Intransitivity and the development of ergative alignment

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X.1. Introduction

Ergatively aligned languages pose a challenge to the generative approach to argument licensing and case marking. According to Chomsky (2001 and subsequent works), the functional heads finite T and transitive \( v \) are each merged with an unvalued \( \phi \)-feature. D(P)s enter the derivation with valued \( \phi \)-features and an unvalued case feature.

(1) Accusative language

\[
\begin{align*}
\nu_{Tr}: & \quad [\neutra{u}{\phi}] \\
\nu_{Intr}: & \quad \text{No} \ [\neutra{u}{\phi}] \\
T_{Fin}: & \quad [\neutra{u}{\phi}] 
\end{align*}
\]

The unvalued \( \phi \)-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 \( \phi \)-feature set on a DP, the \( \phi \)-feature on T is valued, and the DP supplying the valued \( \phi \)-features is valued for case. Consequently, 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.
(2)  a  She\textsubscript{NOM} walks.
   b  She\textsubscript{NOM} sees him\textsubscript{ACC}.
   c  

\[ 
\text{TP} \]

\[ 
\text{T} \]

\[ 
\text{vP} \]

\[ 
\text{DP} \]

\[ 
\text{v'} \]

\[ 
\text{VP} \]

\[ 
\text{V} \]

\[ 
\text{DP} \]

The challenge presented by ergative languages is the fact that nominative case does not always appear on the DP structurally closest to T. Specifically, the object has nominative case in a transitive clause rather than the subject.

\textit{Seediq} (Aldridge 2004: 78)

(3)  a  Wada kudurjak  ka  qedin=na.
    PST  flee  NOM  wife=3SG.GEN
    ‘His wife ran away.’
   b  Wada bube-un  na  Pihu  ka  dangi=na.
    PST  hit-TR  GEN  Pihu  NOM  friend=3SG.GEN
    ‘Pihu hit his friend.’

A common approach to this locality problem is to propose that subjects in transitive clauses are assigned some type of inherent case (genitive in Seediq) and consequently do not require nominative case from T. This allows T to ignore the subject and value nominative case on the
A further consequence is that $v$ cannot have its own set of unvalued $\phi$-features, since there is no VP-internal DP to value them. This in turn predicts that ergative alignment arises diachronically in an accusative language as the result of two parameter settings: 1) $v$ in a semantically transitive clause lacks the ability to license structural case; and 2) this $v$ is able to assign inherent case to the external argument in its specifier. It is important to point out that each of these properties is independent of the other. In differential object marking languages like Finnish, objects receive structural accusative case in bounded events but not in unbounded events. Note, however, that the subject continues to surface with structural nominative case.

Finnish (Kiparsky 1998:3)

(5) etsi-n  karhu-a/#karhu-n

seek-1.SG  bear-PART/bear-ACC

‘I’m looking for the (a) bear.’
A shift from accusative to ergative alignment will only be observed when the lack of accusative case for an internal argument is accompanied by the availability of inherent case from \( \nu \) for the external argument. The necessity of the convergence of these two changes also suggests a reason for the relative rarity of ergatively aligned languages, as opposed to the relative commonality of differential object marking in general. In this overview, I summarize how an analysis of this sort has been or can be made to account for accusative-to-ergative change in a variety of languages or language families.

X.2. Passive-to-ergative hypothesis

A classic approach to the origin of ergative alignment is positing a passive construction as the source. In a passive clause, the external argument – if it surfaces at all – is marked by an adposition rather than structural case, while an internal argument – typically the theme or patient – has nominative case. This bears superficial resemblance to a transitive clause in an ergative language, having an inherently case-marked external argument and structurally case-marked internal argument.

\[
\begin{array}{ccc}
\text{EA} & \text{IA} \\
(6) & a & \text{DP}_{\text{OBL}} \text{ DP}_{\text{NOM}} V \\
& b & \text{DP}_{\text{INH}} \text{ DP}_{\text{NOM}} V
\end{array}
\]  

(passive clause)  
(ergative clause)

Anderson (1977) has proposed just such an origin for ergative clauses in the perfective aspect in Indo-Aryan languages. Many modern Indo-Aryan languages exhibit a split-ergative alignment, whereby imperfective aspect follows an accusative pattern, and perfective aspect is ergatively
aligned. Note the ergative suffix on the subject in the Hindi example in (7b). Other DPs appear without a case marker. Note further that the verb shows agreement with the nominative subject in (7a) and the nominative object in (7b).

Hindi (Mahajan 1990: 72-3)

(7)  a raam roTii khaataa thaa.

Ram(M).NOM bread(F) eat.IPV.M was.M
‘Ram (habitually) ate bread.’

b raam-ne roTii khaayii thii.

Ram(M).ERG bread(F).NOM eat.PFV.F was.F
‘Ram ate bread.’

The ergative pattern in the perfective is generally traced to a construction in Sanskrit built on the participle –ta (Proto-Indo-European *-to), exemplified in (8b). Note the case on the external argument, glossed as “instrumental”.

Classical Sanskrit (Klaiman 1978: 205)

(8)  a naro vedān paṭhati

man.NOM.SG Veda.ACC.PL.M recites.3SG
‘The man recites the vedas.’

b narena vedāḥ paṭhi-tāh

man.INS.SG Veda.NOM.PL.M recite-TA.PL.M
‘The man recited the vedas.’
Anderson suggests that the reanalysis of passive to ergative was motivated by the loss of the inflected perfect and its replacement by the participle, on the basis of the semantic similarity between perfect and passive in that both present a state resulting from a completed action (Anderson 1977: 336). The passive-to-ergative analysis has been adopted by Pray (1976), Bubenik (1989), Hook (1991), and others for Indo-Aryan. Cardona (1970), Payne (1980), Bubenik (1989), and others have made similar claims for the related Iranian languages, which manifest ergative alignment in the past tense.

However, questions have also been raised regarding the empirical basis for positing a passive source. Specifically, the source constructions for both the Indo-Aryan and Iranian ergative clause types do not appear to have the characteristics of a canonical passive. Pray (1976) points out that the nominative object in Sanskrit remains in its base position between the agent and verb rather than moving to clause-initial subject position, as can be seen above in (8b). Furthermore, the agent functions as a subject in being able to control into a gerundive embedded clause, as in (9a), and serving as the addressee of certain types of imperatives, as in (9b, c). Additionally, an intransitive verb can be inflected with participle –ta, as in (9c).

Sanskrit

(9) a tapah kṛtvā mayā devo ārādhitaḥ

austerity having.done by.me god.NOM was.propitiated

‘Having performed austerities, I propitiated the god.’ (Pray 1976: 202)
b mañjūṣām ānāyya ṁṛchyaṁtām devatās tvayā
chest.ACC having.caused.to.bring let.them.be god.NOM.PL you.INS
‘Having sent for your chest, inquire of the gods.’ (Pray 1976: 203)

c tvayā gamyatām
you.INS let.it.be.gone
‘Please go.’

Haig (2008, 2010) shows that the corresponding construction in Old Persian likewise did not have the properties of a passive. Here, too, the genitive agent behaves syntactically as a subject and not as an adjunct by-phrase. Not only is the agent frequently highly topical and animate, this argument can also be the pivot for clausal coordination.

**Old Persian** (Kent 1953; DB III, 47-49; Haig 2008: 52)

(10 avaθā=šām hamaranam kar-tam utā
thus=3PL.GEN battle do-PTCP
avam Vahyazdātam agarbāya utā
that Vahyazdata take.prisoner.PST.3PL and
‘They fought battle and (they) took that Vahyazdata prisoner and ….’

In short, there is a lack of evidence that the external argument was ever a demoted adjunct. Facts of this nature prompt Klaiman (1978, 1987) to propose that clauses built on –ta participles were already ergative in Sanskrit times. However, this view raises the question of where the ergative construction came from, a topic which I turn to in the next section.
Before concluding this section, I briefly summarize one more well-known passive-to-ergative proposal. Hale (1968), Hohepa (1969), and Chung (1978) have proposed that ergative alignment in Polynesian languages like Tongan and Samoan also arose through the reanalysis of a passive construction. Maori as an accusative Polynesian language with a passive formed by adding a suffix “–Cia”, where “C” is a lexically determined consonant1.

Maori (Chung 1978: 170)

(11) a Ka inu te tangata i te wai.

UNS drink the man ACC the water

‘The man drinks the water.’

b Ka inu-mia te wai e te tangata.

UNS drink the water OBL the man

‘The water is drunk by the man.’

In contrast, Tongan and Samoan have transitive ergative constructions which very closely resemble the Maori passive. Note the “e” marker on the external argument.

(12) a Na’e taa’i ‘e Mele ‘a Sione. (Tongan; Chung 1978: 53)

PST hit ERG Mary ABS John

‘Mary hit John.’

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1 Historically, this consonant was part of the base to which the suffix –ia attached. Final consonants were lost in Proto-Central Pacific, a subgroup of Oceanic containing Polynesian, Fijian, and Rotuman, so this consonant surfaced only when followed by a suffix. Eventually, the consonant was reanalyzed as being part of the suffix (Pawley 2001: 196).
b  Sā  ‘āmata-īna e lātou le pese.  (Samoan; Chung 1978: 55)

PST  begin-TR  ERG  they  the song

‘They began the song.’

Pawley (2001) provides support for the passive analysis of –Cia by showing that a wide range of Oceanic languages both within and outside of the Polynesian subgroup have a suffix –a, which attaches to a transitive verb to derive an intransitive, stative verb. The following examples from the Southeast Solomonic language Arosi show a verb transitivized with the suffix –Ci and then made stative by the further addition of –a.

Arosi (Pawley 2001: 200-201; from Fox 1970)

(13)  a  age  age-ri  age-ri-a

‘thatch’ (V)  ‘thatch something’  ‘thatched’

b  hunu  hunu-‘i  hunu-‘i-a

‘kill’  ‘kill something’  ‘dead’

However, it is less clear that a diachronic connection can be made between passive –Cia in languages like Maori and transitive morphology in Tongan and Samoan. The transitivizing suffix employed in Tongan is not –Cia but –‘i. Tongan does have –Cia, but this suffix creates intransitives which are often stative, consistent with Pawley’s (2001) findings sketched above.
**Tongan** (Pawley 2001: 204)

(14) a Na’a ku tanu-‘i (‘a e kappa).

\[ \text{PST 1SG bury-TR ABS the can} \]

‘I buried it (the can).

b Na’a ku tanu-mia.

\[ \text{PST 1SG bury-CIA} \]

‘I was buried.’

Likewise, in Samoan -Cia is not generally used as a transitivizing suffix. Transitive verbs are either bare or take the suffix –ina, as shown above in (12b). As in Tongan, when –Cia appears, it creates stative verbs.

**Samoan** (Pawley 2001: 206)

(15) a alu alu-mia

\[ \text{‘go, go out’ ‘be in great demand, sell quickly’} \]

b fuli fuli-sia

\[ \text{‘turn over, roll over’ ‘turned over’} \]

In short, the intransitive, non-agentive *-Cia seems to be retained broadly in this function in modern Eastern Oceanic languages, including the Polynesian languages, regardless of whether they have ergative or accusative alignment, and it is difficult to see a direct connection between this suffix and transitivizing morphology in the ergative Polynesian languages. It may be more reasonable to posit ergative alignment as conservative with Clark (1973, 1976), Kikusawa (2002,
this volume), and Otsuka (2011), which may help to reconcile Proto-Polynesian alignment with the non-accusative type of alignment found in higher-order subgroups of the Austronesian family of the Philippines, Taiwan, and elsewhere.

To summarize this section, passive is one intransitive source which has been claimed to give rise to ergative alignment. However, empirical evidence does not favor this claim for Indo-Iranian or for Polynesian languages. In the next section, I discuss an alternative analysis for Indo-Aryan and Iranian ergative clauses as arising from an active intransitive clause type, specifically a possessive construction.

**X.3. Possessive origin**

Like their Indo-Aryan relatives, Iranian languages also have split-ergative alignment in which ergative clauses are employed in the past tense, as in Modern Kurdish. Transitive subjects take oblique marking, while intransitive subjects and direct objects are nominative.

**Modern Northern Kurdish** (Haig 2010: 258)

(16) a min tu dit-i

1SG.OBL 2SG see.PST.2SG

‘I saw you.’

b te ez dit-im

2SG.OBL 1SG see.PST.1SG

‘You saw me.’
‘I was a child.’

Old Persian, on the other hand, was a language with uniform accusative alignment. Subjects in both transitive and intransitive clauses are nominative.

Old Persian (Haig 2008: 25)

(17) a pasāva  adam  kāram  frāišayam  Bābirum
thereupon 1SG.NOM army.ACC send.PST.1SG to.Babylon
‘Thereupon, I sent an army to Babylon.’ (Kent 1953; DB III, 84)

b yaθā  Dārayavahauš  xšāyaθiyā  abava
when Darius.NOM king become.PST.3SG
‘when Darius became king’ (Kent 1953; XPf, 36-37)

As in the case of Indo-Aryan, the source for the ergative clause type in the Middle Iranian past tense was the participle ending –ta, from PIE *-to. In this construction, the object had nominative case, and the subject was marked with genitive case.

Old Persian (Kent 1953; DB I, 28-29; Haig 2008: 26)

(18) ima  tya  manā  kar-tam
that which.NOM 1SG.GEN do-PTCP
Benveniste (1952) proposes that this participle construction was originally a possessive construction expressing the perfect, similar to the English “I have eaten”. Like Benveniste, Haig (2008) likewise analyzes this construction as expressing (external) possession. This construction was reanalyzed as finite and transitive as a result of the loss of past tense verbal inflection, the participle being co-opted in order to express the past.

**Old Persian** (Kent 1953; DB IV, 75; Haig 2008: 62)

(19) utā=taiy tauhmā vaisy biyā

and.also=2SG.GEN seed much may.be

‘and may you have much seed (offspring)’ (lit: ‘and may to you/for you much seed be’)

Bynon (2005) has proposed a similar analysis for Indo-Aryan. She claims that the agent was a raised possessor in an anticausative construction that served as an evidential in Vedic. Bynon argues that the subject in the older construction had genitive case and that the later Sanskrit construction employing instrumental agents represents an innovation.

**Vedic** (Bynon 2005: 56; MS 1.4.13:62.10; Kulikov 2001: 310)

(20) átha yásya kapālam bhidyēta

and who.GEN pot.NOM break.3SG.PRS.OPT
tát sám dadhyāt
it.NOM PV put.3SG.PRS.OPT

‘And if someone’s dish would break, he should mend it.’

Regarding the structure of the possessive construction, it was clearly intransitive in certain respects. The Proto-Indo-European resultative participle *-to had the distributional properties of an adjective (Haig 2008: 41-42), from which it can be inferred in both Indo-Iranian and Indo-Aryan, only one structural case (nominative) would have been available, this going to the internal argument in semantically transitive constructions, while the external argument was expressed as a possessor with genitive case.

One possible formal analysis of this construction is that proposed by Mahajan (1997), as it relates ergativity in languages like Hindi to the HAVE-BE alternation in possessive constructions. In transitive perfect (perfective) constructions in Hindi, the subject is marked with an oblique case, labeled ergative, as discussed above. In contrast, perfect constructions in French (and English) have nominative subjects and accusative objects. Note, too, the difference in the auxiliary: BE in Hindi and HAVE in French.

(21) a Raam-ner bhindiyyā pakaayiyi hē
Ram-ERG.MASC okra.FEM.PL cook.PRV.FEM.PL be.PRES.FEM.PL

‘Ram has cooked okra.’ (Hindi; Mahajan 1997: 40)

b Jean a cuit les tomates.

‘Jean has cooked the tomatoes.’ (French; Mahajan 1997: 39)
Following Freeze (1992) and Kayne (1993), Mahajan proposes that possessor subjects in all languages are underlyingly PPs, and the auxiliary is universally BE. HAVE is the result of incorporation of the preposition introducing the subject into BE. But oblique subjects will surface if incorporation fails to take place, and the auxiliary will remain BE.

(22)

Mahajan suggests that incorporation is blocked in languages with verb-peripheral word order like SOV, assuming that both government and adjacency are necessary for incorporation. In SVO languages, in contrast, the VP-internal subject occupies the specifier of the VP selected by the auxiliary in Infl. Given the head-initial word order, the auxiliary both governs and precedes the subject, so incorporation can take place.

An obvious short-coming of this approach is that it relies on directionality rather than structural relations alone. The unaccusative structure in (22) also raises some questions in light of the subject-like behavior of the external argument observed in the past two sections. As an alternative, Whitman and Yanagida (2012) opt instead for a semantically transitive structure along the lines of that proposed for modern Hindi by Anand and Nevins (2006). Following Woolford (1997) and Ura (2000), they analyze the external argument as a DP assigned inherent case in the specifier of \( v \). This DP then moves to [Spec, TP] to satisfy the EPP property of T. But nominative case is valued on the object. This structure accounts easily for the subject properties
of ergative arguments. Except for the movement of the ergative subject, this proposal is essentially identical to the analysis of ergative alignment in (4).

(23) TP
   DP[ϕ, ERG] T' 
   T[ϕ] vP 
   tERG v' 
   v VP 
   V DP[ϕ, NOM]

X.4. Instrumental to NP Split-ergativity
Garrett (1990) proposes an analysis of the origin of NP split-ergativity in Anatolian. The Australian language Dyirbal is an example of a language with NP split-ergativity. Third-person nominals are marked according to an ergative-absolutive alignment, as shown in (23a, b). Intransitive subjects and transitive objects have no overt case-marking, while transitive subjects are marked with a suffix. In contrast to this, first- and second-person pronouns in Dyirbal are marked according to a nominative-accusative pattern. The transitive subject in (24c) is bare, while the object takes a suffix.

Dyirbal (Dixon 1994: 161)

(24) a yabu banaga-νu 
    mother.NOM return-NFUT
    ‘Mother returned.’
Silverstein (1976) observes that the Dyirbal facts are part of a larger cross-linguistic pattern. 1<sup>st</sup> and 2<sup>nd</sup> person pronouns and 3<sup>rd</sup> person animate nominals are more likely to be case-marked nominative-accusative, while those marked ergative-absolutive are more often found at the other end of this animacy hierarchy.

(25) **NP Hierarchy** (Silverstein 1976; revised by Dixon 1994: 85)

1<sup>st</sup>/2<sup>nd</sup> Person Pronoun   Dem/3<sup>rd</sup> Person Pronoun   Proper N   Common N

Nom/Acc marking ↔ Erg/Abs marking

(26) is a Hittite transitive clause with an ergative subject (marked with the ablative marker – *anza*) and a nominative object. According to Garrett (1990), NP split-ergativity manifests itself in Anatolian in the sense that the ergative suffix attaches only to neuter singular nouns.
Hittite (KUB 14.4+rev 23’ [Hymnes 196]; Garrett 1990: 266)

(26) nu KUR URU Ḫatti=ya apāš išḫan-anza arḫa namma
    PTCL land Ḫatti=and that.NOM.SG blood-ERG.SG PV moreover

‗and that murder moreover ended the land of Ḫatti‘

For the source construction, Garrett (1990: 277) posits a transitive clause with an instrumental adjunct and no overt subject.

Hittite (Garrett 1990: 277)

(27) n=at witenanza parkunuzi
    PTCL=3SG.ACC water.ABL.SG pure.CAUS.PRS.3SG

‗S/he purifies it with water.‘

Garrett proposes that an instrumental adjunct was reinterpreted as an agent when the subject did not overtly appear. Another key ingredient of the reanalysis is that it had to have taken place in transitive clauses. This is because of the functional overlap between instruments and agents. Garrett (1990: 265) notes that it is rare – if even possible – for a theme to be packaged as an instrument. In English, for example, instruments can function as subjects only in transitive clauses but not in intransitive clauses.

(28) a John opened the door with the key.

b The key opened the door.

c John walks with a cane.
Consequently, if an instrument is reinterpreted as a subject, it will always be a transitive subject. In short, this analysis conforms to the type of change sketched in section 1. It involves a reduction in the number of structural cases available, since a nominative subject is replaced by a PP external argument.

X.5. Nominalization source

Synchronic or diachronic connections between ergative clauses and nominalizations have been proposed for a wide variety of languages. This is unsurprising, given that nominalizations clearly have the formal properties illustrated in (4), most notably the assignment of inherent – specifically, genitive – case to the external argument.

X.5.1. Inuit

Johns (1992) proposes that transitive clauses in the Inuit language Inuktitut are derived synchronically from nominalizations. First note that possessors are marked with the same case as transitive subjects, glossed as “relative”.

Inuktitut

(29) a anguti-up nanuq kapi-ja-a-0
    man-REL bear.ABS stab-PASS-PTCP-3SG/3SG
    ‘The man stabbed the bear.’  (Johns 1992: 61)
Johns proposes that transitive verbs combine with a passive participle, -ja in (29a), which nominalizes the verb root. The external argument is merged within the nominal projection and assigned genitive case, while the internal argument is base generated outside the nominalization in subject position. The absolutive argument is assigned both case and O-role as a result of verb movement to AgrV.

Since ergative NPs function as the subject of the clause and generally precede absolutes in linear order, Johns proposes that this argument moves to a position above the absolutive NP. The motivation for this movement is case, since its case-assigner AgrN has moved to AgrV, and case is assigned in a spec-head configuration.
Aside from the outdated theoretical assumption that case must be assigned in a spec-head configuration, another disadvantage of this proposal is its requirement that the ergative NP move past the absolutive NP, which violates Relativized Minimality (Rizzi 1990), since both of these NPs are located in case-licensing A-positions. Another question is whether a synchronic derivation involving nominalization is truly warranted, an issue which I take up again in relation to Tagalog ergative alignment in section 5.3.

X.5.2. Old Japanese active alignment

Modern Standard Japanese is a canonical accusative language: nominative case appears on subjects in both transitive and intransitive clauses, while objects in transitive clauses have accusative case.

Modern Japanese

(32) a Taroo-ga hasit-ta.
    Taro-NOM run-PST
    ‘Taro ran.’
According to Yanagida (2012) and Whitman and Yanagida (2012), Old Japanese of the 8th century likewise showed accusative alignment in finite root clauses. At this time in the history of the language, nominative and accusative cases were not morphologically marked.

Old Japanese (Yanagida 2012)

(33) a 我期大王國所知良之 (Manyoshu 933)

I-GEN great-lord country rule-CONC seem

‘My great lord rules seems to rule the country.’

b 鳥梅能波奈伊麻佐加利奈利 (Manyoshu 933)

[Ume-no pana] ima sakari nar-i.
plum-GEN blossom now at.peak be-CONC

‘The plum blossoms are now at their peak.’

In contrast to this, case-marking of subjects in nominalized clauses exhibited an active alignment. All external arguments in nominalized clauses appear with genitive case, while internal arguments – including subjects of unaccusative predicates – are bare. The genitive case marker in (34a) is ga, which in modern Japanese has been reanalyzed as nominative. However,
its genitive use in this period is clearly in evidence in (33a) and (34a) marking the possessor *wa-ga* ‘my’.

**Old Japanese**

(34) a 我背子之求流乳母尒

\[\text{wa-ga seko-\text{ga} motomu-ru omo-ni}\]

I-GEN lord-GEN ask-ADN nurse-DAT

‘as the wet nurse that my lord asks for’

b 久木生留清河原尒

\[\text{pisaki opu-ru kiyo-ki kapara-ni}\]

catalpa grow-ADN clear-ADN river.bank-on

‘on the banks of the clear river where catalpas grow’

In addition to the assignment of inherent genitive case to external argument subjects, Whitman and Yanagida further propose that the nominalized *ν* lacks the ability to structurally license the object. Yanagida (2006), Yanagida and Whitman (2009), Yanagida (2012), and Whitman and Yanagida (2012) have shown that there was an asymmetry between null case-marked objects in nominalized clauses and those taking the particle *wo*, which is the historical precursor of the modern accusative particle *o*: *wo*-marked (accusative) objects are interpreted as specific and must precede a genitive subject, while bare objects remain in their base positions immediately preceding the verb.
Old Japanese

(35) a 佐欲比賣能故何比列布利斯夜麻    (Manyoshu 868)

\[
[v_p \text{Sayopimye=no} \quad kwo=ga \quad [v_p \text{pire} \quad puri]}-si \quad yama
\]
Sayohime=GEN  child=GEN  scarf  wave-PST.ADN  hill

‘the hill where the girl Sayohime waved her scarf’

b 蜻野叫人之懸者                              (Manyoshu 1405)

\[
[\text{AspP} \quad \text{Akidu} \quad nwo=wo \quad [v_p \quad \text{pito=no} \quad [v_p \quad t_{Obj} \quad \text{kakure-ba}]])]
\]
Akizu  field=ACC  man=GEN    speak.of-when

‘When a man speaks of the moorland of Akizu…’

Yanagida and Whitman (2009) and Whitman and Yanagida (2012) propose that the \( v \) in the
nominalized clause assigns inherent genitive case to its specifier but is unable to value structural
case on an internal argument. A nonspecific object remains in its base position immediately
preceding the verb. They point out that these objects are generally \( N^0 \)-level categories, and they
analyze them are incorporated to the verb. But when the object is specific, it raises from its base
position to the specifier of an aspect projection dominating \( vP \), where it values structural
accusative case. As for bare internal argument subjects in unaccusatives, which are potentially
phrasal, Whitman and Yanagida (2009) propose that T values nominative case on these DPs,
given that \( vP \) is defective in unaccusatives.

In this way, Whitman and Yanagida (2012) implement the proposal that non-accusative
alignment emerges in an otherwise accusative language when the external argument in a
transitive clause is assigned inherent case, while the object is denied structural licensing by this
same \( v \) head.
X.5.3. Austronesian

Tagalog has been claimed by Payne (1982), De Guzman (1988), Aldridge (2004, 2012b), and others to be a language with ergative alignment. This can be seen in the contrast between (36a) and (36b), in which the object in a transitive clause takes the same ang case-marker as the subject in an intransitive clause. (36c) is analyzed as an antipassive, a semantically transitive but syntactically intransitive clause type. Like the simple intransitive in (36b), the subject (external argument) receives ang marking in the antipassive, while the object appears with inherent genitive case.

Tagalog

(36)  a  B<in>ili   ng  babae  ang  isda.
     <TR.PRF>buy  GEN  woman  NOM  fish
     ‘The woman bought the fish.’

b  D<um>ating  ang  babae.
     <INTR.PRF>arrive  NOM  woman
     ‘The woman arrived.’

c  B<um>ili  ang  babae  ng  isda.
     <INTR.PRF>buy  NOM  woman  GEN  fish
     ‘The woman bought a fish.’
X.5.3.1. Synchronic approach

Kaufman (2009) offers an explanation for the use of genitive case to mark DP arguments that are not absolutives by analyzing Tagalog clauses as nominalizations embedded in a copula construction. Kaufman proposes that Tagalog lacks a $v$ functional category. Consequently, lexical roots merge with $n$ and project a nominal predicate. The external argument of a transitive clause is treated as a possessor merged in [Spec, $n$] and assigned genitive case. The nominalized predicate is a relative clause with a null operator in the specifier of PredP. $T$ is treated as a null copula, which mediates a predication relation between PredP in its specifier and its DP complement.

**Tagalog**

(37) a B<in>ili ng babae ang isda.  

<TR.PRV>buy GEN woman NOM fish  

‘The woman bought the fish.’ (lit. ‘The fish is what the woman bought.’)
This analysis offers an account for the constraint in Tagalog and many other Austronesian languages (as well as syntactically ergative languages generally) that all DPs other than the absolutive are ineligible to undergo A’-movement, since genitive DPs are all contained within the relative clause DP, an island to extraction. (38a) shows that a relative clause can be formed on the absolutive object in a transitive clause. However, the ergative subject cannot be extracted in this way, as shown in (38b).

Tagalog

(38) a isda-ng\textsuperscript{2} b<in>ili ng babae
    fish-LK <TR.PRV>buy GEN woman
    ‘fish that the woman bought’

b *babae-ng b<in>ili ang isda
    woman-LK <TR.PRV>buy NOM fish
    ‘woman who bought the fish’

However, this biclausal analysis suffers from a number of short-comings. Aside from the stipulation that all finite clauses are copula constructions, the structure in (37b) makes incorrect predictions about word order in the language, as pointed out by Aldridge (2009). For example, this structure does not allow the absolutive DP to intervene between predicate-internal constituents. (39), however, shows an absolutive appearing between the verb and a genitive

\textsuperscript{2} The linker appearing between the head NP and the modifying clause is spelled the same way as the genitive case marker. But the two differ in pronunciation, the linker pronounced as the velar nasal, and are not the same morpheme.
object (39a) and a goal PP (39b). Since these constituents are arguments of the verb, I assume they would be base generated in the PredP on Kaufman’s analysis. Consequently, their dislocation to clause-final position should invoke an island violation along the lines of (38b), contrary to fact.

\[ (39) \begin{align*}
\text{a } & \text{[PredP } \text{B<um>ili} \ t_{DP} \ ] \ \text{ang} \ \text{babae} \ \text{ng} \ \text{bahay}. \\
& \langle \text{<INTR.PRV>buy} \ \text{NOM} \ \text{woman} \ \text{GEN} \ \text{woman} \\
& \text{‘The woman bought a house.’}
\end{align*} \]

\[ \text{b } \text{[PredP } \text{I-bi-bigay=ko} \ t_{PP} \ ] \ \text{ang} \ \text{bulaklak} \ \text{kay} \ \text{Maria}. \]

\[ \langle \text{APPL-RED-give=1SG. GEN} \ \text{NOM} \ \text{flower} \ \text{to} \ \text{Maria} \\
& \text{‘I will give the flowers to Maria.’} \]

In the next subsection, I propose that PP extraction from a predicate nominal is actually possible in certain Austronesian languages. However, there is a crucial structural difference between my approach and Kaufman (2009). In Kaufman’s approach, extraction takes place from a relative clause in a specifier position, which should result in a violation of Huang’s (1982) Condition on Extraction Domain. In the structure I propose, the predicate nominal is the complement of a Pred head. I draw a parallel between this type of extraction and the lack of opacity effects in subextraction from indefinite objects in English.

X.5.3.2. Diachronic approach

Starosta et al. (1981, 1982) take a diachronic approach to a possible connection between nominalizations and the type of ergative morphosyntax observed in most Philippine and
Formosan languages. Specifically, they propose that many affixes appearing on transitive verbs in the modern languages were nominalizers in Proto-Austronesian (PAn). The nominalizer exemplified in (40) is *-an, which attaches to a verb and projects a relative clause predicated of the matrix subject in a copula construction.

(40) S
   NP
   N P       ( N O M )
   ‘climb’-an  ‘John’  (GEN)

   ‘mountain’

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

In time, biclausal copula constructions like (40) were reanalyzed as transitive verbal clauses like (41). Nominalizers like *–an were consequently became verbal affixes. A reflex of *–an continues to function solely as a nominalizer in Puyuma and Rukai but is employed as a locative applicative attaching to verbs in many other Formosan and Philippine languages.⁵

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³ The term “Formosan languages” refers collectively to the Austronesian languages spoken in Taiwan, but does not indicate a subgroup.

⁴ Starosta et al. reconstruct the morpheme as *-ana, but *-an is the commonly accepted reconstruction in more recent work by Austronesian historical linguists.

⁵ See Gildea (1998) for a similar account of the reanalysis of nominalizations as ergative clauses in Cariban languages.
An advantage over Kaufman (2009) is that the resulting structure is monoclausal and does not require that all root clauses be analyzed as copula constructions. However, the detailed steps in the reanalysis are not spelled out. Nor is a clear motivation for the change identified. In what follows, I develop the insight of Starosta et al. (1981, 1982), Kaufman (2009), and others that there is a connection between nominalization and ergative clauses in Philippine and most Formosan languages and propose an explicit account of how a nominalized relative clause in a copula construction could have been reanalyzed as a finite ergative clause. I also adopt Ross’ (2009) proposal that the reanalysis of nominalizations to root clauses took place in what Ross terms the Nuclear Austronesian subgroup and should not be attributed to Proto-Austronesian or Pre-Austronesian. This subgroup encompasses all Austronesian languages except for Rukai, Puyuma, and Tsou, the last three still spoken in Taiwan.

Much of Ross’ evidence for this grouping comes from the fact that affixes forming finite ergative verbs in NAn languages bear resemblance to morphemes only employed in nominalizations in extra-NAn languages. Since the reanalysis of nominalizations as finite verbs
has not taken place in the extra-NAn languages, this change can be regarded as an innovation defining the NAn subgroup. As an example, the Puyuma finite transitive verb in (43a) takes the suffix –aw, an affix which never appears on a verb in a relative clause. Verbs in relative clauses must be nominalized, as in (43b), where the verb takes perfective aspect marker <in> and the nominalizer –an.

Puyuma

(43) a tu=trakaw-aw na paisu kan isaw
3.GEN=steal-TR DEF.NOM money SG.OBL Isaw
‘Isaw stole the money.’ (Teng 2008: 147)

b ala amuna sadru [[tu<in>ekelr-an] na asi]
maybe because many 3=<PRF>drink-NMLZ DEF.NOM milk
‘Maybe because the milk he drank is a lot.’ (Teng 2008: 105)

These morphemes surface only on nominalized verbs in Puyuma but appear on finite verbs in NAn languages like Tagalog. Note that -an has been reanalyzed as a locative applicative in Tagalog.

Tagalog

(44) 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.’
For the reanalysis of nominalizations as verbal clauses, I assume with Starosta et al. (1981, 1982) that the input structure was a nominal predication. In Aldridge (2004, 2014), I presented evidence for the following structural analysis of nominal predication in Tagalog. The predicate-initial word order is derived by moving the predicate NP to a position above the subject. The trace position of the NP is indicated with angled brackets.  

Tagalog

(45) a Importante-ng miyembro ng Sizzlers si Gilbert.

- important-LK member GEN Sizzlers NOM Gilbert

‘Gilbert is an important member of the Sizzlers.’

This analysis can also accommodate cases in which part of the nominal predicate has been stranded before fronting. In the following example, the complement PP vacates the predicate to be fronted and is stranded inside the PredP. Cole and Hermon (2008) propose a very similar analysis of stranding accompanying predicate-fronting in Toba Batak. Below, I suggest an important role for stranding in the reanalysis of nominal predications as verbal clauses.

Tagalog

(46)  

\[ \text{Importante-ng miyembro} \text{ si Gilbert } \text{ ng Sizzlers.} \]

Important-LK member NOM Gilbert GEN Sizzlers

‘Gilbert is an important member of the Sizzlers.’

I propose that the input to the reanalysis in question was a nominal predication in which the predicate was a nominalized relative clause, specifically the type Krause (2001) terms “reduced relatives with genitive subjects”. The structure contains a position for aspect but not tense. As
Chen (2008:96) shows that the nominalizer –ane (cognate with the nominalizer –an in Puyuma) attaches closer to the root than the perfective marker –nga, I place AspP outside nP. The external argument and nominalizing affix are merged in the nP layer. Internal arguments are merged together with the root.

**Budai Rukai (Chen 2008:84)**

(47) a Ta-badh-ane   ki  tina-ini     ki  lalake-ini

NOM clothes

‘The clothes are what the mother gave her child.’

---

7 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.
Interestingly, stranding is also possible from within this type of predicate nominal. In (48), the dative argument has been moved out of the relative clause and appears in a position following the matrix subject. I assume that the PP moves from complement position in the root phrase and exits the DP via the edge this phase (and possibly also the nP) in order to avoid violating the Phase Impenetrability Condition of Chomsky (2001 and subsequent works).

**Budai Rukai (Chen 2008:82)**

(48) a. Ta-badh-ane  ki  tina-ini  ka  laimai

    NONFUT-give-NMLZ  GEN  mother-3SG.GEN  NOM  clothes

    ki  lalake-ini.

    OBL  child-3SG.GEN

    ‘The clothes are what the mother gave her child.’
It may seem surprising here that the predicate nominal is not an island to extraction. However, two points are worthy of note here. First, extraction takes place from complement position. This is a crucial distinction between the current analysis and Kaufman’s (2009) proposal in (37b), in which the predicate is in a specifier position. Secondly, extraction from DP is in fact possible if certain conditions are met. For example, indefinite DPs in object position in English allow subextraction, but definite DPs do not. Regarding the copula constructions in Rukai, since the DP in question is predicational and not referential, it cannot be definite.8

8 Note further that reduced relative clauses in Tagalog existential constructions allow subextraction. See Aldridge (2012a) for discussion.
Returning to the diachronic reanalysis of copula constructions as verbal clauses, I suggest here that the possibility of remnant predicate fronting may have played a key role. Specifically, when material from the relative clause is stranded to the right of the matrix subject, the utterance comes to strongly resemble a monoclausal verbal construction in its word order, as shown in (50b). (50a) repeats the stranding example in (49a).

Budai Rukai

(50)  

a. Ta-badh-ane  ki  tina-ini   ka  laimai   
NONFUT-give-NMLZ  GEN  mother-3SG.GEN  NOM  clothes  

   ki  lalake-ini.     (Chen 2008:82)  
OBL  child-3SG.GEN  

‘The clothes are what the mother gave her child.’

b. Wa-bai   ku  laimai   ka  kineple  ki  cegau.  
NFUT-give  ACC  clothes  NOM  Kineple  OBL  Cegau  

‘Kineple gave clothes to Cegau.’  (Chen 2008:40)

The reanalysis is straightforward. The mechanisms involved are relabeling and pruning, as proposed by Whitman (2000). Because of the resemblance to monoclausal constructions, the nominalized verb is interpreted as the main verb. As a result, the nP in the relative clause is relabeled as vP.
Since the construction as a whole has been parsed as verbal and monoclausal, there is no longer any evidence for the DP and PredP layers, so these are pruned away, with the result that the AspP dominating vP will be directly selected by T. This clause will exhibit an ergative case-marking pattern, because the genitive-assigning functional head in the erstwhile relative clause is now the matrix v. As a former nominal category, this v also lacks the ability to license structural accusative case on the object. Consequently, the object will enter into an Agree relation with T and value nominative case in order to be licensed. In this way, the ergative v emerged in Proto-Nuclear Austronesian with precisely the properties expected in the analysis in (4).
Identifying a nominalized relative clause structure as the historical antecedent of the ergative clause type has the added advantage of providing an explanation for the extraction restriction observed above. Recall that the internal argument in a transitive clause can be the head of a relative clause, as in (53a), but not the external argument, as shown in (53b). A subject can only be extracted from an intransitive clause. (53c) is an antipassive, in which intransitive morphology appears on the verb and the object receives inherent genitive case rather than structural nominative. On the other hand, extraction of non-DPs is not subject to this constraint, as shown in (53d).
I propose that this locality restriction is a direct consequence of the properties of relativization in Austronesian languages. First consider Rukai, which is an accusative language. 

9 The linker appearing between the head NP and the modifying clause is spelled the same way as the genitive case marker. But the two differ in pronunciation, the linker pronounced as the velar nasal, and are not the same morpheme.

10 Interestingly, Puyuma and Tsou are ergative languages. Aldridge (in press) proposes a revision to Ross’ (2009) subgrouping hypothesis by positing an Ergative Austronesian subgroup as sister to Rukai and parent to Puyuma, Tsou, and Nuclear Austronesian. Rukai retains the accusative alignment of Proto-Austronesian. Ergativity was first innovated in irrealis clauses in Proto-Ergative Austronesian. This alignment is retained in irrealis clauses in the
and has not undergone the reanalysis of nominalizations as verbal clauses. In Rukai, relative clauses formed on subject position are finite CPs. This is evidenced by the fact that they contain the same tense markers as finite clauses. Data for the Tanan dialect of Rukai are taken from my field notes.

### Tanan Rukai

(54) a luða ay-k i la ku tina=li

tomorrow FUT-come NOM mother=1.SG.GEN

‘My mom will come tomorrow.’

b [kuaDa ay-suwasuwaw] ka muka-baru-barua

DEM FUT-clean TOP girl

‘The one who will clean is the girl.’

On the other hand, object relatives are nominalized with the suffix -ani, transcribed as –ane for the Budai dialect in the preceding discussion. But they do not carry tense marking. The prefix a- expresses imperfective aspect.

### Tanan Rukai

(55) w-aga=su sa aga sa [a-kan-i-an=i=ta ki maum]

PAST-cook=2.SG INDEF food INDEF IMPRV-eat-NMLZ=1.PL.INC  P night

‘Did you cook dinner (the food that we will eat tonight)?’

Nuclear-Austronesian languages. These languages have further reanalyzed nominalizations as ergative clauses in the realis paradigm.
The analysis I propose here accounts for the restrictions in both Tagalog and Rukai. The strict locality between DPs observed in the Tagalog examples in (53) suggests that the feature driving movement in the relative clause is a feature which specifically attracts DPs. I propose that this is an unvalued $\emptyset$-feature on the phase head at the edge of the relative clause.\footnote{See also Carstens (2005) and Henderson (2006, 2011) for other proposals that $\emptyset$-features can drive relative clause formation.} In a finite CP, the subject will enter into an Agree relation with the $\emptyset$-probe on the C/T complex and value its case feature. Since the languages under discussion are verb-initial, I assume that the subject does not generally raise to [Spec, TP]. However, in cases of A’-movement, the subject moves to [Spec, CP]. I assume that this movement takes place directly from the subject’s base position in vP, as per Ouali’s (2006) adaptation of Chomsky’s (2005, 2008) C-T inheritance proposal. Tense features are also retained on the C head. This accounts for the fact that subject relatives in Rukai can be formed on finite clauses and need not be nominalized. Extraction of the external argument in antipassives in Tagalog takes place in exactly the same way.

(56)  
```
    DP  
   /
  D   CP  
  /      
DP[CASE:NOM] C'       vP
  /       
 C       
  /     
<DP>      v'       
  /      
 v       VP
```
Relativization is not possible on object position in a full CP. If the object were to move to the edge of vP and consequently become visible to the $\phi$-probe on the C/T complex, the derivation would not result in an object relative clause, for two possible reasons. If the object’s $\phi$-features enter into an Agree relation with C/T, the object would move to [Spec, CP]. However, this would leave the subject’s case feature unvalued, and the derivation would crash. Alternatively, if we assume the Activity Condition of Chomsky (2001), then the object would not be visible to the probe on C/T, since its case feature has already been valued. The derivation would not crash, but the subject would still be the DP to move to [Spec, CP].

(57)

In order to extract an object over the subject, the competition for $\phi$-feature valuing must be eliminated. This is accomplished in a nominalization, since the subject is given inherent genitive case, and there is also no C/T layer. Rather, it is the nominalizer itself which creates the gap to form the relative clause. This probe undergoes Agree with the object and raises it to the edge of
This accounts for the fact that object extraction in Rukai requires a nominalization. Nuclear Austronesian languages like Tagalog have inherited this relativizing \( n \) as the transitive (ergative) \( \nu \), accounting for why internal arguments are extracted in transitive clauses.\(^{13}\)

\[
(58) \quad \begin{array}{c}
\text{DP} \\
D \quad \text{AspP} \\
\quad \text{Asp} \quad nP \\
\quad \text{DP}_{\text{OBJ}} \quad n' \\
\quad \text{DP}_{[\text{GEN}]} \quad n' \\
\quad n_{[\Phi_1]} \quad \sqrt{P} \\
\quad \sqrt{\text{<DP}_{\text{OBJ}>}} \\
\end{array}
\]

Since the probe driving the movement can only agree with a DP, non-DPs can dislocate freely, presumably motivated by focus. It should now be clear how nominalization enables object relativization by eliminating the competition to value \( \Phi \)-features on the relativizing functional.

\(^{12}\) I assume that the moving constituent in a relative clause is a null operator, which will not be spelled out with phonetic content, and that movement to the highest strong phase edge suffices to create a structure which can be interpreted as a lambda abstraction at the interface. But minimal revision could also accommodate a head raising approach by further moving the DP to a peripheral position.

\(^{13}\) This proposal entails that transitive \( \nu \) always raises an object to its outer specifier, which is a welcome consequence of this analysis. It is generally assumed that absolutive objects in Tagalog raise to the \( \nu P \) phase edge when the verb bears transitive morphology (Rackowski 2002, Aldridge 2004, Rackowski and Richards 2005) but is spelled out in its base position if it does not undergo further movement to [Spec, CP]. Raising of the object accounts not only for its ability to undergo A’-movement but also for its presuppositional, wide scope interpretation.
head. Interestingly, this DP locality restriction on A’-movement is widely observed in syntactically ergative languages, particularly those in which morphological ergativity arguably resulted from the reanalysis of a clausal nominalization. Recall from section X.4.1 that Inuit languages exhibit a syncretism between ergative and genitive case, and ergative clauses have been argued to be derivationally related to nominalizations. Mayan is another language family which has both the ergative/genitive case syncretism and the DP extraction restriction. The preceding proposal speaks to this correlation by tracing the source of ergativity to a nominalized relative clause in which the inherent case-marking on the transitive subject is a strategy for allowing the object to enter into an Agree relation with a higher functional head without intervention by the subject.

X.6. Conclusion

Ergative alignment can be characterized as involving one structural case, which appears on intransitive subjects and transitive objects, and one inherent case, which is assigned to transitive subjects. In this paper, I have summarized various accounts of the emergence of ergative alignment and shown that they are compatible with an analysis which traces the source of ergativity to an intransitive v which assigns inherent case to its specifier and does not structurally license an internal argument. I have further shown that the strict locality exhibited between DPs in syntactically ergative languages results when the diachronic source of ergativity is a nominalizing v which facilitates movement of an internal argument over an external argument in relative clause formation.
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