external argument subjects but also for subjects of unaccusative predicates. I assume with Chomsky (2001) that unaccusative *v*P is a weak phase, so extraction from VP does not require an EPP feature on *v*. The EPP restriction on *v* is widely retained in Austronesian languages of Taiwan, the Philippines, Indonesia, Malaysia, and Madagascar in the form of the absolute or subject restriction on A'-extraction (Aldridge 2004, 2008a, 2008b).

It is also in PEAn that the PF and LF nominalizers come to be distinguished. In section 4, I suggest that the *-en PF form resulted when *–an attached to a base ending in the telic marker *–u.

The subgrouping and innovations that I argue for in this paper are summarized in (20).

(22)   Proto-Austronesian   (Accusative alignment)
        Rukai
        Proto-ergative Austronesian   (Detransitivization of irrealis *v*)
            Puyuma   (Subjunctive > realis)
            Tsou   (Subjunctive > nonfinite realis)
            Nuclear Austronesian (Nominalization > verbal)

Several goals are accomplished by reconstructing PAn as an accusative language and deriving the Puyuma realis focus affixes from irrealis forms. First, it is no longer necessary to stipulate the loss of focus in Rukai. Secondly, the formal similarities between the realis and irrealis affixes in Puyuma receive a principled account. A third benefit is in being able to reconstruct PAn with an unmarked type of alignment and accounting for the origin of marked ergative alignment in a principled way. The next section elaborates on the methodological advantage and develops the syntactic analysis of the alignment change in terms of the formal features involved in argument licensing.

## 3. Markedness and direction of change

In the previous section, I proposed that PAn be reconstructed with a relatively unmarked accusative alignment and that the non-accusative alignment observed in Puyuma and Tsou arose when irrealis *v* was detransitivized and lost its ability to license an object. This section develops the syntactic analysis of this innovation. I first show how accusative alignment is predicted to be the least marked type of alignment by principles of Universal Grammar in the Minimalist Program of Chomsky (2001 and subsequent works). I then show how the analysis of argument licensing in this framework predicts a specific path for accusative to ergative alignment change.

According to Chomsky (2001), the functional heads finite T and transitive *v* are each merged with an unvalued ɸ-feature. D(P)s enter the derivation with valued ɸ-features and an unvalued case feature.

(23)   <u>Accusative language</u>
    v_{Tr}:   [uɸ]
    v_{Intr}:   No [uɸ]
    T_{Fin}:   [uɸ]

The unvalued ɸ-feature on T or *v* acts as a probe and seeks a matching counterpart in its c-command domain. As soon as it finds an appropriate goal, i.e. a valued ɸ-feature set on a DP, the ɸ-feature on T is valued, and the DP supplying the valued ɸ-features is valued for case. Because the search domain is determined by c-command, transitive *v* values accusative case on the structurally most prominent VP-internal DP (i.e. the object), while T values nominative case on the highest DP in the clause, e.g. the subject.

(24)   a.   She[NOM] walks.
        b.   She[NOM] sees him[ACC].

c. TP
T[_uφ_]   vP
      DP[φ, NOM]   v'
            v[_uφ_]   VP
                  V   DP[φ, ACC]
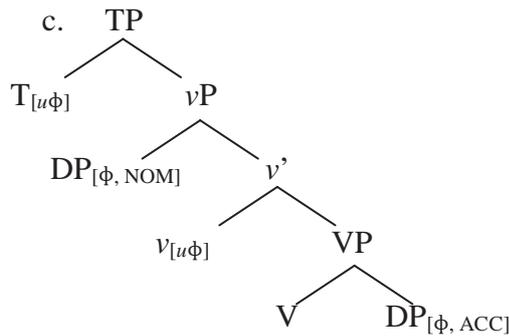
Given that the Agree relation adheres to strict locality, nominative case is uniformly valued on the first DP in the argument structure hierarchy, resulting in accusative alignment. Put differently, argument licensing in an accusative language involves a direct mapping from argument structure to grammatical function. In this way, the mechanisms of Minimalist syntax provide an explanation for the fact that accusative alignment is less marked and more commonly found among the world's languages than non-accusative alignment.

In an ergative language, nominative case is not assigned uniformly to the subject. Rather, this case appears on the subject in an intransitive clause and the object in a transitive clause.
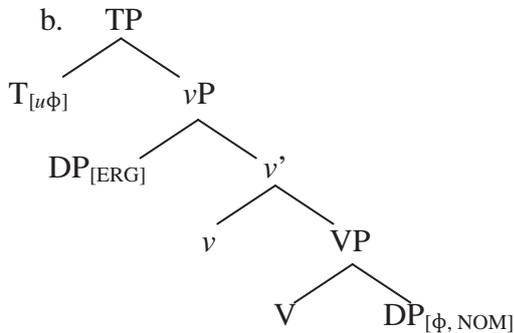
<u>Seediq</u>

(25) a. Wada   kudurjak   **ka**   qedin=na.
          PAST   flee   NOM   wife=3S.GEN
          'His wife ran away.'

      b. Wada   bube-un   **na**   Pihu   **ka**   dangi=na.
          PAST   hit-TR   ERG   Pihu   NOM   friend=3S.GEN
          'Pihu hit his friend.'

The challenge posed by ergative alignment to the Minimalist analysis of argument licensing is first and foremost a matter of locality. Specifically, the ergative subject intervenes between T and the nominative object. If the external argument has an unvalued case feature and is consequently a potential goal for the φ-probe on T, then it should be the DP to value nominative case. Legate (2002, 2008) proposes a solution to this problem by positing (with Mahajan 1989, 1997 and Woolford 1997, 2006, Ura 2000, and others) that ergative case is inherent, assigned by transitive *v* to its specifier. Since its case feature is already valued, the external is not an intervener, and T is able to probe past it and undergo Agree with the object.

Seediq is a Nuclear Austronesian language. Consequently, it reflects the innovation which reanalysed nominalizations as verbal clauses and employs genitive case to mark ergative subjects. Since the ergative case is genitive, it is quite reasonable to analyse it as inherent rather than structural case valued by T. Consequently, licensing in Seediq[10] transitive clauses can receive the following account. Transitive *v* does not have the ability to license structural (accusative) case, though it does assign inherent ergative (genitive) case to its specifier. The object must value its case feature in order to be licensed, which it is able to do with T, since the external argument has received its case from *v* and does not prevent an Agree relation between T and the object.

---

[10] Aldridge (2004, 2008a) analyses Seediq as a "T-type" ergative language. Other terms for this type of language are "high absolutive" (Coon et al. 2011) and "ABS=NOM" (Legate 2008). In addition to high ABS, there are also mixed absolutive (or what Aldridge 2004, 2008a calls "*v*-type") languages, in which absolutive arguments are licensed by T in intransitive clauses and *v* in transitive clauses. See Aldridge (2004, 2008a) and Legate (2008) for discussion and analyses of the two types. Mixed ABS Austronesian languages reflect a later innovation which is beyond the discussion in this paper.

(26) a.   <u>High ABS ergative language</u>
      v_{Tr}:   Inherent case, no $[u\phi]$
      v_{Intr}: No $[u\phi]$
      T_{Fin}: $[u\phi]$

b.
```
           TP
          /  \
    T[uφ]     vP
            /    \
      DP[ERG]     v'
                 /  \
               v     VP
                    /  \
                   V    DP[φ, NOM]
```

To summarize the discussion so far, one crucial parameter which derives ergative alignment rather than accusative is the availability of inherent case for the external argument on transitive *v*, as proposed by Legate (2002, 2008). The lack of accusative case within *v*P for the object is also an ingredient so that the object undergoes Agree with T and values nominative case. See Bok-Bennema (1991), Bittner and Hale (1996), Ura (2000), Alexiadou (2001), and Whitman and Yanagida (to appear) for characterizations of these two syntactic conditions as the parameters distinguishing ergative from accusative systems.

Given that these are the two parameters minimally distinguishing ergative from accusative alignment, it is predicted that an ergative case pattern arises dichronically when these two parameters are set from their default values in (23) to the values given in (26). One environment inducing such a change is an embedded nominalization, for example in a reduced cleft in which the focused constituent is the head of a reduced relative clause. This nominal raises to the edge of the clause, where it is licensed by T with nominative case. The external argument inside the relative clause receives inherent genitive case from *n*.

(27)
```
              TP
             /  \
       T[uφ]     nP
               /    \
      DP[φ, NOM]     n'
                   /    \
            DP[GEN]      n'
                        /  \
                 n[EPP]     NP
                           /  \
                          N    t_DP
```
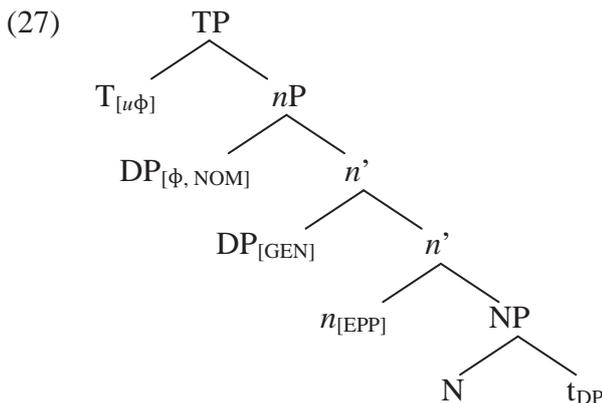
This is the structure which I have proposed (2012) as the input to the reanalysis of nominalizations as verbal clauses in Proto-Nuclear Austronesian. The analysis can also be applied to modern Puyuma cleft constructions, for instance a *wh*-question like the one shown in (28). The *wh*-word occupies the focus position at the beginning of the clause and receives nominative case. The subject inside the relative clause is genitive. The presupposition is packaged as a nominalized relative clause.

<u>Puyuma</u>

(28) amanay   [*nu*=b<**in**>ǝray   kan   aʈuŋ]   (Tan 1997:116)
      what.NOM   2.SG.GEN=<NMLZ>give   OBL   aʈuŋ
      'What is the thing that you gave to Aʈuŋ?'

For the reanalysis of nominalization to root clause, I proposed that the category of the relative clause *n*P changed to *v*P. The trigger for this change was the loss of a copula introducing the focused constituent, which resulted in a vacant T position to which the main verb could move. Verb-movement to T resulted in VSO word order and removed overt evidence for the biclausal structure. The cleft construction was then reanalyzed as the simpler monoclausal root clause. This innovation accounts for why root clauses and verbs embedded in cleft constructions in Nuclear Austronesian languages utilize the same set of affixes, which are the erstwhile nominalizing morphology.

<u>Tagalog</u>

(29) a.   B<**in**>ili   ng   babae   ang   isda.
           <TR.PRV>buy   GEN   woman   NOM   fish
           'The woman bought the fish.'
      b.   Isda   ang   [b<**in**>ili   ng   babae].
           fish   NOM   <TR.PRV>buy   GEN   woman
           'Fish is what the woman bought.'

Given the preceding discussion, it unsurprising that ergative alignment has a nominal origin in a wide range of language families, for example Mayan (Bricker 1981), Cariban (Gildea 1998), Inuit (Johns 1992), and of course Nuclear Austronesian. Nominalizations provide inherent case to the embedded subject. The nominalizing *n* also lacks accusative case for the object. Consequently, the *n*P embedded in a cleft construction provides the two syntactic conditions for the change from accusative to ergative alignment. In the remainder of this section, I explore the possibility that irrealis clauses are another syntactic environment meeting these conditions.

First observe that irrealis clauses often involve detransitivization, cross linguistically, as pointed out by Hopper and Thompson (1980), who rate irrealis mood as being less transitive than realis and propose this as one of their transitivity parameters.[11] In this way, irrealis clauses meet one of the conditions for the emergence of ergative alignment. However, detransitivization of *v* alone does not suffice to predict a change from accusative to ergative alignment. This is because, unlike nominalizations in which the subject receives genitive case, inherent case is not necessarily assigned to the subject in irrealis clauses. For example, the phenomenon known as "genitive of negation" in Slavic languages involves a detransitivized irrealis clause type, but the case of the subject remains nominative. In the following Russian examples, an object can (and often does) receive genitive case in the scope of sentential negation, as in (30a). It is also possible for the object to surface with accusative case, as in (30b). The difference in case-marking correlates with a difference in interpretation. The accusative object definite, while the genitive object is indefinite. But the subject is nominative in both cases.
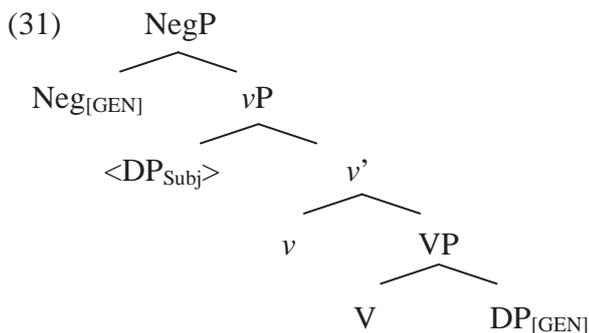
<u>Russian</u> (Harves 2002a:97)

(30) a.   Anna   *ne*   kupila   **knig**.
           Anna.NOM   NEG   bought   books.GEN
           'Anna did not buy any books.'

---

[11] See also Denniss (2007), Beavers and Zubair (2010), and others for analyses of irrealis clauses as intransitive.

b.   Anna   *ne*   kupil   **knigi**.
       Anna.NOM   NEG   bought   books.ACC
       'Anna did not buy the books.'

Many proposals have been made to account for case alternation like that seen in (30). Most assume that the Neg head is the source of genitive case (Pesetsky 1982, Bailyn 1997, Brown 1999, Harves 2002a, Harves 2002b, and Witko 2008). Harves (2002b) implements this idea and accounts for the alternation in (30) in the following way. The Neg head can select a transitive vP with an accusative case feature on v, or it can select a defective vP in which accusative case is unavailable. If accusative case is unavailable within vP, then the object is dependent upon a higher functional head for case licensing and consequently values genitive case with Neg[12]. The brackets around the DP in [Spec, vP] indicate the trace position of the subject, which has moved to [Spec, TP].

(31)

$$\begin{array}{c}
\text{NegP} \\
\swarrow \qquad \searrow \\
\text{Neg}_{[GEN]} \qquad v\text{P} \\
\swarrow \qquad \searrow \\
<\text{DP}_{Subj}> \qquad v' \\
\swarrow \qquad \searrow \\
v \qquad \text{VP} \\
\swarrow \qquad \searrow \\
\text{V} \qquad \text{DP}_{[GEN]}
\end{array}$$

An alternative approach is to assume that the genitive case is an inherent, specifically lexical (in the sense of Woolford 2006), case assigned by the verb. Such an analysis is proposed by Kim (2003, 2004), and I assume this approach as well. Analysing the genitive case as inherent also allows a parallel to be drawn with other languages in which differential object marking correlates with interpretation. Partitive case marks objects in atelic events in Finnic languages. It is frequently noted that there is a connection between aspect and the availability of structural object case (Tenny 1987, 1994; Van Voorst 1988; Bittner 1994; Borer 1994; Benua 1995; Kiparsky 1998; Ritter and Rosen 2000; Spreng 2006; Basilico 2008; and others). For example, Kiparsky (1998:6) proposes for Finnish that an object has partitive case if it is governed by an unbounded verbal predicate or is itself quantitatively indeterminate. In (32), the appearance of accusative case on the object correlates with a bounded interpretation for the event. If a verb is intrinsically unbounded, it can only license partitive case on its object.

      <u>Finnish</u> (Kiparsky 1998:3)
(32)   etsi-n   karhu-a/#karhu-n
       seek-1.SG   bear-PART/bear-ACC
       'I'm looking for the (a) bear.'

The same alternation is found in the related language Estonian. Objects receive partitive case in atelic events and accusative case when the event is telic.

      <u>Estonian</u> (Hiietam 2004)
(33)   a.   Poiss   luges   **raamatut**.
           boy.NOM   read.PAST.3.SG   book.PART
           'The boy was reading a/the book.'

---

[12] At first blush, this Agree relation seems to violate the Phase Impenetrability Condition of Chomsky (2001 and subsequent works). Harves proposes, however, that the v lacking a case feature is not a strong phase, allowing the case feature on Neg to probe into the VP.

b.	Poiss	luges	**raamatu**	läbi.
	boy.NOM	read.PAST.3.SG	book.ACC	through

'The boy read the book through.'

Adopting the analysis of Travis (2010), the alternation in (33) can be accounted for in the following way. Accusative case is available in telic contexts and depends on the presence of a *v*P-internal aspect projection. Travis proposes that, when the event is telic, the object moves to the specifier of the aspect projection where it receives accusative case. In atelic events, the AspP is not projected; the object remains in its base position and receives inherent case from the verb.

(34)

```
            TP
           /  \
          T    vP
              /  \
     DP[NOM]      v'
                 /  \
                v    AspP   (Telic event: Object has structural case, in [Spec, AspP])
                    /  \
             DP[ACC]    Asp'
                       /  \
                    Asp    VP (Atelic event: Object gets inherent case from V)
                          /  \
                         V    DP[INH]
```
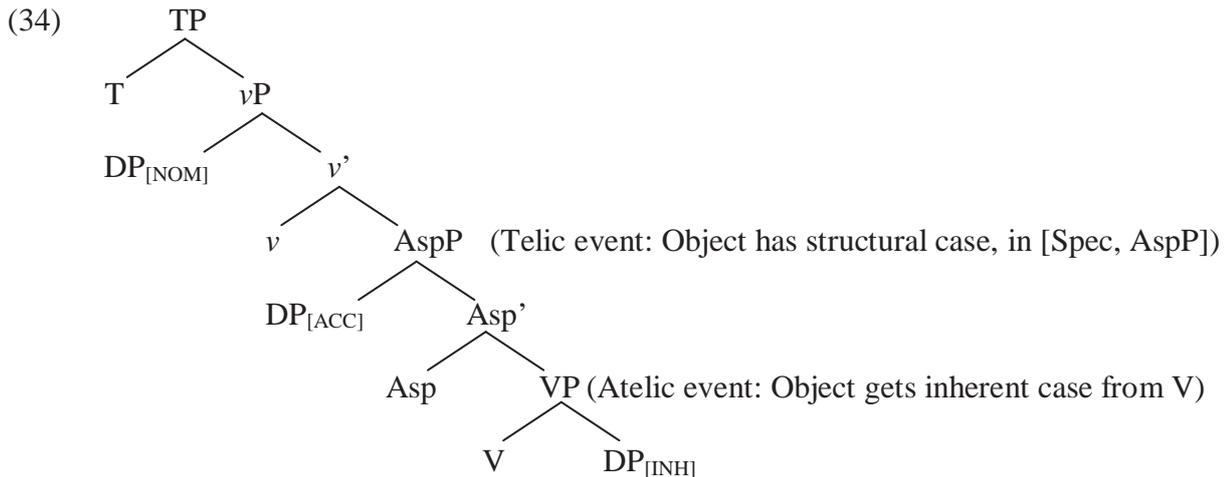
In this way, objects in telic events require structural licensing in Finnic languages. But if accusative case is unavailable, then the object must rely on T to value its case. This circumstance introduces the potential for an ergative type case pattern to emerge. This potential is realized in imperative clauses, a type of irrealis. Estonian imperative clauses are detransitivized, making accusative case unavailable. Consequently, accusative does not appear, but the aspectual alternation – and its concomitant correlation with the availability of structural case – can still be observed. In the atelic event in (35a), the object receives partitive case, as expected. In the telic event in (35b), the object is marked with nominative case.

Estonian (Hiietam 2004)

(35)	a.	Söö	**võileiba**!	
		eat.2.SG.IMP	sandwich.PART	

'Eat some sandwich!/ i.e. Do some sandwich eating!'

	b.	Söö	**võileib**	ära!
		eat.2.SG.IMP	sandwich.NOM	up

'Eat the sandwich up!'

Since objects in telic events can have either accusative or nominative case, the following revision to Travis' (2010) proposal is in order. The object in the telic event moves to [Spec, AspP], but it is not the Asp head which values the case feature of the object. Rather, the object undergoes Agree with the closest φ-probe, which will be on *v* when *v*P is fully transitive and capable of licensing an object. Otherwise, it will be the φ-probe on T which undergoes Agree with the object and values its case as nominative.

(36)

```
            TP
          /    \
        T       vP
              /    \
      DP[INH]       v'
                   /  \
                  v    AspP
                      /    \
               DP[NOM]      Asp'
                           /    \
                         Asp     VP
                                /   \
                               V     DP[INH]
```

In the following section, I propose that ergative alignment in Proto-Ergative Austronesian also arose in irrealis clauses after irrealis *v* was detransitivized. This forced the subject to be assigned inherent case so that the object could undergo Agree with T and value nominative case. I further argue for a role for AspP in accounting for the distribution of the focus affixes –*u* (PF) and –*i* (LF).

4. Emergence and development of the focus system

This section proposes that ergative alignment in Puyuma and Tsou is the result of the reanalysis of irrealis clauses as intransitive. When *v* was deprived of the ability to value accusative case, objects became dependent on T for nominative case. The subject also had to be assigned inherent case by *v* so that T could enter into an Agree relation with the object and value its case feature.

On the morphological side, I propose that this change is related to the role of the actor focus affix, which Ross (2009) reconstructs as *M-*. In irrealis clauses across Formosan languages, the reflex of *M-* tends to be absent, at least on the highest verb form in the clause. In Tsou, the irrealis auxiliaries lack the reflex of *M-*. However, embedded AF verbs do still carry *M-*, as can be seen in (37c).

Tsou

(37) a. ta-hin'i cu mon'i mevcongU
   IRR-3PL ASP soon be.married.AF
   'They are soon to be married.'   (Huang and Huang 2003:8)

  b. te bonU ta yoskU
   IRR eat.AF OBL fish
   'Eat fish!'   (Huang and Huang 2003:10)

  c. te-ta **m**-imo ta emi
   will-3SG.BN AF-drink OBL wine
   'He will drink wine.'   (Zeitoun 1996:517)

The same pattern is observed in comparing actor and non-actor focus across Austronesian languages. AF realis forms generally reflect *M-*, while non-actor focus forms systematically lack *M-*.

Tsou (Zeitoun 2000:93-4)

(38) a. **m**o **mo**-si ta pangka to emi 'o amo
   AF AF-put OBL table   OBL wine NOM father
   'Father put the wine on the table.'

b. i-si si-**a** ta pangka to amo 'o emi
   NAF-3.SG put-PF OBL table OBL father NOM wine
   'Father put the wine on the table.'

The contrast between actor focus (with *M-*) and non-actor focus (without *M-*) is typically explained in terms of the focus system, i.e. that *M-* is a focus marker. However, the lack of *M-* on irrealis verb forms, regardless of focus, argues strongly against this analysis. Here, I treat *M-* as a realis verbal prefix. Syntactically, it heads a *v*P, which can be transitive or intransitive, unergative or unaccusative. When it is transitive, it carries unvalued φ-features that seek a DP to value φ and case features with. Without *M-*, *v* does not carry φ-features and is consequently unable to value accusative case.[13] I also suggest that the nature of the external argument is different. It is selected with inherent case (and is possibly a PP). In some cases, it can be absent altogether, as in imperatives.

The next morphological facts which need to be accounted for are the non-actor focus affixes *–u* (PF) *–i* (LF), and *–an* (CF). Before proceeding, it is instructive to re-examine the Puyuma inflectional paradigm. I proposed in section 2 that the realis and hortative forms derive from a subjunctive form. The realis is the result of reanalysis of the embedded subjunctive after loss of the auxiliary introducing this form. Regarding the progressive, I assume this reflects an extension of the realis paradigm. What is of interest here is that the realis, hortative, and imperative patient focus affixes (*–aw* or *–u*) all contain /u/. But the negative and future PF forms are syncretic with the LF.

(39) **Puyuma** <u>AF</u> <u>PF</u> <u>LF</u> <u>CF</u>
   Realis   *\<em\>*V   V-*aw*   V-*ay*   V-*anay*
   Hortative   *\<em\>*V-*a*   V-*aw*   V-*ay*   V-*anay*
   Progressive *\<em\>*RED-V   RED-V-*aw*   RED-V-*ay*   RED-V-*anay*
   Imperative V   V-**u**   V-**i**   V-*an*
   Negative   *\<em\>*V   **V-i**   **V-i**   V-*an*
   Future   RED-V   **RED-V-i**   **RED-V-i**   RED-V-*an*

What I propose in this section is that PEAn was a differential object marking language like Estonian and Finnish. In telic events, the object required structural licensing, while in atelic events the object remained in VP and received inherent case from the lexical verb. This situation can be observed in modern Rukai. Indefinite objects are marked with *sa* and definite objects are marked with *na*. It is clear that *sa* and *na* are object markers and not (in)definite articles, because they can only appear with objects and never with subjects.
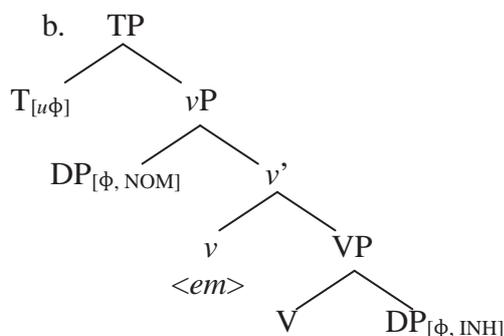
Tanan Rukai
(40) a. aw-bay **sa** valu na rulay kuani taLagi-ini
       PAST-give INDEF treat DEF child DEM friend-3.SG.GEN
       'His friend gave the child a treat.'
    b. ay-daru'u=aku sa uDukay **na** tuh
       FUT-make=1.SG.NOM C short DEF table
       'I will make the table shorter.'

Puyuma is also a differential object marking language, but information status of the object affects whether the clause is actor or non-actor focus in this language. Teng (2008) shows that actor focus is used when the object is indefinite. It is fairly clear, then, that Puyuma AF *v* never carries unvalued

---

[13] Note that it is the finite verb form in Tsou which determines whether *v* has the ability to value case. The AF morphology on the embedded verb in (37c) will not play a role, since this verb is too low in the structure to occupy *v*.
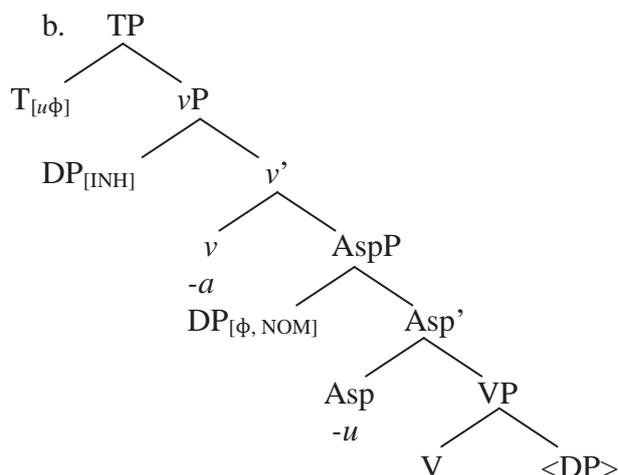
φ-features and has been reanalysed as fully intransitive.[14] Consequently, objects in AF clauses must be inherently case licensed, just as indefinite objects in negated clauses in Slavic languages.

Puyuma (Teng 2008:147)

(41) a. tr**<em>**akaw *dra*   *paisu* i   isaw
          <INTR>steal   INDEF.OBL   money SG.NOM   Isaw
          'Isaw stole money.'

b.

```
            TP
           /  \
      T[uφ]    vP
             /    \
    DP[φ, NOM]     v'
                  /  \
                 v    VP
               <em>  /  \
                    V    DP[φ, INH]
```

When the object is definite, a patient focus clause must be used. I assume that this is because the object requires structural licensing when it is definite. Note, however, that the object receives nominative case, while the subject has oblique case and is resumed by a genitive pronoun on the verb. I propose that patient focus clauses are telic; AspP is projected, and the object moves to the specifier of this projection. In this position, it will undergo Agree with T and value nominative case.

Puyuma (Teng 2008:147)

(42) a. tu=trakaw-**aw**   *na*   *paisu* kan   isaw
          3.GEN=steal-TR1   DEF.NOM   money SG.OBL   Isaw
          'Isaw stole the money.'

b.

```
            TP
           /  \
      T[uφ]    vP
             /    \
      DP[INH]      v'
                  /  \
                 v    AspP
                -a   /   \
          DP[φ, NOM]     Asp'
                        /   \
                      Asp    VP
                      -u    /  \
                           V    <DP>
```

Regarding the morphemes that comprise the patient focus suffix in Puyuma, I proposed in section 2 that *-a* was a subjunctive marker in PAn and PEAn. In this section, I suggest that *-u* was a marker of telic aspect. Returning to the Puyuma paradigm in (39), recall that *-u* appears in realis, hortative, and imperative patient focus suffixes, while *-u* is missing from negative and future forms.

---

[14] Teng (2008) also analyses Puyuma AF as intransitive and NAF as transitive, though she is working outside the generative framework and does not adopt the terminology I use for argument licensing.

I suggest here that this is not a morphological accident. In the preceding subsection, I showed that imperatives, though irrealis, can be telic. It is reasonable to assume that this is also true of hortatives.

Estonian (Hiietam 2004)

(43) a. Söö   **võileiba**!   (Atelic)
          eat.2.SG.IMP   sandwich.PART
          'Eat some sandwich!/ i.e. Do some sandwich eating!'

      b. Söö   **võileib**   ära!   (Telic)
          eat.2.SG.IMP   sandwich.NOM   up
          'Eat the sandwich up!'

In contrast to this, future and negative clauses are never telic, and this accounts for the systematic lack of *-u in these clause types. Regarding the *–i and *-an that appear in locative and circumstantial focus clauses, I propose that these morphemes were required in order to license objects which were not themes or patients. LF and CF clauses are generally ditransitive, containing two internal argument DPs. The theme or patient argument can be directly selected by the lexical verb and is therefore eligible for inherent case. But this is not the case for applied objects, which are dependent on structural licensing and consequently must occupy a structurally prominent position within *v*P.

The exact functions of these morphemes are not extremely obvious, but some possibilities are suggested by comparative evidence. I begin with *–i. Starosta et al. (1981) propose that the LF suffix *–i was a preposition which was reanalysed as an applicative selecting a dative or locative argument.[15] Many Austronesian languages reflect *–i as a preposition, as is the case in Paiwan.

Southern Paiwan

(44) t<em>alem   ti   ina   ta   qarizang   i   gade
      <ACT>plant   NOM.PN   mother   OBL   bean   P   mountain
      'Mom plants beans in the mountains.'

However, it is difficult to maintain this hypothesis, given that there is no direct thematic correspondence between the suffix and the applied object, which is a goal or locative argument in LF but a theme or patient in PF irrealis atelic contexts. I suggest below that the off-glide in the CF suffix is also *–i, but this *–i selects a wide variety of arguments, including themes, instruments, and beneficiaries. Another possibility is that –i heads an atelic AspP.[16] This hypothesis provides a satisfying account of the complementarity between *–i and *–u. There is also evidence that this dichotomy extends beyond irrealis non-actor focus contexts. The Rukai examples in (40) show that past tense is marked by the prefix *aw-* (/a/+/u/) and future is marked by *ay-* (/a/+/i/). The following alternation in Tsou may also be related to this dichotomy. Auxiliary verbs are inflected either for actor focus or non-actor focus. The actor focus auxiliaries all begin with *m-*, a reflex of *M-*. The following vowel seems to be related to aspect. According to Zeitoun (1996:511), if the vowel following *m-* is /o/, then then the event has been completed and has no relevance to the speech time. If the vowel following *m-* is /i/, then the event is either on-going or has relevance to the speech time.

Tsou (Zeitoun 1996:510)

(45) a. **moh**-ta   yuevaho   to   peisu   to   oko
          AF-3S.BN   lend-AF   OBL   money   OBL   child
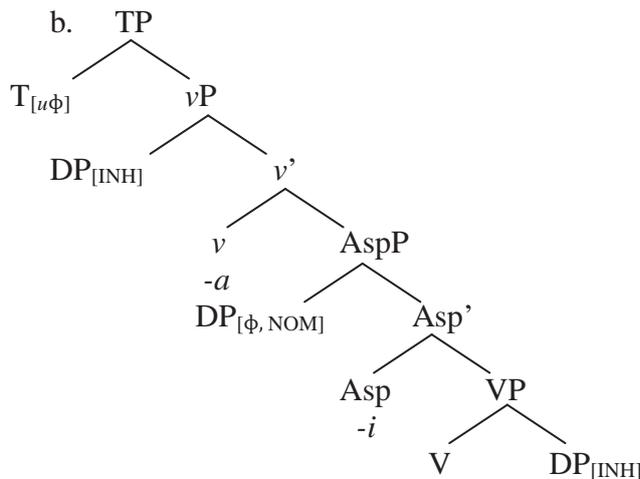   'He is lending money to a child.'

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[15] For Starosta et al. (1981), the reanalysis was the result of "preposition capturing", which I interpret as head movement of the preposition to incorporate to the verb.

[16] I credit Barbara Meisterernst (personal communication) for originally suggesting that –i might be an atelic aspect marker.

b. **mi**-ta   yuevaho   ta   peisu   ta   oko
    AF-3S.BN   lend-AF   OBL   money   OBL   child
    'He is lending money to a child.'

The argument selected by the Asp head is also the highest DP in *v*P that does not have its case feature valued and will consequently be the argument to undergo Agree with T.

Puyuma (Teng 2008:147)
(46) a. tu=trakaw-**ay**=*ku*   dra   paisu kan   isaw
         3.GEN=steal-TR2=1SG.NOM   INDEF.OBJ   money SG.OBL   Isaw
         'Isaw stole money from me.'

b.
```
                TP
              /    \
         T[uφ]      vP
                  /    \
           DP[INH]      v'
                      /    \
                    v      AspP
                    -a    /    \
               DP[φ, NOM]      Asp'
                             /      \
                           Asp      VP
                           -i      /   \
                                  V    DP[INH]
```

Viewed in this way, the syncretism between PF and LF in atelic contexts is unsurprising. *–*u* and *–i* are not focus affixes, per se, but markers of telic and atelic aspect, respectively. Note that locative focus can even be used in some Nuclear Austronesian languages in patient focus clauses when the event is not telic. The LF suffix *-an* seems to cancel the telicity that is normally present in PF clauses in Tagalog.

Tagalog
(47) a. K<in>ain=ko   ang   isda.
         <TR.PRV>eat=1.SG.GEN   NOM   fish
         'I ate (up) the fish.'
     b. K<in>ain-**an**=ko   ang   isda.
         <TR.PRV>eat-APPL=1.SG.GEN NOM   fish
         'I ate at the fish.'

To summarize the discussion so far, I have accounted for most of the morphological characteristics of non-actor focus verb forms in the following way. The systematic lack of the reflex of *M-* in non-actor focus across Austronesian languages is due to the deletion of this affix in irrealis contexts in PEAn. The effect of this deletion was to deprive *v* of the ability to value accusative case. Non-actor focus clauses are all semantically transitive, which means that an exceptional strategy was required in order to license internal argument DPs. In telic clauses (the present PF), the direct object required structural licensing. Since T was the only source for structural case, the subject had to be assigned inherent case by *v*, so T could probe past it and value nominative case on the object. Since these clauses were telic, the object occupied the specifier of AspP whose head was *–u*.

In ditransitive clauses, there are two internal argument DPs. The theme can remain in its base position in VP and be assigned inherent case by the verb. But the goal, which is not directly selected by the lexical verb, requires structural licensing. Consequently, it must reside in [Spec, Asp] so that it can undergo Agree with T and value nominative case. However, LF clauses are atelic, so the head of AspP is *–i rather than *-u.

Turning now to the circumstantial focus affix, I reconstruct *–anay as the subjunctive CF suffix, which is reflected in Puyuma as the realis CF marker. I analyse *–anay as tri-morphemic, consisting of *–an, the subjunctive *–a, and the atelic aspect head *–i. The main question which needs to be addressed here is why both *–an and *–i were necessary. I propose that this was due to the need to license two internal arguments which were not eligible for structural case licensing. Themes and patients are always eligible for inherent licensing if they remain inside the VP. On the other hand, pseudo-arguments are cross linguistically either packaged as PPs or selected by applicative heads (or atelic aspect heads, as in this paper), because they are not eligible to receive inherent case from the lexical verb. The hypothesis I propose here for the CF *–anay is that *-an was a nominalizing affix. It was necessary in order to license an object which was not merged in [Spec, AspP] or was eligible for inherent case from the verb. The applied object was, as expected, merged in the specifier of the atelic aspect head *–i. However, the need for *-an is not obvious in cases in which the lower object is a theme. This object should be eligible for inherent case from the verb.

Puyuma (Teng 2008:147)

(48) a. tu=trakaw-**anay**   *i*   *tinataw*   dra   paisu
          3.GEN=steal-TR3   3.SG.NOM   his.mother   INDEF.OBL   money
          'He stole money for his mother.'

b.
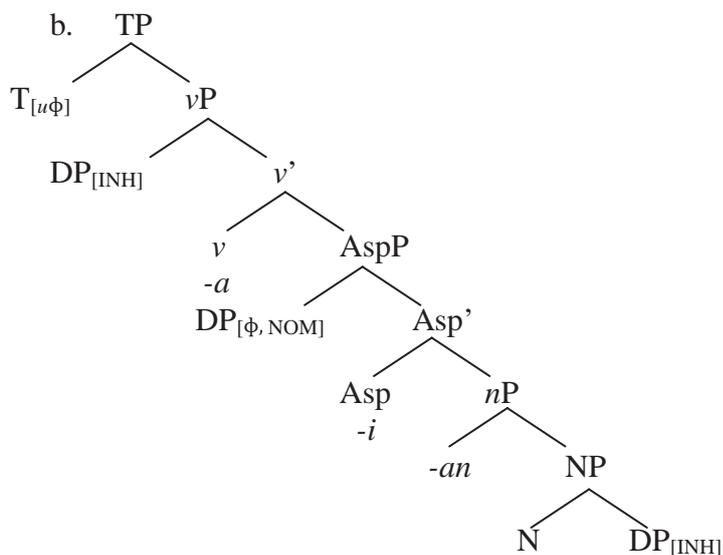
Real evidence for the proposal comes from examples of CF clauses in which the object selected by Asp is a theme, while the lower object is a pseudo-argument like a goal. The theme would be eligible for inherent case if it stayed inside VP. But this is not possible if the object resides instead in the specifier of a functional projection. The lower object is also not eligible for inherent case from the verb, since it is a goal and not a theme or patient. What I propose is that the nominalizer *-an was used in order to provide a specifier position where the goal could be licensed and assigned inherent case by the nominalizer itself.

Tsou (Chang 2011a:808)

(49) a. is-i   f-a-**eni**   to   mo'o   to   pasuya   'o   tposx-xi
         TR-3.SG   give-TR-APPL   OBL   PN   ERG   PN   ABS   book-3SG
         'Pasuya gave his book to Mo'o.'

b.
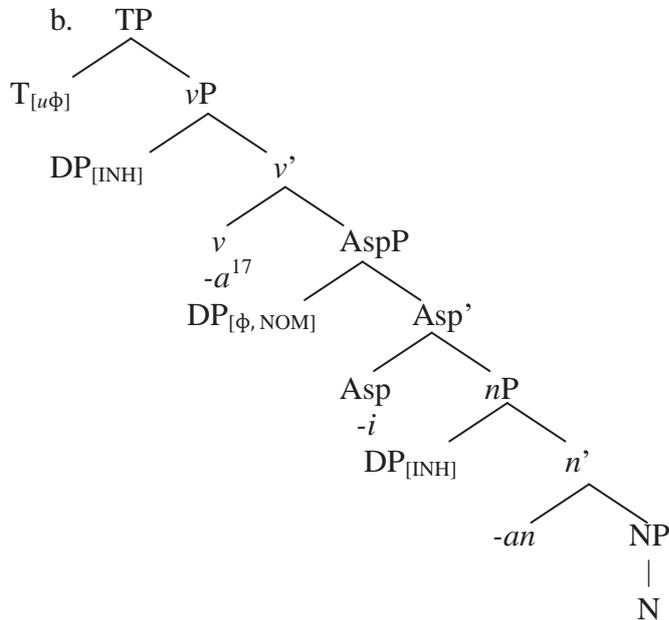
There is independent evidence for the proposal that *–an* was a nominalizer. This suffix is the locative focus marker in many Nuclear Austronesian languages and is reconstructed by Ross (2009) as the PAn LF nominalizer. I suggest here that *–an* was a general nominalizer in PAn and was not related to focus, per se. Rukai and some other Formosan languages employ a reflex of *–an* as a focus neutral nominalizer. (50a) is an object relative clause. The relative clause in (50b) is formed on a locative adjunct. In addition to *–ani*, the verb is also prefixed with *ta-*. By itself, *ta-* is used to create subject nominalizations. I assume that its function is to bind a *v*P external position, accounting for why it is used in subject relativization, as well as relativization on a high adjunct position like a locative. The function of *–ani* is simply to nominalize the *v*P.

Tanan Rukai

(50) a. w-aga=su   sa   aga   sa   [a-kanɨ-**anɨ**=ta
         PAST-cook=2.SG   INDEF   food   INDEF   IMPRV-eat-NMLZ=1.PL.INC
              kɨ   maum]
              P   night
         'Did you cook dinner (the food that we will eat tonight)?'

      b. a-mua=nay   cɨ'ɨl   [ta-tuma-tuman-**anɨ**=ini]
         PAST-go=1.PL.EXCL   see   NMLZ-RED-work-NMLZ=3.SG.GEN
         'We went to see (him) at the place where he works.'

To summarize this section, I have proposed that PAn was an accusative language and that ergative alignment first emerged in irrealis clauses in a first-order subgroup PEAn. This innovation involved the loss of *M-* in irrealis mood, which deprived *v* of the ability to structurally license an internal argument. This resulted in the development of new strategies for licensing internal arguments in

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[17] I follow work Chang (2011) and subsequent work in assuming that *–a* in modern Tsou is transitive *v*. But I reconstruct this to the subjunctive *v* in PEAn.

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semantically transitive clauses. First, the external argument was assigned inherent case by *v*, thereby allowing T to undergo Agree with the first internal argument in *v*P. This argument was the direct object in a telic clause; the object resided in the specifier of a AspP headed by the telic aspect marker *–u*. In ditransitive clauses, goal DPs required structural licensing and needed to value case with T. But this type of clause is atelic, so the goal argument is selected by the atelic aspect head *–i*. The circumstantial focus, in which neither object is eligible for inherent case, required two specifier positions for the internal arguments. The higher one was projected by the atelic aspect head *–i*, and the lower one was projected by the nominalizer *–an*. In this way, the emergence of the focus system was nothing more than a strategy for licensing internal arguments which could not receive inherent case from the lexical verb. (51) repeats the paradigm I proposed in section 2 for Proto-Ergative Austronesian verbal inflection.

(51)   PEAn reconstruction

	AF	PF	LF	CF
Realis (N)	---	*V-*en*	*V-*an*	*Si-*V
Perfective (N)	---	*<*in*>V	*<*in*>V-*an*	*<*in*>Si-*V
Future (N)	---	*RED-V-*en*	*RED-V-*an*	*(Sa-/)*Si-*V
Realis$_{FIN}$	*M-*V	---	---	---
Realis$_{NONFIN}$	*M-*V	---	---	---
Progressive	*M-*RED-V	---	---	---
Subjunctive	*M-*V-*a*	*V-*a*	*V-*a-i*	*V-*an-a-i*
Hortative	*M-*V-*a*	*V-*a-u*	*V-*a-i*	*V-*an-a-i*
Imperative	*V	*V-*u*	*V-*i*	*V-*an-i*
Future	*RED-V	*RED-V-*i*	*RED-V-*i*	*RED-V-*an-i*

The proposal that *–an* was a general nominalizing affix (and not just a locative focus nominalizer) has an additional consequence for the development of the focus system in nominalizations. I propose that it was in PEAn that the distinction emerged between the PF and LF nominalizers. The central vowel that appears in the PF suffix was the result of suffixing the nominalizer *–an* to the telic form *–u*. This process was unnecessary in PAn but emerged in PEAn with the need to express telicity and license direct objects in contexts where objective case was unavailable.

Let me close this section with a word about realis AF clauses in Puyuma. In the preceding discussion, I suggested that AF clauses are intransitive in the sense that structural licensing is not available for an object. In other words, Puyuma AF clauses are antipassives, and Puyuma is a fully ergative language.

Puyuma realis (Teng 2008:147)

(52) a. tr**<em>**akaw *dra*   *paisu* i   isaw
          <INTR>steal INDEF.OBL   money SG.NOM   Isaw
          'Isaw stole money.'

      b. tu=trakaw-**aw**   *na*   *paisu* kan   isaw
          3.GEN=steal-TR1   DEF.NOM   money SG.OBL   Isaw
          'Isaw stole the money.'

This is somewhat mysterious, given my proposal that AF is a retention of realis verbal clauses from PAn, since these were potentially transitive. What I suggest here is that transitive *M- v* was replaced in Puyuma by the PF *–aw* after the NAF clauses were reanalysed from subjunctive to realis root clauses. Recall that PAn was a differential object marking language (cf. Rukai examples in 40). After the subjunctive PF clause type because a realis root clause type, it is reasonable to imagine that

it usurped the role of the erstwhile telic *M-* clause that provided structural licensing for an object. *M-* clauses consequently came to be used only in atelic environments.

Interestingly, Nuclear Austronesian languages, which did not undergo the reanalysis of subjunctive to realis, seem to retain the transitive AF clause type. In Seediq, the object can freely be definite, as in (53a). The *v* also seems to be able to license an object. The subject of the embedded small clause in (53b) requires structural licensing, which must be accusative in this example.

Seediq

(53) a. Wada beebu **Pawan**   ka   Awi-ni.
          PAST hit   Pawan   NOM   Awi-DEF
          'Awi hit Pawan.'

      b. Tanah tunuh **m**-ekan   [meluk   **qutsuruh**].
          red   head   ACT-eat   raw   fish
          'Japanese (lit. red heads) eat [fish raw].'

It should not be surprising that NAn languages retain the transitive AF clause type from PAn, given that the NAF realis clauses have a different historical origin. These were reanalysed from nominalizations in a reduced cleft construction, and their development was not a direct consequence of alternations in telicity and interpretation of the direct object. Consequently, the aspectual and information structural properties of AF and NAF clauses in Proto-NAn did not come into direct competition.

5. Changes within the PEAn subgroup

In this section, I propose the paths through which the PEAn subjunctive was reanalyzed as the realis focus system in Puyuma and Tsou. The case of Tsou is fairly straightforward, since Tsou reflects only embedded nonfinite NAF affixes. Recall that finite clauses in Tsou are always introduced by an auxiliary verb. The AF auxiliaries reflect PAn and PEAn realis *M-* auxiliaries, while the NAF auxiliaries reflect the subjunctive auxiliary.

Tsou

(54) a. **moh**-ta   yuevaho   to   peisu   to   oko
          AF-3S.BN   lend-AF   OBL   money   OBL   child
          'He is lending money to a child.'   (Zeitoun 1996:510)

      b. **i**-si   si-a   ta   pangka   to   amo   'o   emi
          NAF-3.SG   put-PF OBL   table   OBL   father   NOM   wine
          'Father put the wine on the table.'   (Zeitoun 2000:93-4)

The focus system in Tsou nonfinite verb forms is repeated below. I propose that the actor focus form reflects the nonfinite realis form in PAn and PEAn. The non-actor focus forms were reanalyzed from the subjunctive paradigm. This is straightforward in the case of PF, which reflects *–a*. However, *-a* is absent in the LF and CF forms. One fact about Tsou phonology which may help to explain what happened is that modern Tsou has no diphthongs. I suggest here that the subjunctive LF and CF forms were simply monophthongized, resulting in the loss of the subjunctive *-a*.

(55) | **Tsou** | Actor | Patient | Location | Circumstance |
      |-------------|-------|---------|----------|--------------|
      | Nonfinite | *M*-V | V-*a* | V-*i* | V-*(n)eni* |

The remaining question which needs to be answered for Tsou is what could have served as the trigger for the reanalysis of the subjunctive as a realis form. One possibility is the case marking

paradigm. Both Puyuma and Tsou exhibit relatively impoverished morphological case systems, having only nominative and non-nominative forms. The non-nominative is used for all inherent cases, including the lexical case assigned by the verb in atelic clauses and the genitive case assigned to a possessor. What I suggest here is that the lack of a case marker which unambiguously signaled structural objective case provided the trigger for the extension of the subjunctive NAF forms to realis contexts. This is because it is only in subjunctive clauses where it was clear that objects had structural case, so these clauses were reanalyze as the basic transitive clause type.

A slightly different change took place in Puyuma. As I proposed earlier in the paper, the hortative forms are simply root-level subjunctives. The NAF realis forms also reflect the subjunctive. However, I suggest here that it was not the hortative forms which were reanalyzed as realis but rather the embedded subjunctives themselves.

(56) **Puyuma** | <u>AF</u> | <u>PF</u> | <u>LF</u> | <u>CF</u>

	AF	PF	LF	CF
Realis	<em>V	V-*aw*	V-*ay*	V-*anay*
Hortative	<em>V-*a*	V-*aw*	V-*ay*	V-*anay*
Progressive	<em>RED-V	RED-V-*aw*	RED-V-*ay*	RED-V-*anay*
Imperative	V	V-***u***	V-***i***	V-*an*
Negative	<em>V	**V-*i***	**V-*i***	V-*an*
Future	RED-V	**RED-V-*i***	**RED-V-*i***	RED-V-*an*

This approach allows us to suggest a motivation for the reanalysis. Recall that Tsou clauses are introduced by auxiliaries, which I assume are a retention from PAn. This is a reasonable assumption, given that Puyuma provides actual evidence for the loss of auxiliaries in this language. This evidence comes in the guise of clitic placement. Subject agreement markers in Tsou are all post-verbal (specifically, post-auxiliary), as can be seen in the preceding examples in (54). In contrast, AF clitics in Puyuma are post-verbal, while NAF clitics procliticize to the verb.

Puyuma

(57) a. bəray=**ku** ḍa kuraw ḍa ŋiaw (Tan 1997:11)
give=1.SG.NOM OBL.INDEF fish OBL.INDEF cat
'I gave a fish to a cat.'

b. **tu**=trakaw-aw na paisu kan isaw (Teng 2008:147)
3.GEN=steal-TR1 DEF.NOM money SG.OBJ Isaw
'Isaw stole the money.'

Starosta et al. (1982) and Ross (2002, 2006) have proposed that clitics were all enclitics in PAn and that proclitics in the languages that have them are the result of loss of a clause-initial auxiliary verb. I adopt this analysis here and further suggest that the loss of the auxiliaries in Puyuma provided the trigger for the reanalysis of subjunctive to realis root clause in this language. Specifically, without the auxiliary, the child acquiring the language did not have evidence that the verb was nonfinite (or embedded, for that matter). Consequently, they chose the default parameter (in the sense of Roberts 1997, Roberts and Roussou 2003) setting and acquired these forms as finite root verbs.

6. Summary

In this paper, I have proposed that Proto-Austronesian was a differential object marking language with accusative alignment. This alignment is retained in Rukai, while the ergative type alignment commonly referred to as a "focus" or "voice" system was first innovated in the language I call "Proto-Ergative Austronesian".

(58)

```
                    PAn
           ╱                ╲
      Rukai              Ergative An
                      ╱        ╱    ╲
                 Tsou    Puyuma    Nuclear An
```
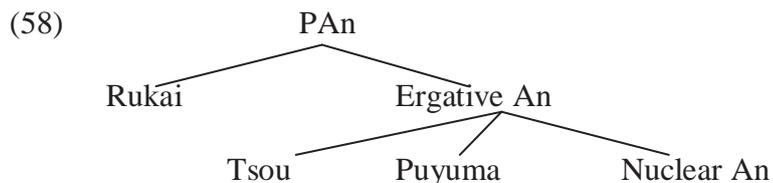
The emergence of ergative alignment in PEAn was caused by the detransitivization of irrealis *v*, with the result that subjects in these clauses had to be assigned inherent case so that objects could value structural case with T. This yielded an ergative case marking pattern in transitive irrealis clauses. The development of a "focus system" beyond simple transitive clauses was a response to the need to license internal arguments in ditransitive clauses which were not eligible for structural or inherent (lexical) case.

The realis focus forms found in Puyuma and Tsou trace their origin to subjunctive suffixes. The subjunctive was reanalysed in Puyuma as a realis root clause type after the loss of the subjunctive-introducing auxiliary verb. In Tsou, the subjunctive remained an embedded clause type but lost its association with irrealis modality and became the basic realis transitive clause type.

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