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Ergativity from Subjunctive in Austronesian Languages*

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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 other Austronesian languages resulted first from the reanalysis of irrealis clause types in a daughter of PAn, which I term 'Proto-Ergative Austronesian' (PEAn). 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 alignment arises from an accusative system when *v* is unable to structurally license the object in a transitive clause, and the subject does not value case with T. 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*, which is frequently detransitivized cross-linguistically, was likewise unable to license structural accusative case on an object in PAn and PEAn. Objects in irrealis clauses in PAn were case-marked with a preposition, but this preposition was incorporated to the verb in PEAn. This resulted in the emergence of ergative alignment in irrealis clauses in PEAn, because incorporation of the preposition deprived the object of its case licenser and forced it to be dependent on T for case. 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.

Key words: alignment change, diachronic syntax, ergativity, irrealis

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 of the nominal with nominative case. In the perfective aspect in Tagalog, the infix <*um*> appears on the verb when nominative case appears on the subject, that is, the single argument of an intransitive verb or the external argument in a transitive clause, as in (1a). The infix <*in*> occurs when an internal argument in a transitive clause has nominative case, as exemplified by (1b–d). 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.

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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.'

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 thematic relations of the corresponding nominative argument 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

The primary goal of the current work is to investigate the diachronic origin of the focus system. One fundamental aspect of this proposal is that I do not take the focus system to be a typological class itself but rather to be a manifestation of ergative alignment, as proposed by Payne (1982), Gerdts (1988), de Guzman (1988), Mithun (1994), Liao (2002), Aldridge (2004, 2008b, 2012), Chang (2011a), and others. This is clear from a comparison of (1a) and (1b), in which the case of the subject in the intransitive clause is identical to the case of the object in the transitive clause, while the transitive subject has a different case. Examples (1c) and (1d) are applicative constructions. On the ergative analysis, the focus constructions receive the following labels. In this paper, I assume an ergative analysis but continue to use the term 'focus' for descriptive purposes.

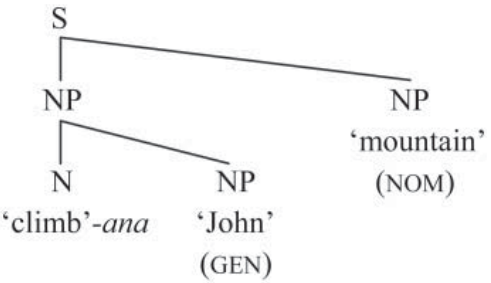
(3)

Focus system	Ergative analysis
Actor (AF)	Intransitive or antipassive
Patient (PF)	Basic transitive
Locative (LF)	Locative/goal applicative
Circumstantial (CF)	Benefactive/instrument applicative

For the diachronic origin of the ergative alignment manifested by Austronesian languages of Taiwan and the Philippines, I assume with Bok-Bennema (1991), Bittner & Hale (1996), Ura (2000), Alexiadou (2001), and Whitman & Yanagida (2012) that ergative alignment emerges in an accusative language when accusative case is unavailable for the object and the subject does not need nominative case. For this reason, a common diachronic source for ergative alignment is the reanalysis of a clausal nominalization. Since the subject receives genitive case, nominative case is

available to be valued on the object. Starosta et al. (1981, 1982) have proposed this type of origin for the focus system in Philippine and most Formosan languages. 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.

(4)



'The place where John climbed is the mountain.' (Starosta et al. 1982:157)

A proposal along these lines readily accounts for the following 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 (4) also bears resemblance to the locative focus suffix in (1c).

Tagalog

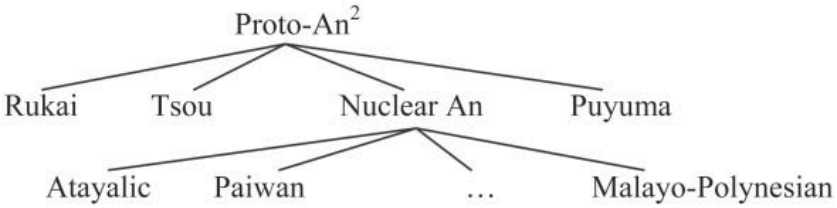
(5) a. B<in>ili **ng** babae *ang* isda.
<TR.PRV>buy GEN woman NOM fish
'The woman bought the fish.'

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

However, Ross (2009) has proposed that the nominalization origin does not account for the earliest appearance of ergative alignment in Austronesian languages. Rather, he argues that the nominalization-to-verbal clause reanalysis[1] is limited to a subgroup which he calls 'Nuclear Austronesian' (NAn). This subgroup contains all Malyo-Polynesian (including Philippine) languages, as well as most Austronesian languages spoken in Taiwan, but does not contain Rukai, Puyuma, or Tsou.

[1] Kaufman (2009) has proposed that Tagalog clauses are built on nominalizations, which suggests that this language might not reflect the proposed NAn innovation, a potential problem for Ross' (2009) proposal. On the other hand, Aldridge (2009) argues that Kaufman's analysis is highly problematic and the relevant facts of Tagalog syntax are better captured if Tagalog clauses are analyzed as verbal.

(6)



Ross shows that these languages do not reflect the reanalysis of nominalizations as verbal clauses. Affixes which are cognate with the Tagalog focus affixes appear only in nominalizations in Puyuma and Rukai. Note the nominalizing suffix *-an* (cognate with the Tagalog LF suffix *-an* in (1c)) and the perfective aspect marker *<in>* (which now marks perfective aspect in all non-AF clauses in Tagalog).

Puyuma

(7) a. kadru [ku=k<**in**>a-sagar-**an** dra suan]
<INTR>there 1.SG.GEN=<PRV>KA-like-NMLZ OBL dog
'My loving of dogs is like that.' (Teng 2008:142)

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)

However, Puyuma and also Tsou are ergative languages with a focus system similar to Tagalog. For example, the focus affixes in question are exemplified by the Puyuma paradigm in (8) and examples in (9). Crucially, aside from the AF infix **, the affixes associated with each focus are not cognate with those in Tagalog.

(8)

Puyuma	Actor	Patient	Location	Circumstance
	**V	V-*aw*	V-*ay*	V-*anay*

Puyuma realis (Teng 2008:147)

(9) 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.'

[2] This proposal runs counter to Blust's (1999) assertion of 10 primary subgroups of Proto-Austronesian (PAn). However, it should be noted that nine of these remain intact as subgroups in Ross' subgrouping: Rukai, Puyuma, and the seven daughters of Proto-Nuclear An all correspond directly to subgroups proposed by Blust. The primary point of contention is the treatment of Tsou, Saaroa, and Kanakanavu. Blust follows Tsuchida (1976) in positing a single subgroup containing all three, while Ross (2009) places Saaroa and Kanakanavu in NAn and makes Tsou a daughter of PAn. Justification for this division and against the Tsouic subgroup is offered by Ross (2012) and summarized also in Aldridge (2015).

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 focus system in Tsou also employs a similar set of affixes. Particularly noteworthy here is the resemblance between the Puyuma and Tsou LF and CF forms. The *-a* in the Tsou PF is also suggestive, given that the Puyuma non-AF forms all include an /a/ before the final glide of the suffix.

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

Ross' (2009) proposal makes a significant contribution to understanding the origin of the Austronesian focus system that originates in nominalizations. However, the presence of focus systems in Puyuma and Tsou employing a distinct set of affixes pushes the question of the ultimate origin of this type of ergative alignment back to Proto-Austronesian (PAn). Indeed, Ross (2009) reconstructs a focus system for PAn which is very similar to Puyuma.

A question left open by Ross' reconstruction of PAn as ergative, however, is the alignment exhibited by Rukai. Rukai is exceptional among Formosan and Philippine languages in that it does not have a focus system, but rather is a straightforward nominative/accusative language. Example (11) shows that subjects in both transitive and intransitive clauses appear with the same nominative case.

Tanan Rukai

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

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

In this paper, I also adopt Ross' (2009) 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 ergative alignment. Ross' decision to reconstruct a focus system for PAn forces him to stipulate the wholesale loss of the non-accusative alignment in Rukai, but he offers neither evidence for the earlier existence of such a system nor any motivation or pathway for the change.

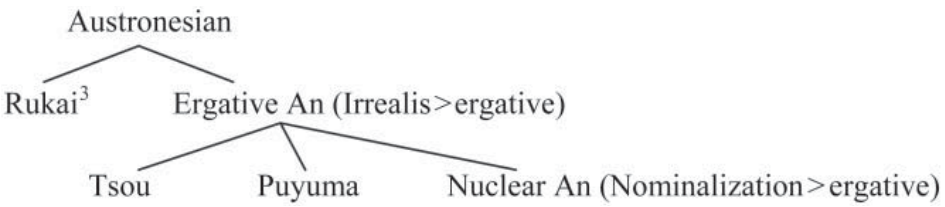
The alternative that I offer in this paper is to propose that PAn was an accusative language and that this alignment is retained in Rukai. As for the focus system found in Puyuma and Tsou, I propose a diachronic reanalysis of an irrealis clause type, specifically an embedded irrealis clause which I label 'subjunctive'. The alignment change in this clause type was the result of the lack of

accusative case licensing for an internal argument on irrealis *v*. 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, was licensed independent of nominative case on T. In this way, bivalent irrealis clauses assumed the guise of transitive clauses in ergative languages: nominative case on the object and a different marking for 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 distinction between realis and irrealis modality on nonfinite verb forms has been lost, and the irrealis forms have been extended to realis clause types. Interestingly, NAn languages also retain the focus affixes found in Tsou and Puyuma but reflect them only in the irrealis paradigm.

Given the reconstruction of PAn as accusative and the hypothesis that ergative alignment was the result of an 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 it was in Rukai's sister where (split-)ergative alignment first emerged. I call this language 'Proto-Ergative Austronesian' (PEAn). Regarding the Nuclear Austronesian subgroup, I follow Ross (2009) in assuming that the origin of the focus system in realis clauses in these languages resulted from the reanalysis of embedded nominalizations (specifically reduced relative clauses in nominal predication constructions) as root-level transitive clauses.

(12)



This paper is structured as follows. Section 2 proposes my reconstructions for PAn and PEAn verbal paradigms, as well as offering empirical evidence for positing irrealis clause types as the origin of ergative alignment in PEAn. Section 3 outlines the syntactic analyses of accusative and ergative alignment and the parameters which account for the change from accusative to ergative systems, one of which is the inability of *v* to value accusative case. I further offer cross-linguistic support for my proposal that irrealis *v* is frequently detransitivized in this way. Section 4 presents the innovations in PEAn which resulted in ergative alignment in irrealis clauses. Principal among these is the incorporation of the oblique case marker introducing the object in irrealis clauses, forcing the object to enter into an Agree relation with T. Section 5 discusses the independent reanalyses of the subjunctive as the basic realis clause type in Puyuma and in Tsou. Section 6 concludes the paper.

[3] This proposal is in agreement with Starosta's (1995, 2001) claims that Rukai is a primary subgroup of PAn. However, the basis for my claim and my reconstruction of PAn bear little resemblance to Starosta's approach.

2. Realis versus irrealis in extra-Nuclear Austronesian morphosyntax

This section proposes reconstructions of the alignments and verbal paradigms in PAn and PEAn that are relevant to the development of the focus system. PAn is reconstructed as an accusative language with only the AF affixes, which appeared on both transitive and intransitive dynamic verbs. I then propose that PEAn was a split-ergative language in which non-AF affixes were innovated in the irrealis paradigm but not the realis. Primary evidence for identifying irrealis clauses as the source of ergative alignment is the suggestion of a derivational relationship between realis and irrealis affixes in Puyuma, the topic I turn to now.

For the purpose of comparison, I first summarize Ross' (2009:306) reconstruction of PAn verbal inflection in (13).[4] There are three features worth pointing out at this time. First, Ross reconstructs a full focus system for all verb forms. Second, nominalizing affixes are distinct from verbal affixes. Third, is the distinction in the verbal forms between realis, imperfective, 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.

(13)

	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
Imperfective (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, as shown earlier in (7) and (9). Another interesting fact about Puyuma is that, like many Formosan languages, it employs different affixes in realis and irrealis mood. Example (14) shows an array of focus affixes employed in imperative sentences: actor focus (14a), patient focus (14b), and locative focus (14c). These forms differ (albeit only slightly) from the realis suffixes summarized in (8) in the preceding section.

Puyuma imperatives (Teng 2008:216)

(14) a. trekelr
drink
'Drink!'

[4] Ross (2009) uses the term 'irrealis' to refer to future modality. In order to clarify the divide between realis and irrealis mood in this paper, I have replaced Ross' (2009) term 'irrealis' with 'future'.

b. pilang-**u** i temuu m-uka i drena-drenan
take-TR1.IMP SG.NOM your.grandmother INTR-go 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).'

Example (15) shows the full inflectional paradigm for Puyuma. As noted earlier, 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).[5]

(15) 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*
Imperfective (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 /a/ in the realis non-actor focus forms. Ross (2009) reconstructs **-a* as the PAn dependent patient focus suffix. This is understandable, given the role of this affix in Tsou. As shown earlier in (10), *-a* is the patient focus suffix in Tsou. But this suffix only surfaces on nonfinite verbs. Auxiliary verbs are finite in Tsou, and these show a focus distinction only between actor and non-actor focus. Crucially, *-a* does not appear on auxiliaries.

Tsou (Zeitoun 2000:93–94)

(16) 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.'

[5] Ross (1995, 2002) also observes a similar pattern, but he does not propose functions for the morphemes involved, as I do below.

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 down the wine (for someone).’

Like Ross, I also propose that *-*a* attached to embedded nonfinite verb forms. However, I 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 followed by the vowel /a/.[6]

Tanan Rukai

(17) a. k<u>an~~i~~-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 and Atayalic languages. In addition to Rukai, the reflex of the subjunctive is also used in imperative clauses in Kanakanavu, Saaroa, and Bunun. I suggest that in these languages the hortative came to be used as a polite or indirect imperative. Puyuma also uses the -*a* suffix on embedded verbs in purpose clauses, a possible connection with subjunctive.

Puyuma (Teng 2008:113)

(18) drua-drua me-na’u-**a** a trau
RED-come INTR-see-A INDEF.NOM person
‘Many people came to see.’

I propose the reconstructions in (19) for PAn focus morphology. The most obvious difference between my reconstructions and Ross (2009) is that I take PAn to be an accusative language like Rukai and completely lacking a focus system. Consequently, there are no non-AF forms in the verbal paradigm. The AF verbal forms that I reconstruct are largely identical to Ross’ (2009)

[6] 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-*.

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, since I assume that the subjunctive was used in root contexts as a hortative clause.

(19) PAn reconstruction

	AF	PF	LF	CF[7]
Realis (N)	---	*V-*an*	*V-*an*	?
Perfective (N)	---	*<*in*>V-*an*	*<*in*>V-*an*	?
$\text{Realis}_{\text{FIN}}$ (V)	**M*-V	---	---	---
$\text{Realis}_{\text{NONFIN}}$ (V)	**M*-V	---	---	---
Imperfective (V)	**M*-RED-V	---	---	---
Subjunctive (V)	**M*-V-*a*	---	---	---
Hortative (V)	**M*-V-*a*	---	---	---
Negative (V)	*V	---	---	---
Future (V)	*RED-V	---	---	---
Imperative (V)	*V	---	---	---

As for the nominalizing forms, I propose two additional revisions to Ross' (2009) reconstructions. First, I do not reconstruct AF nominalizing forms. In Rukai and Puyuma,[8] relative clauses formed on subjects are verbal, as opposed to relative clauses formed on internal arguments in transitive clauses, which were nominalized.[9] This is clearly shown by the fact that the same tense markers employed in finite root clauses also surface on verbs in relative clauses.

Tanan Rukai

(20) a. luða **ay-kɬla** ku tina=li
tomorrow FUT-come NOM mother=1.SG.GEN
'My mom will come tomorrow.'

[7] I do not consider reconstruction of the CF nominalizers in this paper as there is disagreement in the literature that requires careful consideration. I have also removed the 'future' (Ross' 'irrealis') nominalization category, as Ross (2012) proposes this as a later development.

[8] The reader is referred to Teng (2008:105) for discussion of this asymmetry in Puyuma.

[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 Extended Projection Principle (EPP) restriction on *v*. I propose that only the relativizing *v* could project an extra specifier and hence allow extraction from the embedded VP. But the verbal *v* 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 absolutive or subject restriction on A'-extraction (Aldridge 2004, 2008a, 2008b). This in turn is the consequence of the reanalysis of nominalized relative clauses as root clauses.

b. [kuaDa **ay**-suwasuwaw] ka muka-baru-barua
DEM FUT-clean TOP girl
'The one who will clean is the girl.'

In contrast to this, the verb in object relative clauses takes the nominalizing suffix *-an~~i~~*, and the embedded subject has genitive case rather than nominative. Note further that the suffix is *-an~~i~~*, regardless of whether the gap is a theme or location. The same is also true in Puyuma. Given that Rukai, Puyuma, and Tsou do not reflect the suffix in (13) which Ross (2009) reconstructs as the PF nominalizer *V-*en*, I do not attribute this affix to PAn but rather assume that it was an innovation in Proto-Nuclear Austronesian, most likely related to the reanalysis of nominalized clauses as finite root clauses.

Tanan Rukai

(21) a. [ta-tuma-tuman-**an~~i~~**=ini]
NMLZ-RED-work-NMLZ=3.SG.GEN
'where he works'

b. [a-kan~~i~~-**an~~i~~**=ta ki maum]
IMPRV-eat-NMLZ=1.PL.INC P night
'what we will eat tonight'

The main focus of this paper is to propose that the non-accusative alignment found in Puyuma and Tsou today is the result of changes which took place in irrealis clauses in PEAn. The proposal rests on my hypothesis that irrealis clauses were intransitive in PAn (and also PEAn) in the sense that structural accusative case was not available for the object, so this object was marked with a preposition which served as an oblique case marker. I show in §3 that irrealis clauses frequently have this characteristic cross-linguistically. For the purposes of the discussion here, I summarize the morphological changes which resulted in ergatively aligned irrealis clauses in PEAn.

First, I follow Starosta et al. (1981, 1982) in reconstructing a preposition **i*[10] to PAn which was subsequently reanalyzed as a type of applicative suffix. This preposition is reflected in many Austronesian languages as a locative/dative preposition, as in the following Paiwan example.

Northern Paiwan

(22) na-talem azua tsaotsao tua velevel **i** **gadu**
PRV-<INTR>plant NOM.DEM person OBL banana in mountain
'That person plants bananas in the mountains.'

Starosta et al. also assume that **i* marked theme direct objects under certain conditions, noting in passing (1982:155) that personal names functioning as direct objects in Philippine languages take a locative preposition in environments where nominative case is not available for them. I provide the following Tagalog antipassive examples in order to illustrate this point. In antipassive

[10] See also Starosta (1993), and Ross (2006) for reconstruction of locative preposition **i*.

constructions the external argument has nominative case and any internal arguments are obliquely marked. Objects in antipassives are also typically indefinite, and in Tagalog are nearly always non-specific. Consequently, personal names do not generally appear as objects in antipassives, except in extraction contexts. Since only absolutive DPs are able to undergo A'-movement, an antipassive must be used in order to extract the external argument from a transitive clause. A specific or definite object is allowed exceptionally in this context, so I use subject extraction examples in order to illustrate the case-marking alternation between common and personal names in antipassives. If the object is a common noun, it receives genitive case, as in (23a). But a personal name must be dative, as in (23b).

Tagalog

(23) a. Sino ang p<um>atay **ng** **aso**?
who NOM <INTR>kill GEN dog
'Who killed the dog?'

b. Sino ang p<um>atay **kay** **Huan**?
who NOM <INTR>kill DAT.PN Juan
'Who killed Juan?'

The refinement I propose to Starosta et al.'s analysis is in the syntactic function of **i* in PAn. As a preposition, **i* could of course select an adjunct (locative, beneficiary, instrument, etc.). But **i* could also occur with a direct object when this argument was a personal name. Syntactically, I propose that when **i* selected a theme or patient, it served as an oblique case marker in order to license that argument. In PEAn, **i* was reanalyzed as a verbal suffix, with the result that the object was deprived of its case licenser. Consequently, the object became dependent on structural licensing and entered into an Agree relation with T in order to value nominative case. This innovation is discussed in detail in §4.1. The incorporation of the preposition resulted in the **-i* suffix on a variety of irrealis verbs in PEAn. The PF **-i* is the erstwhile preposition **i* used as an oblique case marker for a direct object. The LF and CF **-i* reflect **i* in its original function as a preposition selecting an adjunct, locative or otherwise.

(24) PEAn reconstruction

	AF	PF	LF	CF
Realis (N)	---	*V-*an*	*V-*an*	?
Perfective (N)	---	*<*in*>V-*an*	*<*in*>V-*an*	?
$\text{Realis}_{\text{FIN}}$ (V)	**M*-V	---	---	---
$\text{Realis}_{\text{NONFIN}}$ (V)	**M*-V	---	---	---
Imperfective (V)	**M*-RED-V	---	---	---
Subjunctive (V)	**M*-V-*a*	*V-*a*	*V-*a*-*i*	*V-*an*-*a*-*i*
Hortative (V)	**M*-V-*a*	*V-*a*-*u*	*V-*a*-*i*	*V-*an*-*a*-*i*
Negative (V)	*V	*V-*i*	V-*i*	*V-*an*-*i*
Future (V)	*RED-V	*RED-V-*i*	*RED-V-*i*	*RED-V-*an*-*i*
Imperative (V)	*V	*V-*u*	*V-*i*	*V-*an*-*i*

Another affix appearing in the newly created PEAn non-AF irrealis paradigm is *-*u*, which appears only on PF imperative verbs. I propose that *-*u* was an incorporated second person clitic pronoun, adopting Ross' (2006) reconstruction of this pronoun as *=*Su*. The expression of subjects as clitics, incorporated or otherwise, also played a crucial role in the development of ergative alignment in that these clitics served merely as agreement markers and did not need to value nominative case. This made it possible for T to enter into an Agree relation with the object and value it with nominative case. I discuss this innovation and its consequence for object licensing in §4.2.

As for the *-*an* component of the CF suffix, I propose in §4.3 that this was the PAn nominalizer *-*an*, noting that CF verbs have a clear connection to nominalizations in some Austronesian languages like Chamorro. The appearance of -*i* following the nominalizing suffix is accounted for in the same way as its appearance on PF and LF verbs, assuming that it marked the object or adjunct in PAn that came to have nominative case after the incorporation of **i* to the nominalized verb stem in PEAn.

To summarize the main original components of my proposal which distinguish it from Starosta et al. (1981, 1982) and Ross (2006, 2009), first, PAn was an accusative language with no focus system (other than AF). In my reconstructions, I propose a new morpheme *-*a* subjunctive suffix, and I suggest novel functions for the preposition **i* as an oblique case marker and for the nominalizer *-*an* as a component of the CF affix. Finally, I propose two innovations which resulted in the emergence of ergative alignment in PEAn irrealis clauses: (1) incorporation of the preposition/oblique case marker *-*i*; and (2) incorporation of the subject clitic pronoun *=*Su* in the imperative.

Before closing this section, I point out that the focus system innovated in PEAn is retained in irrealis clauses in NAn languages as well, which is a welcome consequence of the subgrouping I propose in (12), given that NAn is also a daughter of PEAn. As previously mentioned, PNAn reanalyzed nominalized verbs suffixed with *-*an* as root-level realis ergative clauses, but the irrealis focus affixes were unaffected by this change. For example, this dichotomy can clearly be observed in the Atayalic language Seediq. The realis LF suffix -*an* is unquestionably cognate with the PAn and PEAn nominalizer *-*an*. But the irrealis paradigm plainly reflects the PEAn irrealis suffixes *-*i* and *-*ani*.

(25) Seediq (Holmer 1996:38[11])

	AF	PF	LF
Realis	*M*-V	V-*un*	V-*an*
Imperative	V	V-*i*	V-*ani*
Negative	V	V-*i*	V-*ani*
Subjunctive	*M*-V-*a*	V-*o* (< -*aw*)	V-*e* (< -*ay*)

[11] The chart in Holmer (1996:38) does not show the forms for negation, but Holmer (1996:62) points out that the negator *ini* is followed by imperative verb forms. The subjunctive forms do not appear in this table either, but they are shown with examples in Holmer (1996:45).

3. Parameters of alignment change

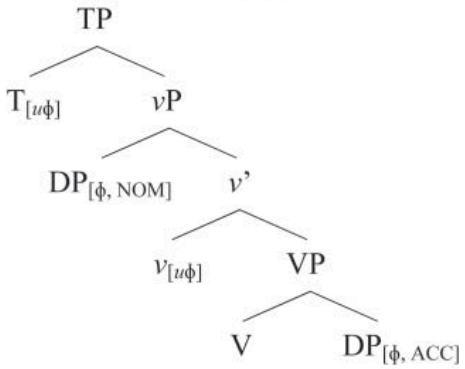
In the previous section, I proposed that PAn be reconstructed with accusative alignment and that the non-accusative alignment observed in Puyuma and Tsou, as well as in irrealis clauses in NAn languages, arose as a consequence of the need to structurally license VP-internal arguments with nominative case. This section presents the syntactic analysis of accusative and ergative alignment and specifies how the accusative type can change into the ergative type in response to licensing conditions for subjects and objects.

In the Minimalist Program of Chomsky (2001 and subsequent works), the functional heads finite T and transitive *v* are each merged with an unvalued ϕ-feature. D(P)s enter the derivation with valued ϕ-features and an unvalued case feature.

(26) Accusative language
v_{Tr}: [*u*ϕ]
v_{Intr}: No [*u*ϕ]
T_{Fin}: [*u*ϕ]

The unvalued ϕ-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, namely a valued ϕ-feature set on a DP, the ϕ-feature on T is valued, and the DP supplying the valued ϕ-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, for example the subject.

(27) a. She$_{[NOM]}$ walks.
b. She$_{[NOM]}$ sees him$_{[ACC]}$.
c.



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.

Seediq

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

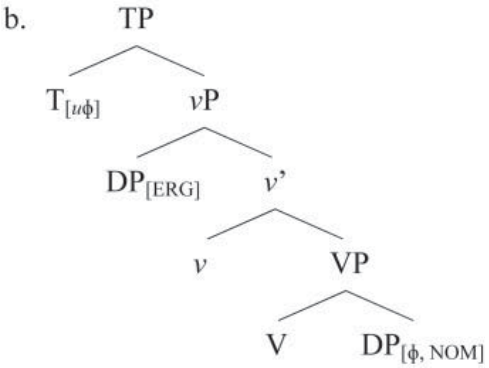
b. Wada bube-un **na** Pihu **ka** dangi=na.
PAST hit-TR GEN Pihu NOM friend=3S.GEN
'Pihu hit his friend.'

Nominative case is valued on an intransitive subject by finite T, just as it is in accusative languages. The challenge posed by ergative alignment to the Minimalist Program is the valuing of nominative case on the internal argument across the intervening ergative subject. 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; Ura 2000; Woolford 1997, 2006; and others) that ergative case is inherent, assigned by transitive *v* to its specifier. Since its case feature is already valued, the external argument is not an intervener, and T is able to probe past it to license the object.

Seediq is a Nuclear Austronesian language. Consequently, it reflects the innovation which reanalyzed nominalizations as verbal clauses and employs genitive case to mark ergative subjects. Since the ergative case is genitive, it is quite reasonable to analyze it as inherent rather than structural case valued by T. Consequently, licensing in Seediq[12] 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.

(29) a. High ABS ergative language
v_{Tr}: Inherent case, no [*u*ϕ]
v_{Intr}: No [*u*ϕ]
T_{Fin}: [*u*ϕ]

[12] Aldridge (2004, 2008b) analyzes 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, 2008b calls '*v*-type') languages, in which absolutive arguments are licensed by T in intransitive clauses and *v* in transitive clauses. See Aldridge (2004, 2008b) 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.



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, since this forces the object to undergo Agree with T and value nominative case. See also Bok-Bennema (1991), Bittner & Hale (1996), Ura (2000), Alexiadou (2001), and Whitman & Yanagida (2012) 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 diachronically when these two parameters are set from the values in (26) to those given in (29). One environment inducing such a change is the reanalysis of an embedded nominalization as a root clause. Building on earlier proposals by Starosta et al. (1981, 1982) and Ross (2009), Aldridge (forthcoming) proposes that nominal predicates in copula constructions like (30) were reanalyzed as mono-clausal transitive constructions in Proto-NAn. Crucial to the current discussion is the fact that structural case is not available within the relative clause portion. The external argument has genitive case, and the internal argument has inherent oblique case.

Budai Rukai (Chen 2008:84)[13]

(30) [Ta-badh-ane ki tina-ini ki lalake-ini] ka laimai.
NONFUT-give-NMLZ GEN mother-3.SG.GEN OBL child-3.SG.GEN NOM clothes
'The clothes are what the mother gave her child.'

The biclausal structure is reanalyzed as monoclausal, and the erstwhile matrix subject (*laimai* 'clothes' in (30)) becomes the object of the resulting construction. However, the case valuing parameters of the erstwhile nominalizing *v* in the relative clause are retained, with the result that genitive case continues to be assigned to external arguments in transitive clauses, and *v* does not value case with internal arguments. Rather, the object is dependent on T for case licensing and consequently surfaces with nominative case. In other words, the resulting parameter settings for

[13] Chen (2008) does not analyze this construction as a nominalization, but rather as 'object voice'. However, he admits that affixes like *-ane* are clearly nominalizers in the language. He also attributes stative semantics to the construction. So it is difficult for me to understand the rationale for not analyzing this construction as a nominalization.

transitive *v* are exactly those specified in (29), and they yield the pattern of case assignment just discussed for Seediq in (28). Given the preceding discussion, it is unsurprising that ergative alignment often has its diachronic source in a clausal nominalization, as has been proposed for Cariban (Gildea 1998), Inuit (Johns 1992), Indo-Iranian (Whitman & Yanagida 2012), and of course Nuclear Austronesian. 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 are often less transitive cross-linguistically, as pointed out by Hopper & Thompson (1980), who rate realis versus irrealis mode as one of their transitivity parameters.[14] For example, the phenomenon known as 'genitive of negation' in Slavic languages involves a detransitivized irrealis clause type. In the following Russian examples, an object can (and often does) receive genitive case in the scope of sentential negation, as in (31a). It is also possible for the object to surface with accusative case, as in (31b). The difference in case-marking correlates with a difference in interpretation. The accusative object is definite, while the genitive object is indefinite.

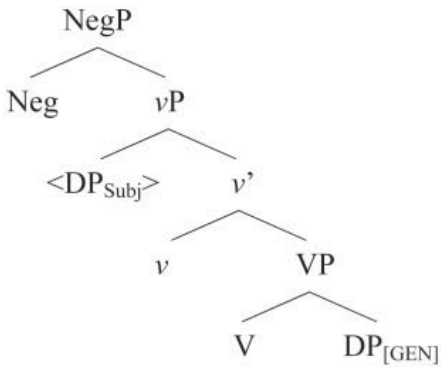
Russian (Harves 2002a:97)

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

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 alternations like the one seen in (31).[15] I follow Kim (2003, 2004) in assuming that the genitive case is an inherent, specifically lexical (in the sense of Woolford 2006), case assigned by the verb.

(32)



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

[15] Most assume that the Neg head is the source of genitive case (Bailyn 1997; Brown 1999; Harves 2002a, 2002b; Pesetsky 1982; and Witkoś 2008). Harves (2002b) implements this idea and accounts for the alternation in (31) in the following way. The Neg head can select a transitive *v*P with an accusative case feature on *v*, or it can select a defective *v*P in which accusative case is unavailable. If accusative case is unavailable within *v*P, then the object is dependent upon a higher functional head for case licensing and consequently values genitive case with Neg.

Analyzing 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 (Basilico 2008; Benua 1995; Bittner 1994; Borer 1994; Kiparsky 1998; Ritter & Rosen 2000; Spreng 2006; Tenny 1987, 1994; Travis 2010; Van Voorst 1988; 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 (33), 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.

Finnish (Kiparsky 1998:3)

(33) 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.

Estonian (Hiietam 2004)

(34) a. Poiss luges **raamatut**.
boy.NOM read.PAST.3.SG book.PART
'The boy was reading a/the book.'

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

In this way, irrealis clauses meet one of the conditions for the emergence of ergative alignment: the lack of accusative case on *v*. However, this parameter by itself does not suffice to effect 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. Note that the subjects in (31), (33), and (34) all receive nominative case. But an ergative-like pattern does emerge if we examine Estonian imperative clauses, another irrealis clause type. Estonian imperative clauses are intransitive in the sense that accusative case is unavailable. But the aspectual alternation—and its concomitant correlation with the object's need for structural licensing—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. Nominative case on the object is highly suggestive of ergative alignment.

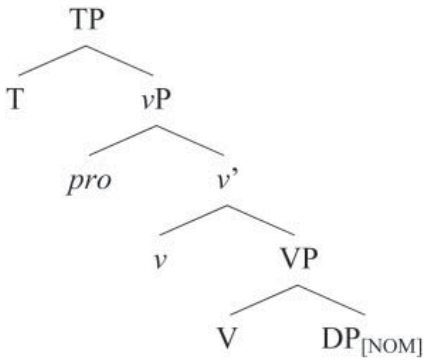
Estonian (Hiietam 2004)

(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!'

I suggest the following analysis of Estonian telic imperative clauses. Since *v* does not have an accusative case feature, the object must value nominative case with T, given that objects in telic events require structural licensing and cannot surface with inherent partitive case. I further suggest that the subject is not an intervener for the purposes of this Agree relation, since it is realized only as agreement on the verb and not as a DP which requires case licensing.

(36)



In the following section, I propose that ergative alignment in PEAn also arose in irrealis clauses with an intransitive *v*. In PAn, objects in irrealis clauses were obliquely marked with a preposition, resulting in a case-marking pattern reminiscent of the Russian negated clause in (31a) and the Estonian partitive example in (34a), in which the object has inherent case. In PEAn, however, I propose that the preposition was reanalyzed as an affix on the irrealis verb. This deprived the object of its inherent case licensor and forced it to be dependent on a structural case licenser. Since there was no accusative case on *v*, the object had to undergo Agree with T instead and value nominative case. As for the condition which allowed T to probe past the subject, I propose that, as in Estonian imperatives, the subject was expressed as an agreement marker on the verb rather than as a DP argument, allowing T to probe past it.

4. Emergence of the PEAn focus system

This section develops the analysis of the origin of ergative alignment in PEAn irrealis clauses due to the incorporation of the preposition **i* and the syntactic status of subject clitic pronouns. Specifically, incorporation of the preposition deprived the object of its case licenser and forced it to value nominative case with T. This Agree relation was made possible by the fact that the subject was expressed as an agreement clitic pronoun and did not require case licensing. In this section, I also discuss the origin of CF focus as a nominalization.

4.1 Preposition **i* > irrealis transitivity marker **-i*

I begin the discussion with the PAn preposition **i*, which I propose selected not only adjuncts like locatives, but also was used to case license direct objects in environments where accusative

case was unavailable, as in irrealis clauses. First, it is clear that PAn was some type of differential object marking language like the Slavic and Finnic languages discussed in the preceding section. Starosta (1993) reconstructs a definite non-nominative case marker **i* and an indefinite non-nominative case marker **a*.[16] Ross (2006) refines Starosta's reconstruction by proposing that **i* (often in combination with a consonant, which he leaves unspecified as *C-) specifically marked objects which were personal names, a subset of definite noun phrases. A pattern along these lines can be observed in the following Rukai examples.[17] In (37a), *ki* marks a goal argument in a ditransitive. The theme is marked with *sa*. Themes marked with *sa* are typically indefinite. A definite theme headed by the demonstrative *kai* 'this' takes *ki*, as shown in (37b). Definite themes which are not personal names or selected by demonstratives are marked with *na*, as shown in the second clause of (37b). Example (37c) shows that *na* replaces *ki* if the demonstrative is absent.

Tanan Rukai

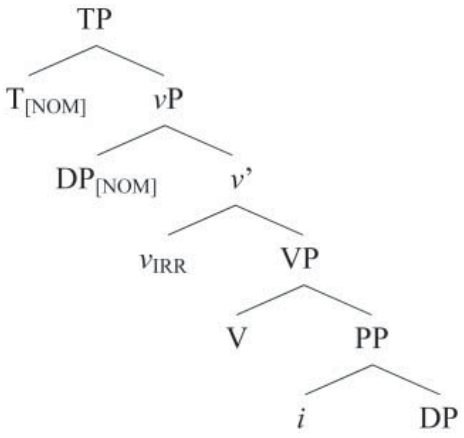
(37) a. ay-baað-aku **sa** bɨlbɨl **ki** sakacɨkɨlɨ-li
FUT-give-1.SG.NOM ACC banana DAT spouse-1.SG.GEN
'I will give a banana to my spouse.'

b. arakay-aku **ki** kai kwaŋ ʔa-ʔacay **na** cumay
use-1.SG.NOM DAT DEM gun CAUS-die ACC bear
'I used this gun to kill the bear.'

c. arakay-aku **na** kwaŋ ʔa-ʔacay na cumay
use-1.SG.NOM ACC gun CAUS-die ACC bear
'I used the gun to kill the bear.'

I loosely follow Ross (2006) in proposing that **i* (or possibly*Ci) typically marked locatives and goals and could also be used as an oblique case marker for direct objects that were personal names, pronouns, or were selected by a demonstrative. The function of **i* in this capacity was to assign case to the object when structural case was unavailable, as in irrealis clauses.

(38)

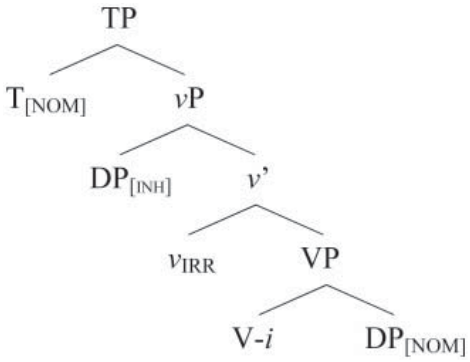


[16] Starosta's reconstructions are attributed to what he terms 'Proto-Formosan', which he assumes to be either a first-order subgroup of PAn or PAn itself.

[17] See also Li (1973:87), who classifies Tanan Rukai *ki* as a non-nominative, personal article.

Ergative alignment emerged in PEAn as a consequence of the incorporation of the preposition **i* to the verb. I assume that this was a rebracketing of the sort cited by Haspelmath (1998:326) for the reanalysis of 'a nadder' as 'an adder' by reinterpretation of the first consonant of the noun as part of the article. In the case of **i*, the reanalysis was from a preposition selecting the following argument to a suffix on the preceding verb. What is most relevant to the purposes of the current discussion is that the reanalysis deprived the object DP of its case marker, with the result that it became dependent on either *v* or T for structural licensing. Since irrealis *v* was intransitive and lacked a case feature, it had to be T that valued case on the object, with the result that the object came to be marked nominative.

(39)



Another crucial ingredient in the switch to ergative alignment was that the external argument not be an intervener for the Agree relation between T and the object, a circumstance which I suggest in the following subsection obtained when the external argument was expressed as a clitic pronoun rather than a full DP.

As I mentioned in §2, the preceding proposal is greatly inspired by the suggestion by Starosta et al. (1981, 1982) that the applicative **-i* (for them in PAn, for the current proposal in PEAn) was an incorporated preposition. However, there is a crucial difference between their proposal and mine. Starosta et al. assume that PAn was an ergative language in which objects were typically marked with nominative case. This assumption actually reveals a possible contradiction in their analysis, since it is not clear why the object would have been marked obliquely with a preposition rather than as nominative. Definite DPs, including personal names in ergative Austronesian languages, are highly resistant to oblique marking. Put differently, obliquely marked objects in antipassives are typically indefinite or even nonspecific, as in (40a). Definite objects generally require structural nominative licensing in ergative clauses, as in (40b). Consequently, if PAn had been an ergative language, then the dative preposition should not have appeared with a definite object, and the reanalysis of the preposition to applicative would not have taken place.

Puyuma (Teng 2008:147)

(40)	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.'				

On the other hand, since my analysis reconstructs PAn as an accusative language in which objects were never marked with nominative case in transitive clauses, dative prepositions would have appeared on certain objects (specifically, personal names and pronouns) when accusative case was not available to them, as proposed earlier in (38). Furthermore, my proposal accounts for the fact that nominative objects in ergative clauses in Formosan and Philippine languages today are generally definite, since the objects which valued nominative case with T in irrealis clauses in PEAn would also have been limited to definite objects, typically those originally selected by the preposition **i* in PAn.[18] As suggested by the Rukai examples in (37), PAn would have had other case markers for indefinite objects. I assume that the oblique case marker for indefinite objects was not incorporated to the verb. In this construction, the subject would have continued to value nominative case. This construction is thus the origin of AF clauses containing an (indefinite) object, in other words the antipassive construction, as in (40a).

4.2 Incorporation of *=(*S*)*u* in imperatives

The preceding subsection proposed the origin of the ubiquitous **-i* irrealis transitive marker in PEAn as the preposition **i* which was incorporated to the verb, depriving the object of its case licenser and forcing it to value nominative case with T.

(41) PEAn reconstruction

	AF	PF	LF	CF
Realis (N)	---	*V-*an*	*V-*an*	?
Perfective (N)	---	*<*in*>V-*an*	*<*in*>V-*an*	?
$\text{Realis}_{\text{FIN}}$ (V)	**M*-V	---	---	---
$\text{Realis}_{\text{NONFIN}}$ (V)	**M*-V	---	---	---
Imperfective (V)	**M*-RED-V	---	---	---
Subjunctive (V)	**M*-V-*a*	*V-*a*	*V-*a-i*	*V-*an-a-i*
Hortative (V)	**M*-V-*a*	*V-*a-u*	*V-*a-i*	*V-*an-a-i*
Negative (V)	*V	*V-*i*	*V-*i*	*V-*an-i*
Future (V)	*RED-V	*RED-V-*i*	*RED-V-*i*	*RED-V-*an-i*
Imperative (V)	*V	*V-*u*	*V-*i*	*V-*an-i*

However, one crucial condition for this Agree relation to obtain is the independent licensing of the external argument. In this subsection, I propose that the external argument was licensed independent of T when it functioned as an agreement marker cliticized to the verb. Interestingly, both Tsou and Puyuma exhibit clitic doubling with subjects. The following examples are ergative clauses, and the full DP subjects are expressed with oblique case.

[18] It should be pointed out that the objects selected by **i* in PAn would have been limited to personal names and pronouns. An extension clearly took place after the incorporation of the preposition to include all definite objects. I assume that this was possible since the incorporation would have weakened the semantic association between the preposition and the type of object it selected.

(42) a. 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.’ (Tsou; Zeitoun 2000:93–94)

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

I propose here that in clauses where the external argument was expressed as a clitic pronoun, it did not need to undergo Agree with T to value nominative case but could instead be licensed by virtue of being incorporated to T. This allowed the probe on T to look past the external argument and value nominative case on the object.

An interesting parallel can be found in many Indonesian languages. In addition to the active transitive clause type in (43a), where the external argument has nominative case and appears in clause-initial position, Indonesian has a second transitive clause type[19] in which an internal argument is nominative and occupies subject position, as in (43b–c). The external argument is expressed as a pronoun procliticized to the verb, which can be a historically genitive form, as in (43b), but need not be, as in (43c). The fact that the pronoun need not be in the genitive case suggests that it is not the availability of this case which serves to license it. Rather, it is merely the fact that it has been cliticized to the verb which ensures that it is not an intervener for the valuing of nominative case by T on the internal argument. Note that the external argument in this construction *must* be a clitic pronoun and cannot be expressed as a full DP.

Standard Indonesian

(43) a. Ali mem-beli buku.
Ali ACT-buy buku
‘Ali bought a book.’

b. Buku itu *ku*-/*kau*-baca.
book that 1.SG/2-read
‘The book, I/you read.’ (Arka & Manning 1998:3)

c. Buku itu *saya*/*kamu*/*dia* baca.
book that 1.SG/2/3 read
‘The book, I/you/(s)he read.’ (Arka & Manning 1998:3)

The preceding discussion also lays the groundwork for the reconstruction of the imperative suffix *-*u*, which is the primary focus of this subsection. I propose that this suffix was historically the second person singular nominative clitic pronoun (reconstructed by Ross 2006 as *=*Su*) which was incorporated to the imperative verb and reduced to *-*u*.

[19] This construction has been referred to in various ways in the literature: ‘object preposing’ (Chung 1976), ‘objective voice’ (Arka & Manning 1998), ‘passive type two’ (Cole & Hermon 2005; Sneddon 1996), ‘ergative’ (Aldridge 2008a), etc.

Kaufman (2011) points out that languages which retain the imperative inflection do not express the subject overtly, as in Paiwan (44a). In contrast to this, languages which have lost the irrealis paradigm and use realis verb forms in the imperative do express the subject overtly, as is the case in Tagalog (44b). This fact suggests at least indirectly that the suffix could be a replacement for an earlier overt subject.

(44) a. Santapav-**u** i qinaljan! (Southern Paiwan)
build-IMP P village
'Build (it) in the village!'

b. Bigy-an=**mo**=siya ng kape. (Tagalog)
give-APPL=2.SG.GEN=3.SG.NOM GEN coffee
'Give him some coffee!'

One question left open by this analysis is why **-u* appears only on PF imperative verbs and not on LF and CF imperatives. I suggest here that ergative alignment might first have appeared in this construction, making PEAn[20] very similar to Estonian imperatives, as mentioned in §3. In other words, the easy recoverability of the features of the subject in the imperative (being consistently second person) facilitated the reanalysis of this pronoun from an argument to an agreement marker. The reanalysis of the other clitic pronouns may then have taken place on analogy with the imperative. Note further that incorporation of **i* would also have been subsequent to the change in the status of the pronouns, since licensing of the object stranded by this incorporation depended crucially on the subject not being an intervener for the purposes of this Agree relation. Consequently, **-u* would already have been established as the imperative marker in the PF before the development of the **-i* applicatives in the LF and CF.

The absence of **-i* in the PF imperative is also straightforwardly accounted for in this hypothesis. The lack of an argumental subject in the imperative would have allowed an object to enter into an Agree relation with T, so themes or patients would have been merged as bare DPs without the preposition **i*. The fact that the LF and CF imperative forms do have the **-i* suffix is because the objects in these constructions would have been adjuncts, meaning that the preposition was required not only for syntactic licensing, but also for semantic purposes.

One final point which needs to be touched upon in this subsection is the **-u* following **-a* in the hortative. At present, I can only suggest that this was an extension which took place on analogy with the imperative when the subjunctive was used as a hortative expression, given the semantic similarity between imperatives and hortatives. It is necessary to reconstruct **-a-u* for the PEAn PF hortative, because not only is it reflected as the Puyuma realis and hortative suffixes, but it is also found in Atayalic languages, Bunun, Paiwan, and Kanakanavu as imperative or hortative.

[20] It is even possible that the **-u* imperative suffix had been formed as early as PAn, but since Rukai does not retain this form but rather uses the erstwhile subjunctive *-a* as the imperative, there is no evidence for attributing this reanalysis to PAn rather than PEAn.

4.3 Nominal origin for CF *-*an*

Turning now to the circumstantial focus affix, one component of this suffix is always *-*i*, which is a consequence of the incorporation of the preposition **i* marking an object or adjunct, as discussed earlier. The other component of this suffix which must be accounted for is *-*an*, which I propose was the nominalizer *-*an.*

Recall first that I proposed in §2 that *-*an* was a general nominalizer in PAn and PEAn and was not related to focus, per se. There is also evidence for the use of nominal forms as CF. Chamorro no longer employs the focus system in declarative root clauses, but some morphemes cognate with focus affixes in other NAn languages surface in extraction contexts. As in Tagalog, <*um*> appears on the verb when an external argument is extracted, as in (45a), and <*in*> can indicate that a theme or patient has undergone movement, as in (45b). In (45c), an instrument has been extracted. Rather than an affix appearing on the verb, the verb is nominalized.

Chamorro

(45) a. Hayi f<**um**>a'gasi i kareta?
who <AV>wash the car
'Who washed the car?' (Chung 1998:236)

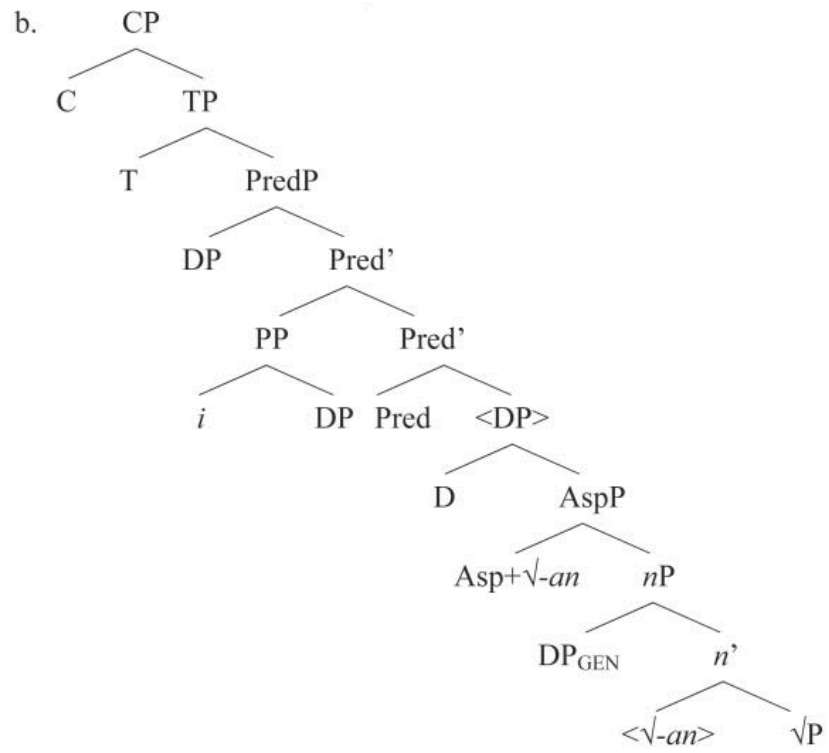
b. Hafa k<**in**>annono'-mu?
what TV-eat.PROG.2.SG.GEN
'What are you eating?' (Chung 1998:237)

c. Hafa para **fa'gase-mmu** ni kareta?
what FUT wash.NMLZ-2.SG.GEN OBL car
'What are you going to wash the car with?' (Chung 1998:236)

For PEAn, I propose the following analysis. The verb was nominalized with *-*an* (reflected in Tsou as -*en*) and the nominalized clause was predicated of another constituent, for instance a beneficiary or instrumental adjunct PP headed by **i*. At this stage in history, a CF clause like the following Tsou sentence would have meant something along the lines of 'My writing of the letter was with the pencil' or 'It was with the pencil that I wrote the letter.' The verb-initial word order is derived by fronting the nominal predicate to the outer specifier of the predicate phrase, as per the analysis of Tagalog nominal predications proposed by Aldridge (2004).

Tsou (Chang 2015:4)

(46) a. os-'o tpos-neni to tposx 'o 'empicu
TR.RL-1.SG.ERG write-IA OBL letter ABS pencil
'I wrote a letter with the pencil.'



I assume that this construction was reanalyzed as monoclausal at a later stage in the development of the language. The reader is referred to Aldridge (forthcoming) for details on how this reanalysis might have taken place. Conceptual support for the preceding analysis of the origin of the CF suffix as containing a nominalization comes first from Pylkkänen's (2002) analysis of 'high' applicatives, which typically introduce instruments or beneficiaries, as predicating this argument of the entire event. Empirical support for the nominalization origin is provided by the seemingly mysterious fact that the nominative object in Austronesian CF clauses is not limited to adjuncts, but also can be a transported theme. This is unexpected behavior for an applicative, since themes are typically arguments which are directly selected by lexical verbs. But transported themes in Austronesian languages are generally selected by CF applicatives and accordingly do not correlate with PF morphology on the verb.

My analysis resolves this apparent contradiction. Chang (2015) has argued convincingly that Tsou CF constructions involving a theme have as part of their derivation raising of a null operator from the theme position inside the VP to the edge of *v*P. The overt applied object is merged in the specifier of the ApplP headed by *-eni* and coindexed with the operator. In this way, the CF affix heading the applicative phrase functions as a (high) applicative, but the argument it selects can be interpreted as a theme selected by the verb.

(47) a. Tsou

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-3.SG

'Pasuya gave his book to Mo'o.' (Chang 2011b:803)

b. $[_{ApplP}$ DP_i $[_{Appl'}$ *-neni* $[_{vP}$ DO_i … $[_{VP}$ $[_{V'}$ V <DO_i>]]]]] (Chang 2015:29)

This analysis fits neatly with my proposal that the *-eni* construction historically contained a nominalization. The **-an* of PEAn not only served as a nominalizer, but could also form a relative clause on object position, as shown by the following Rukai example. The headless relative clause is formed by moving a null operator from the position of the argument in the embedded clause to the edge of that clause.

Tanan Rukai

(48) [OP [a-kan~~i~~-**an~~i~~**=ta <OP> ki maum]]
IMPRV-eat-NMLZ=1.PL.INC P night
'what we will eat tonight'

I propose that the operator movement shown in (47b) for modern Tsou CF constructions is a retention of the earlier relative clause structure which was historically projected by the nominalizer **-an* in PAn and PEAn.

4.4 Summary of the proposal

In the preceding discussion, I have proposed diachronic origins for the PEAn morphemes **-i*, **-u*, and **-an*, reflexes of which comprise the focus affixes found in Puyuma and Tsou today, as well as those focus affixes retained in the irrealis paradigm in many Nuclear Austronesian languages. The primary innovations which led to the emergence of ergative alignment are the incorporation of the preposition **i* and the reanalysis of clitic pronouns as agreement markers. Specifically, I proposed that the origin of **-i* in PEAn was the preposition **i* in PAn, which could select an adjunct or serve as an oblique case marker for a direct object when structural accusative case was not available, as in irrealis clauses. The preposition was reanalyzed in PEAn as the applicative **-i*, with the result that the object was deprived of its case licenser and was then dependent on T for nominative case licensing. Agree with T was possible because the external argument in PEAn transitive clauses was typically expressed as a clitic agreement marker, which did not intervene between T and the object needing case. I have further proposed that the **-u* suffix in imperative PF clauses was the second person pronoun **=Su* in PAn which incorporated to the preceding verb. After lenition of the consonant, the incorporated form ceased to be recognizable as a pronoun and the vowel was reanalyzed as an imperative suffix.

In short, ergative alignment in PEAn irrealis clauses arose as the result of two parameter settings: (1) the lack of accusative case on *v*; and (2) the lack of intervention by the subject for nominative case licensing of the object. As discussed in §3, these two parameters are independent of each other, but both are necessary for the emergence of ergative alignment. As observed in §3, the convergence of these two parameters is relatively rare, even in differential object marking environments, as evidenced by the fact that most differential object-marking languages exhibit an alternation between accusative and oblique case within the VP, but the subject remains nominative, as is the case for Slavic genitive of negation and Finnic aspectual alternations. It is only when the external argument does not require licensing from T that the object will be able to value nominative case. This was shown in §3 for Estonian imperatives, in which the subject is incorporated to the verb in the form of second person agreement. This situation is mirrored by PEAn imperatives, which I have proposed also contained an incorporated pronominal subject.

5. Changes within the PEAn subgroup

In this section, I propose the paths through which the PEAn subjunctive was reanalyzed as the realis clause type in Puyuma and Tsou. The focus system in modern Tsou is fairly simple, since Tsou reflects only embedded nonfinite non-AF affixes.

(49)

Tsou	AF	PF	LF	CF
Nonfinite	*M*-V	V-*a*	V-*i*	V-(*n*)*eni*

This simplification suggests a merger or coalescence of different parts of the irrealis paradigm, possibly through analogical leveling. The lack of the imperative and hortative *-u* is unsurprising, given that the focus system in Tsou is only manifested on embedded verbs following auxiliaries. I propose here that the Tsou PF suffix reflects the PEAn PF subjunctive directly, while the LF and CF forms have been extended from other parts of the irrealis paradigm. The AF form is a retention of the PAn basic verbal affix **M-*. The use of these focus affixes in irrealis clauses was in time extended to realis contexts, as modern Tsou does not differentiate these moods in the affixes on lexical verbs.

(50) PEAn reconstruction

	AF	PF	LF	CF
Realis (N)	---	*V-*an*	*V-*an*	?
Perfective (N)	---	*<*in*>V-*an*	*<*in*>V-*an*	?
Realis$_{FIN}$ (V)	**M*-V	---	---	---
Realis$_{NONFIN}$ (V)	**M*-V	---	---	---
Imperfective (V)	**M*-RED-V	---	---	---
Subjunctive (V)	**M*-V-*a*	*V-*a*	*V-*a-i*	*V-*an-a-i*
Hortative (V)	**M*-V-*a*	*V-*a-u*	*V-*a-i*	*V-*an-a-i*
Negative (V)	*V	*V-*i*	*V-*i*	*V-*an-i*
Future (V)	*RED-V	*RED-V-*i*	*RED-V-*i*	*RED-V-*an-i*
Imperative (V)	*V	*V-*u*	*V-*i*	*V-*an-i*

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.

(51)

Puyuma	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 retentions 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. AF clitics in Puyuma are post-verbal, while NAF clitics procliticize to the verb.

Puyuma

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

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

In contrast, subject agreement markers in Tsou are all post-verbal (specifically, post-auxiliary).

Tsou

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

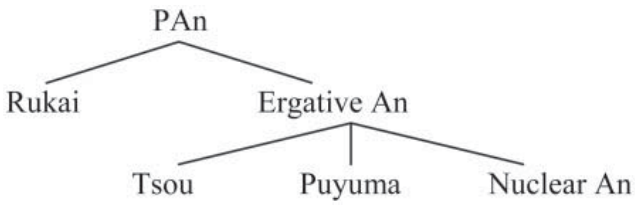
b. i-si si-a ta pangka to amo 'o emi
NAF-**3.SG** put-PF OBL table OBL father NOM wine
'Father put the wine on the table.' (Zeitoun 2000:93)

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 and Roberts & Roussou 2003) setting and acquired these forms as finite root verbs.

6. Conclusion

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

(54)



The emergence of ergative alignment in PEAn was a consequence of the need for the object to be structurally case licensed in the absence of accusative case on *v* in irrealis clauses. An Agree relation between T and the object was possible in PEAn transitive clauses because the external argument was expressed as a clitic agreement marker and was consequently not an intervener. The coincidental convergence of these two conditions, though otherwise completely independent of each other, yielded an ergative case marking pattern in transitive irrealis clauses.

This proposal for the change from accusative to ergative alignment conforms to the general framework put forth by Whitman & Yanagida (2012) and Aldridge (forthcoming), who propose these two parameters as providing the necessary environment for this reanalysis. The languages focused on by Whitman and Yanagida involve the reanalysis of a clausal nominalization as the ergative clause type, and it is unsurprising that this diachronic path is responsible for the evolution of ergative alignment in a wide range of languages, since nominalizations make genitive case available for the external argument but often do not structurally license an internal argument. In this paper, I have shown that irrealis clauses can also provide the necessary conditions for the change from accusative to ergative alignment. However, alignment change in this clause type is far less common. Irrealis clauses tend cross-linguistically to be intransitive in the sense that structural accusative case is unavailable. But inherent case is not generally assigned to the external argument. The typical result is differential object marking, but the case of the subject remains nominative. It is only when the external argument does not need to value nominative case that ergative alignment can emerge, and I have suggested for Estonian imperatives and PEAn irrealis clauses that pronouns functioning as agreement markers need not value nominative case with T. Consequently, when subjects are expressed in this way, the nominative case on T is made available for the object.

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非現實語氣與作格性的來源

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本文的主要目標是尋找南島語言作格性（焦點系統）的來源。本文假設原始南島語言是賓格語言（沒有焦點系統），並且假設現代魯凱語保持了原始南島語的賓格性。其他南島語言中的作格性源於另外一個創新。關於南島語言中作格句法特點的來源，本文提出作格格局先出現在原始南島語言的子語原始作格南島語，是非現實句型中的賓語得到主格的結果。具體來說，原始南島語言中非現實句型中的輕動詞 v 沒有賦予賓格的能力。原始南島語言非現實句型中的賓語一定要帶介詞，並且通過介詞得到格。本文提出作格南島語支的主要創新是介詞併入動詞。介詞併入導致了非現實句型中的賓語失去了格的來源。因爲輕動詞沒有賦予賓格的能力，賓語只能由 T 賦予主格。這就是南島語言中作格格局的來源。

關鍵詞：作格性，格局演變，非現實句型，句法構擬