## Split Intransitivity in Ranmo

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Split intransitivity in Ranmo

A dissertation presented
by
Jenny Soyeon Lee

to
The Department of Linguistics
in partial fulfillment of the requirements
for the degree of
Doctor of Philosophy
in the subject of

Linguistics

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This dissertation brings novel data from Ranmo, an endangered Papuan language, to bear on the phenomenon of split intransitivity, the comparatively understudied type of split ergativity (cf. aspectual and person-based splits). Ranmo is spoken by approximately 300 people in Western Province, Papua New Guinea and belongs to the Morehead-Upper Maro River family. The point of departure for this dissertation is the observation that there are two classes of semantically one-place verbs, unaccusatives and middles, which show distinct patterns of agreement—an apparent case of split intransitivity.

I demonstrate, however, that this “split” is only an illusion: middles, which show a non-ergative pattern of agreement (i.e., S=A), are in fact syntactically transitive, having an NP (as opposed to φP) object that is coindexed with and bound by the φP external argument. This NP object requires a corresponding functional projection on the clausal spine, XP, which is sandwiched between VP and vP; this is essentially a new proposal for pseudo-noun incorporation (PNI) (cf. Massam 2001). Under this analysis, middle verbs—a semantically heterogeneous class encompassing reflexives/reciprocals, anticausatives, and agentives—are subsumed under PNI. When v probes, it cannot agree with the NP object (since it lacks
φ-features), resulting in the default spell out of object agreement, which is referred to as the ‘middle’ morpheme; this is an instance of agreement failure in the sense of Preminger (2009, 2011, 2014). No special rules of agreement are required to capture the non-ergative pattern of agreement in Ranmo; therefore, it is entirely ergative rather than split-ergative. This is a significant conclusion especially in light of recent findings showing that aspeclual and NP-based splits, too, are epiphenomenal, involving additional clausal structure in the non-ergative portions (Coon 2010, Coon and Preminger 2012).

I further propose that applicative constructions form the “other side of the PNI coin,” i.e., their direct object is also an NP, which requires the presence of a clausal correspondent, XP. I argue that the Person-Case Constraint (Bonet 1991, 1994) is evidence for the PNI analysis of applicatives, i.e., only 3rd-person arguments, which are structurally reduced compared to 1st/2nd-person arguments, are licensed in the NP direct object position of applicatives. It is simply that in applicatives, X has the additional function of introducing an applied argument in its specifier and assigning it a φ-role and inherent case.

Another major contribution of this dissertation is that it presents new evidence for the dependent theory of case assignment (Bittner and Hale 1996, Marantz 1991). On this view, case is assigned configurationally on the basis of the c-command relationships between noun phrases themselves; it is an alternative to the standard Chomskyan view that case is assigned as a reflex of agreement/Agree (Chomsky 2000, 2001). From both middle clauses and unaccusative applicative constructions in Ranmo, we have evidence of dependent case assignment: an argument receives ergative case only if it c-commands another noun phrase...
in the same domain. This also argues against the analysis of Ranmo ergative as inherent case assigned to agents by transitive $\nu$/Voice. New data like those of Ranmo urge us to adopt a more nuanced, perhaps parameterized, view of case/agreement relationship, i.e., whether case is assigned as a reflex of agreement/Agree is a point of cross-linguistic variation, not a universal absolute.
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\(^1\)Richard J. Foster’s *Prayer*, p. 14.
Dedicated to my parents.
Chapter 1

Introduction

1.1 Overview

This dissertation provides a theory of split intransitivity through the lens of Ranmo, a Papuan language with an ergative-absolutive system of case marking and an apparent split-ergative system of agreement. Split ergativity refers to a phenomenon in which a non-ergative \((S=A\neq O)^{1}\) pattern appears in certain grammatical constructions or environments in an otherwise ergative \((S=0\neq A)\) language.

Cross-linguistically, split ergativity is conditioned by one of the following three factors: (i) tense/aspect, (ii) nominal features, and (iii) the semantics of the main verb (Dixon 1979, 1994). The bulk of the split ergativity literature has focused on the first two types

\(^{1}\)These labels were first used by Dixon (1979) to refer to the primitive grammatical relations: \(A =\) transitive subject; \(O =\) transitive object; and \(S =\) intransitive subject.
(aspectual and NP-based splits), but Ranmo is an example of the last type; thus, this dissertation contributes a crucial piece toward a more comprehensive understanding of split ergativity. Specifically, in Ranmo, the subjects of one class of semantically one-place verbs—unaccusatives—pattern with transitive objects (O), while those of another class—middles—pattern with transitive subjects (A). Since the split is between two types of semantically one-place verbs, we may characterize this as a case of split intransitivity. And since this split is limited to the domain of agreement, I will often refer to it as **split-S agreement**.

Of course, it should come as no surprise to anyone that there are two classes of intransitive verbs in Ranmo. We are already familiar with the unergative-unaccusative distinction (Perlmutter 1978, Burzio 1986), and there are plenty of well-known syntactic tests that can be used to reveal this contrast in many languages, including cliticization, auxiliary-selection, impersonal constructions, linear order, sentence pronominalization, stranded prepositions, benefactive datives, inherent reflexives, reduced relativization, embedding under causatives, and get-passivization (Burzio 1981, Haegeman 1985, among others).

What is unique about Ranmo is that it makes the unergative-unaccusative distinction *via overt agreement*. Such languages are in fact relatively rare. Siewierska (2005) reports just 26 languages out of a sample of 380 (less than 7%) which show split intransitive behavior, i.e., the arguments of one type of intransitives (unergatives) are marked like transitive subjects while those of another type of intransitives (unaccusatives) are marked like transitive objects.² Compare them with English, which shows the same pattern of agreement for both

---

²This alignment type is even rarer in the domain of case, shown by only 4 out of 190 languages (a mere 2%). These languages are Basque, Georgian, Imonda, and Drehu (Comrie 2005).
unaccusatives and unergatives (John run-s, The hunter arrive-s). The typological rarity of split intransitivity explains why it is the least studied and most poorly understood of the three types of split ergativity, at least from a theoretical perspective.

So what is it about Ranmo that it should mark the two intransitive classes distinctly via agreement? The answer to this question will deepen our understanding of the nature of the unergative-unaccusative distinction in general—and the proposal I offer will provide important insights into the connection between a number of seemingly disparate construction types, including intransitives derived via object ”demotion” and applicative constructions, which involve object ”promotion.”

The domain of case marking in Ranmo is theoretically intriguing for at least two reasons. The first concerns the source of ergative case. The current literature is dominated by two views on this topic: either ergative is an inherent case assigned to thematic agents by transitive v (or Voice), or it is structurally assigned by T or v, making it essentially identical to nominative in all respects except morphology. On both these views, a particular functional head (transitive v or T) is directly responsible for assigning ergative case. However, we find that the distribution of ergative case in Ranmo is not what one would expect if a functional head was directly responsible for its assignment.

The second reason why (morphologically observable) case in Ranmo is important for syntactic theory is because it poses a challenge to the mainstream generative view that case is assigned as a reflex of agreement/Agree (Chomsky 2000, 2001). On this view, we expect to find a one-to-one correspondence between case and agreement (as we do between nominative
and finite T, for example). However, no such correspondences can be found in Ranmo. Instead, case is assigned configurationally, on the basis of the c-command relationships between noun phrases themselves. From both middle clauses and applicative constructions, we have evidence of dependent case assignment: an argument receives ergative only if it c-commands another noun phrase in the same case assignment (locality) domain. New data like these lead us to adopt a parameterized view of the relationship between case and agreement, i.e., whether case is a reflex of agreement/Agree is a point of cross-linguistic variation, not a universal absolute.

The major theoretical claims of this dissertation are summarized below.

(1) **Major theoretical claims of this dissertation**

a. **Split-S agreement** in Ranmo is only apparent; no special rules of agreement are required to capture the non-ergative pattern of agreement shown by middles. The “split” is an illusion which arises from middles taking a (null) NP (as opposed to \( \varphi P \)) as their object, combined with the possibility of agreement failure in the sense of Preminger (2009, 2011, 2014) in the object domain.

b. **Case and agreement** constitute two independent systems in Ranmo which do not interact with each other. Agreement proceeds in the usual manner (through the probe-goal relation in Chomsky’s Agree framework), but it does not result in case valuation; rather, case is assigned configurationally, following rules of dependent case assignment in Marantz (1991)’s sense.

The bulk of this dissertation will be devoted to the first issue, with the second issue being
addressed only in relation to the first.

1.1.1 The language

1.1.1.1 Language classification and geographic context

Ranmo is a Papuan (non-Austronesian) language spoken by approximately 300 people in the southwest extreme of the mainland of the country of Papua New Guinea (PNG), which forms the eastern half of the New Guinea island, situated in the southwest Pacific Ocean. Its western half comprises the two provinces of Indonesia, West Papua and Papua. Figure 1.1 is a map of the country showing its mainland and numerous offshore islands, which include New Ireland, New Britain, Manus and Bougainville.

Figure 1.1: Map of Papua New Guinea
Ranmo is currently listed as a “dialect” of Blafe (alternatively spelled Mblafe) by Ethnologue and is not assigned an ISO-code of its own. All the resources available online have been identified under Blafe’s ISO-code, \texttt{bfh}, by the Open Language Archives Community (OLAC).

Ranmo is spoken primarily in two villages in the Morehead District of Western Province, PNG—Yenthoroto\(^3\) and Menggeti (informally known as Korath or Koral). The vast majority of the approximately 300 Ranmo speakers reside in Yenthoroto.

Ranmo belongs to the Tonda subgroup of the Morehead and Upper Maro River family, which consists of about seventeen languages spoken throughout a region known as the Trans Fly\(^4\). The area spans from the Merauke district of Western Papua Province, Indonesia to the Morehead district of Western Province, PNG, and is bounded to the east by the Morehead and Maro rivers, to the south by the Torres Strait, and on the north and east by the Fly River (Evans 2012).

According to Gorden (2005), the Tonda subfamily consists of ten varieties (Ranmo, currently treated by Ethnologue as indistinct from Blafe for classification purposes, is excluded from this number). The other two subfamilies of the Morehead-Upper Maro family are Nambu and Yei, which include six languages and one, respectively. Since the name “Morehead-Upper Maro” actually excludes Nambu languages, which are spoken east of the

\(^3\)Alternative spellings are \textit{Indorodoro} and \textit{Indorodo}.

\(^4\)The Fly refers to the second largest river in Papua New Guinea, which flows mostly through the Western Province.
Morehead River, an alternative name has been suggested by Evans and his colleagues—the “Yam” family.

The selected languages of the three subgroups of the Morehead-Upper Maro family, along with other language families of the Trans Fly, are shown in Figure 1.2. Furthermore, Figure 1.3 locates the Morehead-Upper Maro family in relation to other language families in the island of New Guinea.

1.1.1.2 Sociolinguistic context

The map shown in Figure 1.3 zooms in on the Trans-Fly region of southwest Papua New Guinea. According to Evans (2012), this is “a zone with among the highest levels
of linguistic diversity in New Guinea, arguably only exceeded by those found in the Sepik and the north coast...contain[ing] more deep diversity than has hitherto been realised, with somewhere between five and eight unrelatable families taking in forty or so languages in an area about the size of the Netherlands” (p. 110).

This picture of linguistic diversity is further complicated by sociocultural factors such as multilingualism and language mixing. In particular, the widespread practice of sister exchange has contributed a great deal to language contact and multilingualism in the area. Sister exchange refers to the form of marriage involving a reciprocal exchange of spouses between two families. If a daughter from family A is being given in marriage to a son from group B, a daughter from group B is also expected to be given in marriage to a son in...
group A. This system allows families to “make up” for the loss of their daughters/sisters—indispensable for working family gardens—in a society where virilocal residence (living with or close to the husband’s kin) is promoted. Sister exchange is not practiced in all parts of Papua New Guinea, but is widespread in the Morehead region.

Since exchanged women often come from different villages speaking different languages, the custom results in multilingual households in which children speak the native language of their mother as well as the ambient language. Strong ties of intermarriage and multilingualism exist between communities that are linguistically unrelated, leading to a mixture of patterns of typological convergence and divergence (as a case in point, read Evans 2012’s discussion of Nen and Idi). For more details on the diversity of the languages of the region, in terms of their structures, sociolinguistic settings and historical and areal trajectories, refer to Evans (2009, 2012, 2015).

1.1.1.3 Documentation in progress

We have only begun to scratch the surface of the striking picture of diversity presented by the Moreheard-Maro languages; the precise level of linguistic variation in the area is not well-known. As Evans (2012) correctly points out, “our knowledge of virtually every language of the region is extremely basic, even by the standards of New Guinea in general, which is in its turn the least-documented part of the world linguistically” (p. 146). Indeed, until recently, virtually no documentation materials existed on these languages beyond just a few simple wordlists and unpublished grammatical sketches. The increasing influence of
English—the lingua franca among New Guineans in the Morehead region and the single medium of instruction in school beginning grade three—adds to the urgency of documenting the languages of the region.

In 2011, researchers at the Australian National University undertook the first systematic investigation of the languages of the region. This dissertation is a contribution to this larger areal project as it provides a focused study of Ranmo; it is also the first investigation of a language from this area in the generative framework. A grammar detailing the phonology and nominal and verbal morphology of Ranmo will appear separately in Lee (in prep) as an addendum to this work.

The ongoing efforts to document the languages of the Morehead-Upper Maro family are significant especially because Papuan languages are among the most underrepresented in the general linguistic literature. Our present understanding of Papuan languages has largely been shaped by (Foley, 1986)’s seminal work, *The Papuan Languages of New Guinea*, which is the most extensive survey of Papuan languages to date. While of extreme value to the linguistic community, this work has been predominantly based on the highlands languages of the Trans-New Guinea phylum, the largest and most extensively documented Papuan language group. In his work, while acknowledging that Papuan languages are typologically very varied, he identifies the following as “typical” traits of Papuan languages: a relatively simple phonology; a restricted inventory of verb roots; a preponderance of verb compounding or serialization; a morphological distinction in verb types according to inflectional possibilities; switch-reference (the morphological marking of whether or not the actor of a verb is the
same as that of the next verb); and the absence of true conjunctions.

While many Papuan languages do exhibit many or all of these characteristics, the emerging work on Ranmo and other Morehead-Maro languages, as well as other minority Papuan families, indicates that a much more varied and fine-grained characterization of Papuan languages is required.

Like many other Papuan languages, Ranmo is an agglutinative SOV head-final language with an ergative-absolutive alignment of case marking and a split ergative system of agreement. However, it shows a number of morphosyntactic properties which are absent in the languages of the Trans-New Guinea phylum, the largest and most extensively documented Papuan language family. Ranmo entirely lacks properties which have been considered to be “hallmarks of Papuan languages such as clause chaining, switch reference, and verb serialization. Moreover, it has a large open class of verb roots, makes extensive use of non-finite constructions including restructuring, ECM, and raising-to-object, and a preponderance of morphologically middle verbs which are related to their transitive counterparts via pseudo-noun incorporation (the central topic of this dissertation). Furthermore, Ranmo uses an extremely rare senary (base-six) numeral system, which is reported to have cultural underpinnings (e.g., the custom of ceremonial yam counting).
1.2 Split-S agreement in Ranmo

1.2.1 The context: split ergativity

Ergativity refers to a system of marking grammatical relations in which the sole subjects of intransitive clauses (S) and the objects of transitive clauses (O) (“absolutive”) share certain syntactic and morphological properties to the exclusion of the subjects of transitive clauses (A) (“ergative”). This pattern of alignment contrasts with the more familiar nominative-accusative alignment in which S and A pattern together to the exclusion of O.

(2) Two types of alignment

a. Ergative-absolutive: O=S≠A

b. Nominative-accusative: O≠S=A

It is well-known that languages often described as “ergative” are not entirely so. This is referred to as split ergativity, a phenomenon where an otherwise ergative language exhibits a non-ergative (“accusative”) pattern in certain grammatical environments. The following factors have been observed to condition split ergativity cross-linguistically.

(3) Factors conditioning split ergativity

a. The tense or aspect or mood of the clause (“aspectual split”)

b. The semantic nature of the core nominal arguments (“person split”)

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5There is a fourth trigger of split ergativity noted by Dixon (1994), namely whether the clause type is matrix or subordinate. I do not discuss this type of split as, Dixon himself notes, “closer consideration shows that this type of division can be related to tense/aspect-type and to NP-conditioned splits” (p. 101).
c. The semantic nature of the main verb ("split intransitivity")

The bulk of the generative literature on split ergativity has focused on the first two types (3a-b). Basque provides an example of an aspectual split. As shown in (4), there is a split in subject case marking between the non-progressive construction (4a) and the progressive construction (4b), with the latter receiving absolutive case instead of ergative case.

(4) **Basque**

a. **Non-progressive: ergative**

\[
\text{emakume-a-k} \quad \text{ogi-a} \quad \text{ja-ten} \\
\text{woman-DET-ERG} \quad \text{bread-DET} \quad \text{eat-IMPF}
\]

‘The woman eats (the) bread.’

b. **Progressive: "split"/non-ergative**

\[
\text{emakume-a} \quad \text{ogi-a} \quad \text{ja-ten} \quad \text{ari} \quad \text{da.} \\
\text{woman-DET} \quad \text{bread-ART.ABS} \quad \text{eat-IMPF-LOC} \quad \text{PROG} \quad \text{is}
\]

‘The woman is eating the bread.’

This is in conformity with the universal directionality of aspectual splits, schematized in (5).

(5) **Universal directionality of aspectual splits**

\[
\begin{array}{c c c c}
\text{ergative} & \text{perfective} & \text{imperfective} & \text{progressive} \\
\leftarrow & \gg & \gg & \rightarrow
\end{array}
\]

(Dixon 1979, 1994)

It is also well-known that NP-based splits universally follow the fixed directionality in (6).
In Mocho’ (Mayan) and Kham (Tibeto-Burman), for instance, the choice of ergative case marking on the subject is governed by whether the subject is local (1st/2nd-person) or non-local (3rd-person).

(7) Mocho’

a. 3rd-person: ergative
   maaqi-Ø
   go.up-3ABS
   ‘He went up.’

b. 1st/2nd person: “split”/non-ergative
   ii-maaqi
   1ERG-go.up
   ‘I went up.’

1.2.2 The third type: split intransitivity

Comparatively less studied is the third type (3c) whereby intransitive verbs show a split on the basis of their semantics. This is variably referred to as “split intransitivity,” “split-S marking,” and the “active-inactive system.” The usual description for this type of split is that intransitive subjects (S) pattern with either transitive subjects (A) or transitive objects (O) depending on the semantics of the verb. While the precise semantic basis of the $S_a/S_o$ distinction varies from language to language, this split often seems to be sensitive to the semantic category of voluntary control: S can be semantically similar to A (in exerting control over the activity) or to O (in being affected by the activity).
For example, in the Siouan language Mandan, the $S_a/S_o$ distinction is said to reflect an ‘active’ vs. ‘neutral’ (=inactive) contrast (Kennard 1936). The active class includes verbs which occur with subjective prefixes and denote activities which are likely to be controlled (e.g., break camp, enter, arrive, think it over, go) (8). The neutral/inactive class includes verbs which take objective prefixes and denote non-controlled events (e.g., fall, hang, be lost, lose balance), as well as verbs corresponding to adjectival meanings in other languages (e.g., be alive, be strong, be brave) (9).

(8) Mandan active verbs (Kennard 1936:9)

a. \textit{wa’-xkah-oc} I-break.camp-PRES ‘I broke camp’
b. \textit{da-ro’pxe-ktoc} you-enter-FUT ‘you will enter’
c. \textit{nu-ne’h-oc} we-go-PRES ‘we go’

(9) Mandan neutral (inactive) verbs

a. o<\textit{ma’}>ptik-soc <I>fall-PRET ‘I fell’
b. \textit{mi’-mahap-oc} I-be.lost-PRES ‘I am lost’
c. \textit{ni-xara’k-init-oc} you-brave-2PL-PRES ‘y’all are brave’

Ranmo is similar to Mandan in that its one-place verbs are divided into two classes on the basis of their agreement pattern. The difference is even more stark than in Mandan because the two patterns of agreement show a positional difference as well. The first class takes an objective (O) prefix, the same marking used to cross-reference the object of a transitive verb, and will be referred to as \textbf{unaccusatives} (10a). This class includes all stative positional
verbs (up to around twenty) and just a few eventive verbs like arrive, sleep/dream, go, and be (10a). All other semantically one-place verbs are expressed as morphologically middles, which shift out of the ergative(-absolutive) alignment in taking a subjective (S) suffix, the same marking used to cross-reference the subject of a transitive verb. This class is semantically heterogeneous, encompassing reflexives/reciprocals (wash, kill self), anticausatives (break, tear), and agentives (fly, run) (10b). Transitives are characterized by both O and S agreement (10c).

(10)  

a. **Unaccusative: Ergative**

\[
\begin{align*}
\text{Ni} & \quad \text{nng-f-lorar.} & (>\text{nngèflorar}) \\
\text{nsg.ABS} & \quad \text{nsgO}, \beta & \text{-NON.FUT-arrive} \\
\end{align*}
\]

'We arrived.'

b. **Middle: "Split"/Non-ergative**

\[
\begin{align*}
\text{Thingo} & \quad \text{ng-a-lèfen-ai.} & (>\text{ngalfèni}) \\
\text{bird} & \quad \text{m.α-A-fly-2/3nsgS} \\
\end{align*}
\]

'(The) birds are flying.'

c. **Transitive**

\[
\begin{align*}
\text{Ninta} & \quad \text{mam s-f-yikan-e} & \text{mèngg-fa.} & (>\text{sefikane}) \\
\text{nsg.ERG} & \quad \text{fish} & \text{3sgmO}, \beta & \text{-NON.FUT-carry-nsgS house-ALL} \\
\end{align*}
\]

'We carried the fish to the house.'

In terms of case marking, however, both middles and unaccusatives are ergative-patterning, i.e., their subjects are absolutive case-marked just like the objects of transitive verbs.
Moreover, it is important to observe that agreement is not the only feature that distinguishes middles from unaccusatives. Middles also have additional prefixal morphology, the \textit{a-} prefix and the middle (\textit{M}) prefix. A proper analysis of these morphemes will be essential to understanding the nature of split-S agreement in Ranmo. In a nutshell, I propose that the \textbf{\textit{a- prefix}} spells out the head of a functional projection which is required for pseudo-noun incorporation (i.e., NP objecthood). That is to say, middle verbs are, contrary to what their semantics suggests, syntactically transitive, having an active object position that is filled by an NP (as opposed to a \(\varphi\)P). This NP is coindexed with and bound by the external argument of middle clauses, which derives their intransitive meaning. The \textit{appearance} of the non-ergative pattern of agreement arises because the object in middle clauses is an NP, which lacks \(\varphi\)-features and therefore cannot serve as a goal for object agreement. This has the immediate consequence of accounting for the \textbf{\textit{middle (M) prefix}}:it is the morphological realization of failed object agreement in the sense of Preminger (2009, 2011, 2014).

What this means is that split-S agreement arises from \textit{structural} differences between the two classes. No special rules of agreement are required to capture the non-ergative/“split” pattern of agreement exhibited by Ranmo middles.

\subsection*{1.2.3 Morphological syncretism between middles and applicatives}

The transitive PNI analysis of middles has the important consequence of providing a principled explanation for an otherwise surprising instance of morphological syncretism between middles and applicatives. The same \textit{a-} prefix obligatorily present in middles also appears
in applicative constructions (11b), which introduce a non-core argument. This morpheme is absent in the transitive variant (11c).

(11) a. MIDDLE

Ndótar t-a-rèfunt-∅. (＞tarfunt)
door m.α-“DT”6-open.rst-sgS
‘A/the door opened.’

b. APPLICATIVE

Kèn Jon-an ndótar s-a-rèfunt-∅. (＞sarfunt)
lsg.erg Jon-dat door 3sgm.γ-“APPL”-open.rst-sgS
‘I opened a/the door for Jon.’

c. TRANSITIVE

Kèn ndótar s-rèfunt-∅. (＞sèrfunt)
lsg.erg door 3sgm.γ-open.rst-sgS
‘I opened a/the door.’

I argue that applicative constructions form the “other side of the PNI coin,” i.e., their direct object is also an NP, which requires the presence of a clausal correspondent, XP. This NP cannot be an anaphor as in middles because in applicatives, X projects an applied argument in its specifier, whose presence would rule out binding between the external argument and the NP object. Rather, the NP must be some non-referential object or a 3rd-person argument, which is still structurally reduced relative to 1st/2nd-person arguments. This derives the Person-Case Constraint (Bonet 1991, 1994).

6Derived Intransitive.
1.3 Case in Ranmo

1.3.1 Ergativity in the domain of case

While all middle verbs invariably show a non-ergative pattern of agreement, they exhibit more varied behavior with respect to case marking. The vast majority of middle clauses are characterized by an ergative pattern of case marking, i.e., their sole arguments bear absolutive case, as we saw in (10b) and (11a). But this neat picture of ergativity in the domain of case is complicated by a small number of morphologically middle verbs which can take an object-like nominal, as in (12). In these examples, the subject receives ergative case marking.

(12) a. Kën barnta ban ng-a-rik-∅.
    1sg.ERG drum sound M.α-A-hear-sgS
    ‘I hear the sound of drums.’

b. Kën kom ng-a-yuna-∅.
    1sg.ERG water M.α-A-drink-sgS
    ‘I am drinking (the) water.’

To complicate matters, there are some unaccusative verbs which can take two internal arguments—so-called “complex unaccusatives” (see section 5.3.2). In these constructions, the higher of the two arguments, which controls agreement, is ergative case-marked.

(13) Gidion-o wel ban s-a-ran.
    Gidion-ERG fart 3sgmO.γ-A-emit
    ‘Gidion farted.’

Examples like these are crucial to understanding the nature of case assignment in Ranmo
(and cross-linguistic variation in case assignment generally). In particular, they rule out the possibility of ergative case being an inherent case assigned by transitive v/Voice (contra Woolford 1997, 2006; Aldridge 2008, 2012; Mahajan 1989, 2012, among others). This is because all middle verbs invariably contain a Voice head (the presumed source of inherent ergative case), but it is only in the presence of a non-anaphoric object that ergative is assigned to the middle subject. Similarly, ergative case can even be assigned in unaccusatives, which are defined by the absence of a Voice projection—as long as there are two, not one, (internal) arguments.

It appears that ergative case marking is contingent on there being two noun phrases (within some well-defined locality domain) rather than on the presence of a designated functional head per se. This means that Ranmo case assignment follows configurational rules of dependent case assignment (Bittner and Hale 1996, Marantz 1991, Yip et al. 1987). The theory of dependent case was proposed as an alternative to the standard Chomskyan view that case is assigned by designated functional heads to the closest noun phrase via agreement/Agree (Chomsky 2000, 2001).

1.3.2 The original idea: nominative case and subject agreement

In the generative literature, the single most prominent view of case and agreement has been that all structural case is assigned by designated functional heads under a relationship of agreement. The clearest motivation for this view is the one-to-one correspondence we find between a finite verb (specifically, finite T/Infl) and nominative case in Indo-European
languages and many typologically unrelated others. In English, Sakha (Turkic), and Latvian, for example, the subject that bears nominative case obligatorily controls subject agreement on the finite verb (14).

(14)  
   a. **John** own-s a restaurant.
   
   b. **SAKHA**
   
      Min kel-li-m.
      I.NOM come-PAST-1sS
      ‘I came.’ (Vinokurova 2005:285)

   c. **LATVIAN**
   
      Bērn-s zīmē veikal-u.
      child-NOM draw.3sg.PRES store-ACC
      ‘The child is drawing a store.’ (Polinsky and Preminger 2014:157)

In environments where there is no agreement on T, as in infinitival clauses, there is also no nominative case. Either PRO must appear instead, controlled by the matrix subject (15a), or an overt prepositional complementizer that assigns accusative case is required (15b).

(15)  
   a. John wanted [PRO to buy the restaurant].
   
   b. [For him/*he buy the restaurant] was unlikely.

Similarly, it is also well-known that in so-called quirky subject languages like Icelandic, the finite verb will agree with the subject only if it is nominative case-marked, as in (16a), but not if it is dative case-marked, as in (16b). When the subject is dative, the finite verb agrees with the nominative object.
Within the minimalist framework, the correspondence between nominative case and subject agreement is implemented as follows. Syntactic elements can enter the derivation with features that are either interpretable or uninterpretable. Interpretable features are lexically valued features which are legible to the interfaces, while uninterpretable features (uFs) cannot be interpreted at the interfaces and therefore must be eliminated before they reach the end of the derivation; otherwise, the derivation will not converge, resulting in ungrammaticality (it will “crash”).

Fortunately, there is a way to render uFs interpretable, and that is via the syntactic operation Agree, which is implemented as a probe-goal relation involving feature checking and valuation in Chomsky (2000, 2001). It proceeds as follows: There is a functional head $F$ with a set of uninterpretable $\varphi$-features which are unvalued (the probe). The probe searches its $c$-command domain for a noun phrase which contains a matching set of valued $\varphi$-features (the goal). Once it has successfully located a goal to value its uninterpretable features, an Agree relation is established between the two. This results in morphological agreement where the $\varphi$-features of the noun phrase are spelled out as agreement affixes on the verb.

Importantly, when this happens, case is assigned to the noun phrase, which is assumed
to enter the derivation with an uninterpretable case feature (uCase). Under Agree, this feature gets checked and valued. This is essentially recasting of the Case Filter, originally formulated as (17). It can be seen as a subcase of the general requirement that all unvalued features be valued.\footnote{But see Levin (2015), who argues that \[uF\] can survive the derivation. The presence of unvalued features at the interfaces does not, in general, cause syntactic derivations to crash (Preminger 2009, 2011, 2014).}

(17) **Case Filter** (Chomsky and Lasnik 1977; Vergnaud 1977/2008)

Every lexical noun phrase must be assigned Case.

The assignment version of Agree is stated in (18).

(18) **Agree**

An Agree relation holds between a functional head \(F\) (probe) and a noun phrase \(\alpha\) (goal) in its c-command domain if and only if the \(\varphi\)-features of \(\alpha\) value the uninterpretable \(\varphi\)-features of \(F\) and \(F\) values the case feature of \(\alpha\).

In the minimalist framework, therefore, case and agreement are manifestations of the same syntactic relation (Agree)—“two sides of the same coin.” This would, of course, very naturally capture the tight relationship that exists between subject agreement and nominative case in a great many languages, the distribution of nominative case being the most classic illustration.

More recently, however, it has become more clear that the tight relationship that has been posited between case and agreement in many languages is not as evident in perhaps the better half of the world’s languages. Baker (2015) is the most recent and thorough
exposition dealing with this problem (in which some twenty typologically unrelated non-
Indo-European languages are examined in depth)\textsuperscript{8}, and concludes that the case/agreement
correspondence should be understood a \textit{parameterized} property, not a universal one, i.e., one
that holds in some linguistic systems but not in others. This means that agreement is just
one mode of structural case assignment in natural languages; there must be others.

1.3.3 Severing case and agreement

Before discussing what other mode of case assignment might be present/necessary in
natural languages, I briefly outline the grounds on which it has been argued that case must be
dissociated from agreement. Baker (2015) discusses four reasons for dissociating (structural)
case and agreement.

\begin{equation}
\text{Grounds for dissociating case and agreement} \quad \text{(Baker 2015:34-47)}
\end{equation}

a. Case in languages with no evidence of agreement

b. Issues with accusative case and object agreement

c. Issues with ergative case marking

d. The robustness of case across different clausal domains

1.3.3.1 Case in languages with no evidence of agreement

One reason why agreement might not be the only source of structural case is simply
because there are case-marking languages which lack any evidence of agreement, so-called

\textsuperscript{8}See also Baker (2010b, 2012).
dependent-marking (vs. head-marking) languages in the sense of Nichols (1986). For example, Korean has overt nominative and accusative case marking, but no overt $\varphi$-agreement, as in (20).

(20) **Korean**

\[
\begin{align*}
\text{John-i} & \quad \text{Mary-lul} \quad \text{po-ass-ta.} \\
\text{John-NOM} & \quad \text{Mary-ACC} \quad \text{see-PST-DECL}
\end{align*}
\]

‘John saw Mary.’

One might argue that there is in fact agreement in the syntax, but that it is simply not realized at PF. In that case, nominative case is assigned as a result of syntactic agreement at T. Such a view cannot entirely be ruled out, but it does rest on a fair amount of abstractness.

A more serious reason to consider the alternative view (that there is no agreement) is that there are languages in which a number of syntactic phenomena can only be explained if one posits there is no syntactic agreement. Kuroda (1988), for example, proposes that the absence of (forced) agreement is what makes multiple subject constructions, scrambling/free word order, wh-in-situ, and so on possible in Japanese.

**1.3.3.2 Object agreement and case marking**

Even if we accept the view that nominative case is assigned under agreement with T, it is far from clear that other structural cases are also assigned in this way. The issue of the relationship between case and agreement has mostly been discussed in the context of
subject agreement. If the theory is to be sufficiently general, we would want to see a similar correspondence between objective case (absolutive or accusative) and object agreement.

However, such a correspondence is hard to establish. This is not only because there are many languages which simply lack object agreement.\textsuperscript{9} Even in those languages which do have overt object agreement (in addition to subject agreement)\textsuperscript{10} as well as overt case marking\textsuperscript{11}, the two do not show the kind of tight relationship exhibited between nominative case and subject agreement.

Consider Amharic, a Semitic language spoken in Ethiopia, which allows object agreement with definite objects which are accusative case-marked (21b), but not with indefinite objects which are not accusative case-marked.

\begin{align*}
(21) & \quad \text{a. Amharic} \\
& \quad \text{Lemma \ wiffa \ j-aj-al.} \quad (*j-aj-\omega-w-al) \\
& \quad \text{Lemma dog \ 3mS-see-aux(3mS) 3mS-see-3mO-aux(3mS)} \\
& \quad \text{‘Lemma sees a dog.’} \\
& \quad \text{b. \ Lemma \ wiffa-w-\textbf{in} \ j-aj-\omega-w-al.} \\
& \quad \text{Lemma dog-DEF-ACC 3mS-see-3mO-aux(3mS)} \\
& \quad \text{‘Lemma sees the dog.’} \\
& \quad \text{(Baker 2012:257)}
\end{align*}

\textsuperscript{9}Languages without overt object agreement include Latin, Greek, German, Russian, Barasano, Brahui, Evenki, Finnish, Fur, Hebrew (Modern), Iraqw, Kannada, Khasi, Nenets, Dubian (Dongolese), Tamil, Turkish, Urubú-Kaapor, and Yukaghir (Kolyma), as reported in Baker (2015:35).

\textsuperscript{10}It is well-known in the typological literature that object agreement implies subject agreement (Croft 1990, Moravcsik 1974, Siewierska 1999).

\textsuperscript{11}Such languages constitute only 13 out of a sample of 188 languages (7\%) in Comrie (2005). They include: Cahuilla, Comanche, Greek, Guarani, Hungarian, Kamuri, Koasati, Kunama, Mangarayi, Miwok, Persian, Quechua, and Spanish. Note that the object-referencing marker on the verb in some of these languages (like Spanish and Greek) is probably a clitic, not true agreement.
(21) can be taken as prima facie evidence that there is a correspondence between accusative case and object agreement parallel to that observed between nominative case and subject agreement. However, this generalization is quickly falsified. First, it turns out that object agreement is only optional in Amharic; (21b) can alternatively be expressed as in (22).

(22) Lemma wiffa-w-in  j-aj-al.
     Lemma dog-DEF-ACC 3mS-see-AUX(3mS)
     ‘Lemma sees the dog.’  (Baker 2012:257)

Second, for some classes of nominals which are obligatorily accusative case-marked, object agreement is in fact prohibited. They include expressions that are not fully or canonically referential, such as quantifiers and negative polarity items (23a-b), as well as interrogative DPs and reflexive anaphors (23c-d).

(23)  a. UNIVERSAL QUANTIFIER

     Lemma sω-w-n  hullu gabbaz-ə.
     Lemma person-DEF-ACC every invite-3mS
     ‘Lemma invited everyone.’

b. NEGATIVE POLARITY ITEM

     Lemma mann-in-im  al-ajj-ə-m.
     Lemma who-ACC-FOC NEG-see-3mS-FOC
     ‘Lemma didn’t see anyone.’

c. INTERROGATIVE DP

     Mann-in ajj-if?  (??ajj-if-əw)
     who-ACC see-2fS  see-2fS-3mO

27
‘Who did you (feminine) see?’

d. **REFLEXIVE ANAPHOR**

\[
\begin{align*}
\text{Lemma ras-u-n} & \quad \text{goddɔl-ɔ.} & (*\text{goddɔl-ɔ-w}) \\
\text{Lemma self-3mP-ACC kill-3mS} & \quad \text{kill-3mS-3mO}
\end{align*}
\]

‘Lemma killed himself.’ (Baker 2012:257-258)

Finally, theme arguments in double object constructions fail to trigger object agreement despite being accusative case-marked. Only the goal or source argument\(^\text{12}\), which is also accusative case-marked, can show object agreement.

**DOUBLE OBJECT CONSTRUCTIONS**

\[
\begin{align*}
a. \quad \text{Lemma Aster-in} & \quad \text{his’an-u-n} & \quad \text{asaj-at.} & (*\text{asaj-ɔ-w}) \\
\text{Lemma Aster-ACC baby-DEF-ACC show-(3mS)-3fO} & \quad (*\text{asaj-ɔ-w}) \\
\text{‘Lemma showed Aster the baby.’}
\end{align*}
\]

\[
\begin{align*}
b. \quad \text{Lemma Aster-in} & \quad \text{gonzəb-u-n} & \quad \text{sorrək’-at.} \\
\text{Lemma Aster-ACC money-DEF-ACC rob-(3mS)-3fO} & \quad (*\text{sorrək’-ɔ-w, *sorrək’-at-ɔw}) \\
\text{rob-3mS-3mO, rob-(3mS)-3fO-3mO} \\
\text{‘Lemma robbed Aster of the money.’} & \quad \text{(Baker 2012:258)}
\end{align*}
\]

Conversely, there are also situations in which the verb shows object agreement with a DP that does not bear accusative case. For example, in double object constructions, a dative case-marked goal object (but not a source object) can show agreement with the verb.

\[
\begin{align*}
(25) \quad \text{Lemma l-Almaz} & \quad \text{mos’haf-u-n} & \quad \text{sət’t-’at.} & (*\text{sət’t-’ɔ-w}) \\
\text{Lemma DAT-Almaz book-DEF-ACC give-(3mS)-3fO} & \quad \text{give-3mS-3mO}
\end{align*}
\]

‘Lemma gave the book to Almaz.’ (Baker 2012:258)

\(^{12}\text{Aster and Almaz (the latter in (25) and (26a)) are female names.}\)
It is also possible for a verb to show object agreement with a DP in nominative (unmarked) case, as exemplified by verbal predicates that have an experiencer or possessor argument.

(26)  

<table>
<thead>
<tr>
<th>a.</th>
<th>Almaz rab-at.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Almaz hunger-(3mS)-3fO Almaz-ACC</td>
</tr>
</tbody>
</table>

‘Almaz is hungry.’

<table>
<thead>
<tr>
<th>b.</th>
<th>Aster wifsa all-at.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Aster dog exist-(3mS)-3fO Aster-ACC</td>
</tr>
</tbody>
</table>

‘Aster has a dog. (lit. ‘A dog exists to/for Aster.’)’ (Baker 2012:259)

These data strongly suggest that the tight theoretical relationship posited between case and agreement cannot readily be extended to the object domain. As illustrated by Amharic, object agreement can be associated with a range of case markings, including accusative, dative, and nominative. Conversely, there are situations in which noun phrases fail to trigger object agreement despite having the “appropriate” case marking (accusative). Therefore, accusative case and object agreement are not morphological manifestations of the same abstract relation in Amharic.

1.3.3.3 Ergative case marking

Ergative languages/patterns present additional opportunities to observe case-agreement mismatches because the subject is associated with two distinct case markings. In Kewa (Papuan) and Burushaski (isolate, Pakistan), for example, the transitive and intransitive subjects show ergative and absolutive case marking, respectively, yet the verb shows the
same kind of agreement with both.

(27) Kewa

   I       house-in sit-1sS
   ‘I sat in the house.’

b. Né-mé irikai tá-wa.
   1-ERG dog   hit-1sS
   ‘I hit the dog.’

(28) Burushaski

a. Dasín há-e le hurút-umo.
   girl.ABS house-OBL in sit-PAST.3fS
   ‘The girl sat in the house.’

b. Hilés-e dasin mu-yeéts-imi.
   boy-ERG girl.ABS 3fO-see-PAST.3sS
   ‘The boy saw the girl.’

These data would be consistent with the view that ergative is in fact not a structural case, but an inherent case, which is assigned to an argument in its merged position where its thematic interpretation is determined, i.e., where a θ-role is assigned (Hale and Keyser 1993; Chomsky 2000, 2001)). Since ergative is associated with an agent θ-role, it is assumed to be assigned by transitive v/Voice (Woolford 1997, 2006; Aldridge 2008, 2012; Mahajan 1989, 2012, etc.). If ergative is an inherent case, then it is assigned as a reflex of θ-role assignment and need not be contingent on agreement.

This is not to say that the structural view of ergative should or can be abandoned entirely. Rezac et al. (2014) argue for the structural character of Basque ergativity based on
the following properties\textsuperscript{13}: (i) external arguments lose ergativity due to a defective T-system and gain absolutivity through ECM and (ii) in raising structures, internal arguments gain ergativity via Agree with and Move to T, alternating with absolutivity if these relations are blocked. Ergativity in Basque is thus not a property of the thematic vP system, but of the T-system.

As shown in (29a), there is no ergative case on transitive subjects in the gerund complements of perception verbs. These complements project the external argument in a thematically complete vP, but have a defective T-system. This leaves the transitive subject absolutive through ECM by the perception verb; this contrasts with a finite complement in which the subject is ergative case-marked, as in (29b).

(29) Basque: clausal complements of ECM perception verbs

a. Gerund complement

\textbf{Katu-ak} sagu-ak harrapa-tzen ikusi ditut.
cat-d.pA mouse-d.pA catch-ing seen aux.3pA.1sE

‘I saw the cats catch the mice.’

(Rezac et al. 2014:1280)

b. Finite complement

\textbf{Katu-ek} sagu-ak harrapa-tu/harrapa-tzen dituzte-la ikusi
cat-d.pE mouse-d.pA caught/catch-ing aux.3pA.3pE-that seen
dut.
aux.1sE

‘I saw that the cats caught/were catching the mice.’

\textsuperscript{13}See also Pittman (2006) where it is argued that Inuktitut ergative is a structural case assigned by CP-TP.
Another argument for the structural character of Basque ergativity comes from raising structures in which internal arguments gain ergativity by movement to T.

(30) **Basque: Ergative-absolutive alternations in unaccusative infinitives**

+ behar ‘must’

a. Museo-AK geratu-ko dira.
   museum-d.pA remain-FUT AUX.3pA
   ‘Museums [in general] will remain; there will remain museums.’

b. Museo-**EK/AK** geratu behar dute kultur ondarea ez galtzeko.
   museum-d.p**E/d.pA** remain must AUX.3pE culture heritage not to.be.lost
   ERG: ‘Museums [in general] must remain in order for cultural heritage not to be lost.’
   ABS: ‘There must remain (some) museums in order for cultural heritage not to be lost.’ (Rezac et al. 2014:1299)

These data do speak in favor of the structural character of Basque ergativity; however, I know of no other languages which show similar properties. I agree with the authors that ergative alignment is a heterogeneous phenomenon with both structural and inherent sources, but I doubt that when the source is structural, it is (generally) the T head. There may be another structural source of ergative case that is more pervasive across languages.

1.3.3.4 Case in nonfinite or reduced clauses

Reduced clauses such as infinitivals and participials present another opportunity to observe case-agreement mismatches because they often lack the functional category that is assumed to assign structural case. A simple illustration of this is the English non-finite clause, which has a defective T or lacks T entirely.

(31) a. John wanted [PRO to buy the restaurant].

b. [For him/*he buy the restaurant] was unlikely.
However, there are plenty of cases in which the case patterns in a non-finite or reduced clause are completely unaffected by the lack of certain functional categories. Burushaski infinitives lack subject agreement, but license overt subjects all the same. When the infinitive clause is intransitive, the subject is absolutive; when it is transitive, the subject is ergative, just as in finite clauses.

   1s-ERG 2s.ABS go-INF-OBL to want 3sO-do-NONPAST-1sS.PRES
   ‘I want you to go.’

   b. Gú-e [hir-e in mu-del-as-e ] r rái
   woman-ERG man-ERG 3s.ABS 3fO-hit-INF-OBL to want
   a-é-t-c-ubo.
   NEG-3sO-do-NONPAST-3fS.PRES
   ‘The woman doesn’t want the man to hit her.’ (Willson 1996:30-31)

Examples like (32) are seriously problematic for any theory that purports that ergative or absolutive case assignment depends on the presence of, say, finite T. There are many other languages which behave like Burushaski, including Shipibo, Chukchi, Greenlandic Inuit, and Ingush.

1.3.4 The alternative: dependent case

The arguments presented in the previous section strongly suggest that case is not always assigned under agreement/Agree, as predicted by (18). There must then be another source of case assignment. Enter configurational case assignment (Marantz 1991, Bittner and Hale 1996, Yip et al. 1987). On this approach, case is assigned on the basis of the relationship
between noun phrases themselves (within some well-defined locality domain), as opposed to the relationship between a noun phrase and a functional head, as in Agree. The most distinctive feature of this approach is the notion of dependent case, which assigned to an argument only in the presence of another (which itself gets unmarked case). This is not to say that functional heads are completely irrelevant in dependent case assignment. While they do not directly assign (structural) case, they are still necessary insofar as they define domains of case assignment. This will be discussed further in chapters 3 and 4.

The immediate attraction of the configurational approach, of course, is that since case assignment does not rely on the presence of a functional head per se, it is logically independent of agreement. This would circumvent the problems of case/agreement “mismatches” discussed in the previous section.

As we will see, Ranmo is a language in which there is no observable correspondence between case and agreement and therefore requires a configurational approach. In addition to the two domains of case assignment posited by Baker (2015), VP and TP, I also introduce a new case assignment domain, XP, which is projected between VP and vP. Each of these domains is associated with its own set of dependent and unmarked case, shown below.

<table>
<thead>
<tr>
<th></th>
<th>Dependent</th>
<th>Unmarked</th>
</tr>
</thead>
<tbody>
<tr>
<td>TP</td>
<td>Ergative</td>
<td>Absolutive</td>
</tr>
<tr>
<td>VP</td>
<td>N/A</td>
<td>Absolutive</td>
</tr>
<tr>
<td>XP</td>
<td>Ergative</td>
<td>Accusative</td>
</tr>
</tbody>
</table>

Table 1.1: Case domains and their structural cases
1.4 Outline of the dissertation

The remaining chapters of this dissertation are organized as follows. In chapter 2, I begin by illustrating the properties of the three basic predicate types in Ranmo—transitives, unaccusatives, and middles. The last two show a split in terms of agreement, with the subjects of middles patterning with transitive subjects instead of objects—an apparent instance of split intransitivity. The rest of the dissertation is devoted to showing that in fact Ranmo is an entirely ergative language.

An important aspect of Ranmo agreement is that it seems to be independent of (morphological) case. This is contra the standard Chomskyan view that the two are morphological realizations of the same syntactic operation Agree (Chomsky 2000, 2001). In chapter 3, I present a number of case-agreement mismatches in Ranmo which motivate a configurational approach to case assignment in Marantz (1991)’s sense. Two main ingredients of the proposal are as follows. First, there are two case assignment domains, VP and TP, which are spell out domains in the sense of Chomsky’s (2000, 2001) phase theory. Second, the Ranmo v phase head is posited to be “soft,” which allows the contents of its VP complement to be visible for dependent (ergative) case assignment at the spell out of TP. This is able to capture the full distribution of ergative and absolutive case in simple transitive and unaccusative clauses (the ergative side of the “split”).

In chapter 4, I demonstrate that split-S agreement in Ranmo is only an illusion: middles, which show a non-ergative pattern of agreement (i.e., S=A), are in fact syntactically transitive, having an NP (as opposed to ϕP) object that is coindexed with and bound by
the $\varphi P$ external argument. This NP object requires a corresponding functional projection on the clausal spine, XP, which is sandwiched between VP and $vP$; this is essentially a new proposal for pseudo-noun incorporation (PNI) (cf. Massam 2001). This preserves the original intuition that PNI/NP objects are more deeply embedded than $\varphi P$ objects without requiring that a $\varphi P$/DP internal argument to undergo object shift to a feature-checking position (Massam 2001). This alternative analysis of PNI seems to be required because there are languages without independent evidence for object shift which nevertheless exhibit PNI properties (Ranmo is a case in point).

Under this analysis, middle verbs—a semantically heterogeneous class of reflexives/reciprocals, anticausatives, and agentives—are subsumed under PNI. When $v$ probes, it cannot agree with the NP object (since it lacks $\varphi$-features), resulting in the default spell out of object agreement, the ‘middle’ morpheme; this is an instance of agreement failure in the sense of Preminger (2009, 2011, 2014). No special rules of agreement are required to capture agreement in middles; therefore, Ranmo is entirely ergative.

**Chapter 5** argues that applicative constructions are another instance of PNI, differing minimally from middle verbs in that their X head is “thematic,” able to introduce an applied argument in its specifier. This accounts for an otherwise surprising instance of morphological syncretism between (valency-\textit{decreasing}) middle constructions and (valency-\textit{increasing}) applicative constructions.

Finally, **chapter 6** concludes with a summary of the major findings of the dissertation and a discussion of directions for future research.
1.5 A note on methodology

This dissertation is based on original fieldwork conducted over the period between October 2013 and August 2014. A total of three non-continuous months were spent in the village collecting data, which were interspersed with another three analyzing, digitizing, and annotating them outside the village.

While the work presented in the remainder of this dissertation is theoretical in nature, the data on which it is based is drawn entirely from a corpus of primary data, i.e., audio files and their derived items including transcripts and texts, which were created for the tasks of language documentation and description. A handful of examples in this dissertation are drawn from short stories and songs or utterances produced in natural speech settings. The vast majority of examples come from structured elicitation sessions, during which time I would ask Ranmo speakers to do any of the following:

(33) **Elicitation methods**

a. Translate from English to Ranmo (or vice versa).

b. Describe pictures intended to probe specific aspects of Ranmo grammar (e.g., positional verbs and imperatives).

c. Ask whether they would accept sentence X (usually constructed by me) and if they wouldn’t, what is the “correct” way to say it.

Since the primary purpose of data collection was documentation and description, the approach I took, at least initially, was almost entirely bottom-up. That is, the primary data
were taken as the starting point of even the theoretical aspects of my research. This meant that my elicitation methods and choices regarding what to elicit were not initially guided by any specific predefined theoretical problems or research questions. I simply turned an attentive ear to what the data were trying to tell me about the language, and trusted that in due course, they would point me to specific issues that were intriguing from a theoretical perspective. This is indeed what happened.

In this respect, my dissertation testifies to the value of drawing on the methodology and approaches of descriptive linguistics to (eventually) engage in theory construction. This is encouraging because at times, a researcher would have to prioritize documentation (due to its urgency and/or at the request of the community), but this need not be thought of as being at the expense of one’s theoretical goals. As my dissertation shows, the potential of well-annotated primary data (collected primarily for documentation/descriptive purposes) to contribute to linguistic theory is tremendous. In other words, primary data provide a solid empirical basis on which future theoretical work can be built. Of course, this is not to say that at various, perhaps more mature, stages of our fieldwork—especially as the size of the corpus grows and our understanding of the language grows to the point we begin to identify specific theoretical problems—we will not have to let our deductive, top-down methods to guide our investigation to probe more subtle aspects of the language.

I do believe that there will be seasons during which a linguist who is generally devoted to both types of tasks (documentary/descriptive and theoretical) is more extensively engaged with one type than the other, and other seasons where the reverse is true. However, over the
long-term course, the approaches used in the two types of activities will constantly inform each other at all times. In this I agree wholeheartedly with Gil (2001) that fieldwork is and should be “an ongoing dialogue of opposites: the deductive and the inductive; the abstract and the concrete; and the general and the particular” (128).
Chapter 2

Split-S agreement in Ranmo

This chapter provides an overview of the properties of the three simple predicate types in Ranmo—transitive verbs, (simple) unaccusatives, and middles.

(34) Basic predicate types in Ranmo

a. Transitive

Kën wanaku y-fitar-∅. (>yêfitar)
1sg.ERG clothing 3sgmO.α-wash-sgS

‘I’m washing (the) clothes.’

b. Unaccusative

Fer y-rêfik. (>yèrfik)
tree 3sgmO.α-grow

‘A/the tree is growing.’

Each of the Greek letters in the glosses indicates some combination of tense/aspect/mood. This will be discussed in detail in section 2.1.
c. Middle

\[
\text{Fi ng-a-lesar-∅.} \\
\text{1sg.ABS M.α-A-groan-sgS}
\]

’He is groaning.’

Transitive verbs invariably show both prefixal objective (O) and suffixal subjective (S) agreement\(^2\) along with an ergative-absolutive pattern of case marking, as in (34a). The other two basic predicate types—simple unaccusatives and middles—are semantically one-place (34b-c). The sole arguments of both these predicate types show absolutive case marking, which is what one expects of an ergative language. But the two diverge in terms of verbal agreement. Unaccusatives pattern with the objects of transitives, showing O agreement (only); this is an ergative pattern (\(S=0\)). Middles, on the other hand, seem to shift out of this alignment, showing S agreement (only), a non-ergative pattern (\(S=A\)).

This “split” may be described as an instance of split ergativity, which refers to the appearance of a non-ergative pattern or construction in an otherwise ergative language. There are three main factors that condition split ergativity cross-linguistically.

(35) **Factors conditioning split ergativity** (Dixon 1994:70)

a. The tense, aspect, or mood of the clause (“aspectual split”)

b. The semantic nature of the core arguments (“person split”)

c. The semantic nature of the main verb (“split intransitivity”)

---

\(^2\)I use the labels “O” and “S” rather than “absolutive” and “ergative” agreement in order to avoid the association of a given type of agreement (O or S) with a specific case marker. It is not necessarily the case that “absolutive” (i.e., O) agreement is associated with absolutive case and “ergative” (i.e., S) agreement is associated with ergative case.
Since the split in Ranmo agreement is between two semantically intransitive classes, we seem to have a case of split intransitivity, or split-S marking, whose source is the semantic nature of the main verb (35c). Since this only occurs in the domain of agreement in Ranmo, I will refer to it as “split-S agreement.”

While the precise semantic basis of split intransitivity varies from language to language, in many cases, it seems to be sensitive to the semantic category of voluntary control. S can be semantically similar to A (in exerting control over the activity) or to O (in being affected by the activity). This semantic division typically has a syntactic correlate, which we refer to as the unergative-unaccusative distinction (Perlmutter 1978, Burzio 1986), schematized below.

\[\text{(36)}\]

\textbf{a. Unaccusative}

\[\begin{array}{c}
\text{vP} \\
\text{VP} \\
\text{DP} \quad \text{V}
\end{array}\]

\[\text{b. Unergative}

\[\begin{array}{c}
\text{VoiceP} \\
\text{Voice'} \\
\text{vP} \quad \text{Voice} \\
\text{VP} \\
\text{V}
\end{array}\]

The rest of this chapter lays the groundwork for understanding whether (36) is indeed the basis of split-S agreement in Ranmo. If it is, then Ranmo is somewhat unusual in its use of agreement morphology to signal the unergative-unaccusative distinction. Siewier-
ska (2005) reports just 26 languages out of a sample of 380 (less than 7%) which show split intransitive behavior, i.e., the arguments of one type of intransitives (unergatives) are marked like transitive subjects while those of another type of intransitives (unaccusatives) are marked like transitive objects. This is in contrast to other languages, which don’t make this distinction via overt agreement, but rather through cliticization, auxiliary-selection, impersonal constructions, linear order, sentence pronominalization, stranded prepositions, benefactive datives, inherent reflexives, reduced relativization, embedding under causatives, and get-passivization (Burzio 1981, Haegeman 1985, among others).

In section 2.1, I will review the properties of transitive and unaccusative verbs, which are ergative-patterning. In section 2.2, I will discuss the semantic and syntactic properties of middle verbs, which are apparently non-ergative-patterning. Chapter 4 provides a more extensive discussion and analysis of middles.

2.1 Transitives and unaccusatives

2.1.1 Transitives

Ranmo has two ways of marking grammatical relations: case and agreement. In transitive clauses, the subject invariably receives ergative case and the object absolutive case. Typically, these arguments bear an agent and a theme/patient role, respectively, as in (37a-c), though this is not always the case. In (37d), for example, the ergative case-marked subject
is an inanimate argument. 4

(37) a. Kèn wanaku y-fitar-∅. (yèfitar)
    1sg.ERG clothing 3sgmO.α-wash- sgS
    ‘I’m washing (the) clothes.’

b. Nafa ndótar y-rèfu-ai. (>yèrfui)
    1nsg.ERG door 3sgmO.α-open-2/3nsgS
    ‘They are opening a/the door.’

c. Ninta fi ng-yikan-e. (>ngikane)
    1nsg.ERG 3ABS 3sgfO.α-carry-1nsgS
    ‘We are carrying her.’

d. Thèbra-ngo wanaku y-yuyar-an-∅. (>yuyaran)
    sun-ERG clothing 3sgmO.α-dry-mul-t-sgS
    ‘The sun is drying (the) clothes.’

Grammatical relations are also head-marked in Ranmo, that is, cross-referenced on the verb via agreement morphology. The most peripheral suffix indicates the person and number of the subject of a transitive verb (S agreement), while the most peripheral prefix indicates the person, number, and gender of the object of a transitive verb (O agreement). There is only a single set of S agreement suffixes in Ranmo, which is used in all (non-imperative) TAM environments, whereas there are as many as three (non-imperative) prefixal O agreement series, each of which is associated with a certain TAM combination, indicated by a Greek letter. The phonological exponents of the S and O agreement morphemes are shown in Tables 2.1 and 2.2.

4This preliminarily suggests that agent θ-role assignment is not a good predictor of ergativity in Ranmo (as it isn’t in many other languages). In the subsequent chapters, we will see that indeed ergative case marking in Ranmo requires configurational rules of dependent case assignment in the style of Marantz (1991).
Table 2.1: S series

<table>
<thead>
<tr>
<th></th>
<th>α</th>
<th>β</th>
<th>γ</th>
</tr>
</thead>
<tbody>
<tr>
<td>1sg</td>
<td>w-</td>
<td>b-</td>
<td>tw-</td>
</tr>
<tr>
<td>1nsg</td>
<td>n-</td>
<td>ngg-</td>
<td>ntèn-</td>
</tr>
<tr>
<td>2sg</td>
<td>n-</td>
<td>ngg-</td>
<td>ntèn-</td>
</tr>
<tr>
<td>2nsg</td>
<td>th-</td>
<td>th-</td>
<td>th-</td>
</tr>
<tr>
<td>3sgm</td>
<td>y-</td>
<td>s-</td>
<td>s-</td>
</tr>
<tr>
<td>3sgf</td>
<td>ng-</td>
<td>k-</td>
<td>tè-</td>
</tr>
<tr>
<td>3nsg</td>
<td>th-</td>
<td>th-</td>
<td>th-</td>
</tr>
</tbody>
</table>

Table 2.2: O series

The γ-series is the most restricted in its use, occurring only in the environment of the [+bounded] feature, which is used to express non-iterative/punctual events. There is a lexical restriction on which verbs can express [+bounded] (as well as [-bounded]). For those verbs that can, [+bounded] (and therefore the γ-series) is only permitted in the presence of singular or dual argument. The occurrence of a γ-series prefix is also correlated with the obligatory use of a so-called ‘restricted’ (glossed .rst) root, which instantiates the presence of an inner aspectual functional projection that contains the feature [+bounded] (more below).

The β-series occurs in all other past perfective environments, i.e., those involving [-bounded] aspect. This series is compatible with all number categories (singular, dual, plural).

The α-series is used in all remaining TAM environments, including the imperfective past and all non-past environments.

I assume that the functional category on which O agreement is realized is v (more on
this in section 4.2.1). Therefore, the contextual allomorphy of O agreement in Ranmo can be captured using the following rules of vocabulary insertion, applied in the post-syntactic component within the framework of Distributed Morphology (Halle and Marantz 1993).

(38) O AGREEMENT ALLOMORPHY

a. γ-prefix \(\leftrightarrow v / \_ \text{Asp:}[+\text{bounded}]\)

b. β-prefix \(\leftrightarrow v / \_ \text{Asp:}[-\text{bounded}] \text{T:}[+\text{perfective past}]\)

c. \(\alpha\)-prefix \(\leftrightarrow v \text{ elsewhere}\)

2.1.2 Simple unaccusatives

A salient typological feature of Ranmo is that it has a very small class of verbs which may be described as inherently intransitive—i.e., one-place predicates which are not derivationally related to any other predicate type. This is a syntactic feature that is shared by other members of the Morehead-Upper Maro family. See Evans (2015) for Nen, Siegel (2015) for Nama, and Döhler (prep) for Kónmzo. Verbs in this class will be referred to as simple unaccusatives. Like the direct objects of transitive verbs, the sole arguments of these verbs are associated with a patient/theme role and bear absolutive case. Within the unaccusative class, two subclasses are distinguished: the eventive and the stative.
2.1.2.1 Simple eventive unaccusatives

Simple eventive unaccusatives constitute a very small set of (approximately)\(^5\) three verbs: *grow*, *arrive*, and *go*. They mark their sole arguments with the same prefixal O agreement markers used to reference the direct objects of transitive verbs, with the same pattern of TAM-conditioned allomorphy (see Table 2.2). This can be seen by comparing O agreement in (39) with (40).

(39) Eventive unaccusatives

a. Fi ng-rēfik. (>ngèrfik)  
3ABS 3sgfO.\(\alpha\)-grow  
‘She is growing.’

b. Fi t-lor. (>tèlor)  
3ABS 3sgfO.\(\gamma\)-arrive.RST  
‘She arrived.’

c. Ke w-ia-wa ntoné nènggai senggar-tha ntoné  
1sg.ABS 1sgO.\(\alpha\)-go-PRFV.DPST 1sg.GEN child family-ADJZ 1sg.GEN  
ngarake-fa Wio.  
garden-ALL Wio  
‘I went with my family’s children to the garden Wio (long ago).’ (Thiessen 2014:1.2)

(40) Transitives

a. Karthanggai-o mantama nènggai ng-mayuk-∅. (>ngèmayuk)  
woman-ERG female child 3sgfO.\(\alpha\)-wash-sgS  
‘A/the woman is washing a/the girl.’

\(^5\)It is quite possible that there are more out there, and they just simply haven’t been discovered yet, but even so, it will remain true that this class is significantly smaller than the middle class.
b. Karthanggai-o fi t-mbrat-∅. (tèmbrat)
   woman-ERG 3ABS 3sgfO.-hug.RST-sgS
   ‘A/the woman hugged her.’

c. Nafo ke w-thamèng-wa-∅. (wothamèngwa)
   3sg.ERG 1sg.ABS 1sgO.-help-PRFV.DPST-sgS
   ‘S/he helped me (long ago).’

2.1.2.2 Simple stative unaccusatives

The vast majority of the unaccusative class is made up of verbs with stative meanings. Most of these are positional verbs denoting spatial positions and postures, exemplified in (41).

(41) Examples of positional roots in Ranmo

a. mil ‘be hanging’
b. mol ‘be leaning’
c. manggal ‘be in/on/at the mouth’
d. yinal ‘be lying horizontal’
e. funtal ‘be floating’
f. fakal ‘be on top’
g. yukar ‘be standing’
h. lant ‘be inside’

The sole argument of a positional verb refers to a figure with respect to some ground,
which is expressed by an adjunct phrase bearing some locative case.

(42) **Stative positionals**

a. Sékufa tarfu-en y-manggal. (yémanggal)
cigarette mouth-LOC 3sgmO. x:STAT-be.in/on/at.the.mouth.POS
‘A/the cigarette is in a/the mouth.’

b. Mbolmbol y-funtal kom-èn. (yèfuntal)
rubbish 3sgmO. x:STAT-float.POS water-LOC
‘Rubbish is floating on the water.’

c. Kafer naifa-ka y-rèthambèl. (yèrthambèl)
butter knife-ALL 3sgmO. x:STAT-be.smeared.POS
‘Butter/oil is smeared on the knife.’

d. Ke yere-n w-lant. (wolant)
1sg.ABS bag-LOC 1sgO. x:STAT-be.inside
‘I am inside a/the bag.’

The stative semantics of these verbs is generally indicated by the following morphological features.  

(43) **Morphological properties of stative positional verbs**

a. Special stative positional root ending in the suffix -l

b. A dual/plural distinction in agreement morphology (44b-c)

c. Special stative O agreement

First, (most) positional verbs take a special stative suffix -l, which is analyzed to be the morphological realization of the stative (as opposed to eventive) v head (Lee 2015, 2016a).

---

6See also Evans (2014) for an overview of positional verbs found in the Morehead-Maro region, especially in the context of Nen.
The presence of this morpheme on positional verbs is correlated with restrictions on their ability to encode certain aspectual information, specifically the bounded/unbounded distinction in the sense of Jackendoff (1991) (also see section 2.1.1). This accounts for the generalization that eventive but not stative verbs undergo extended/restricted root alternation, the morphological manifestation of the bounded/unbounded aspectual distinction.

Second, positional verbs make finer number distinctions in the the O agreement morpheme and in more TAM environments than eventive verbs. Positionals make a dual/plural distinction as in (44b-c)—a contrast that is collapsed under ‘non-singular’ where eventive verbs are concerned.

(44) **Stative positional**

a. Yere-ka fari y-mil.  (>yèmil)
basket-LOC rope 3sgmO.x:STAT-hang. POS

‘A/the rope is hanging over the basket.’

b. Yere-ka fari l-mil.  (>lèmil)
basket-LOC rope 3dlO.x:STAT-hang. POS

‘(The) ropes(2) are hanging over the basket.’

c. Yere-ka fari wá-mil.  (>wámil)
basket-LOC rope plO.x:STAT-hang. POS

‘(The) ropes(3+) are hanging over the basket.’

This is not to say that eventive verbs don’t make a dual/plural distinction at all; they do, but this is limited to perfective past environments, and even in those environments, dual interpretations do not arise via the presence of a dedicated ‘dual’ morpheme per se but rather via discontinuous exponence involving a specific combination of number and aspect
(specifically, non-singular and [+bounded]) (Lee 2016b).

Finally, like eventive unaccusatives, stative positionals show agreement only in the left-most prefixal position (i.e., O agreement and no S agreement), but the actual exponents in the stative O series are slightly different from those associated with the eventive series. The two types of O series are shown below for comparison.

\[\begin{array}{ccc}
\text{1sg} & \text{w-} & \text{b-} \\
\text{1dl/2sg} & \text{n-} & \text{ngg-} \\
\text{3sgm} & \text{y-} & \text{s-} \\
\text{3sgf} & \text{ng-} & \text{k-} \\
\text{2/3dl} & \text{l-} & \text{th-} \\
\text{pl} & \text{wá-} & \text{bw-} \\
\end{array}\]

Table 2.3: Stative O series

\[\begin{array}{ccc}
\text{1sg} & \text{w-} & \text{b-} & \text{tw-} \\
\text{1nsg} & \text{n-} & \text{ngg-} & \text{ntèn-} \\
\text{2sg} & \text{n-} & \text{ngg-} & \text{ntèn-} \\
\text{2nsg} & \text{th-} & \text{th-} & \text{th-} \\
\text{3sgm} & \text{y-} & \text{s-} & \text{s-} \\
\text{3sgf} & \text{ng-} & \text{k-} & \text{tè-} \\
\text{3nsg} & \text{th-} & \text{th-} & \text{th-} \\
\end{array}\]

Table 2.4: Eventive O series

An important question to be addressed later is: why should the shape of agreement vary according to the lexical semantics (i.e., the eventive vs. stative status) of the verb in Ranmo? In section 4.2.1, I argue that this empirical fact straightforwardly follows if the locus of subject agreement in Ranmo unaccusatives is \( v \) rather than \( T \).

The stative unaccusative class also includes a very small number of verbs denoting non-positional states, including ‘sleep/dream’ (45) and the copula ‘be’ (46). The latter can take an adjective or a nominal as its complement, forming a predicate adjective or a predicate nominal.

(45)  a. Selina yar ng-rèmbèr.  (>ngèrmèr)

Selina sleep 3sgfO.\( \alpha: \text{STAT-sleep} \)
‘Selina is sleeping.’

b. Ke yartar b-f-rèmbèr kemá támber. (~bèfèrmèr)
   1sg.ABS dream 1sgO.β-NON.FUT-sleep now night
   ‘I dreamt last night.’

   school NEG when 3sgmO.α-be 2ABS all happy 3nsgO.α-be.MULT
   (~yèra, lèrar)
   ‘When there is no school, you are all happy.’

b. Merakin kafeka y-ra. (~yèra)
   plate empty 3sgmO.α-be
   ‘A/the plate is empty.’

c. Ni keke yu yekal n-ra. (~nèra)
   1nsg.ABS NEG dance man 1nsgO.α-be
   ‘We are not dancers.’

An important aspect of eventive verbs in Ranmo is that they show alternation between so-called extended and restricted roots. These roots are decomposable into two parts, the root core and the suffix. Depending on the nature of the suffix, the root may be spelled out as either extended (EXT) or restricted (RST). In Lee (2015, 2016a), I provide an extensive discussion of the root alternation phenomenon. Here I simply highlight the main points of the analysis.

First, I propose that what distinguishes eventive verbs from stative verbs in Ranmo is that the latter lack so-called Inner Aspect. Inner Aspect is a term used by Travis (2010) to refer to a functional projection sandwiched between V and v; it encodes aspecual information that is distinct from grammatical or outer aspect (found external to vP). I will simply label
this low Aspect head as “Asp.” The Asp head is immediately adjacent to the root and corresponds to the bolded cell in Table 2.5 (this category will be omitted from subsequent verbal templates.).

<table>
<thead>
<tr>
<th>Inflectional prefixes</th>
<th>Stem</th>
<th>Suffixes</th>
</tr>
</thead>
<tbody>
<tr>
<td>O agreement</td>
<td>Inner TAM</td>
<td></td>
</tr>
<tr>
<td>Inner TAM</td>
<td>Valence (Directional)</td>
<td>Root Aspect</td>
</tr>
<tr>
<td>Outer TAM</td>
<td>S agreement</td>
<td></td>
</tr>
</tbody>
</table>

Table 2.5: Ranmo verbal template

I argue that in the case of eventive predicates, the Asp head may be specified as either [+b(ounded)] or [-b(ounded)]. When the root fuses with Asp bearing [-b], it becomes an ‘extended’ root; when it fuses with Asp bearing [+b], it becomes a ‘restricted’ root. What characterizes stative predicates, then, is that they lack this functional category, as shown in (47b).

(47) **Before syntactic head movement**

a. **Eventive unaccusative**

```
  vP
   AspP
    v
   VP Asp[±b]
    φP V
```

b. **Stative unaccusative**

```
  vP
    VP
     v
    φP V
```

Therefore, in Ranmo, the difference between eventive and stative predicates is not the absence of a v head in the latter, as is the case in some languages like Tariana in which
stative verbs do not show any agreement at all (cf. Baker 2012). Eventive and stative verbs are distinguished primarily on the basis of whether Inner Aspect is present or not.\footnote{In addition, the type of \( v \) (eventive vs. stative) also seems to distinguish the two classes.}

Moreover, I assume that \( V \) undergoes head movement to \( v \) in Ranmo. The structure at the end of the syntactic derivation is as follows.

\begin{equation}
(48) \text{After syntactic head movement}\footnote{I also assume that \( V \) and Asp undergo Morphological Merger in the morphological component in order to derive the correct final word order of \( v-V-\text{Asp} \).}
\end{equation}

\begin{itemize}
  \item \textbf{a. Eventive unaccusative}
  \begin{equation}
  \begin{array}{c}
    v \\
    v \\
    v
  \end{array}
  \end{equation}
  \begin{array}{c}
    \text{Asp} \\
    \text{Asp} \\
    \text{V}
  \end{array}
  \\

  \item \textbf{b. Stative unaccusative}
  \begin{equation}
  \begin{array}{c}
    v \\
    v
  \end{array}
  \end{equation}
  \begin{array}{c}
    \text{V}
  \end{array}
\end{itemize}

When Asp (picked up by \( V \)) moves into \( v \), the two heads are in a local relation with each other—local enough that the feature on Asp (\((\pm b)\)) can trigger allomorphy on (eventive) \( v \) at the time of spell out. Since Asp is absent in stative predicates, we predict that the possibility of allomorphy for Inner Aspect would be ruled out. This is borne out, as shown by the fact that only eventive verbs show root alternation.
2.2 Middles

All other verbs which are semantically one-place are expressed as morphological middles\(^9\) in Ranmo. These verbs are “well-behaved” with respect to case marking, showing an ergative pattern of agreement, i.e., their subjects are absolutive case-marked just like those of simple unaccusative verbs. Yet where agreement is concerned, they show non-ergative (or “extended ergative”\(^10\) in Dixon 1994) behavior, patterning with the subjects of transitive clauses, i.e., they show S agreement. Additionally, middle verbs show special prefixal morphology which

\(^9\)I am borrowing the term “middle” from Evans (2012, 2014, 2015), who uses it to describe the same kind of prefixal verbal morphology attested in Nen. It is not used in the sense of non-active voice used in opposition to the morphologically unmarked active voice, as in Greek (1) (cf. Kemmer 1993, Embick 2004) (though, as we will see, there is clearly overlap in function), nor does it describe so-called ‘dispositional’ middles used to express statements with a generic agent as in (2), where only the understood theme (this book) appears. Ranmo middle verbs do express generic statements, but their distribution extends far beyond that of dispositional middles. Finally, it is also not used in the sense of “voice mismatch verbs” (deponents), verbs that take non-active morphology but are used in syntactically active environments (cf. Grestenberger 2014).

\(^{10}\)So-called because transitive subject markers are “extended” to mark intransitive subjects in an otherwise morphologically ergative language.

(1) Greek
a. Afto to vivlio dhiavas-tik-e xtes.
   this-nom the-nom book-nom read-N/A-3S yesterday
   ‘This book was read yesterday.’

b. Ι Maria xtenize-te kathē mera.
   the-nom Maria-nom comb-N/A.3S every day
   ‘Maria combs herself every day.’

c. tsakizo-me
   break-N/A
   ‘break-Intransitive’

d. To kalokeri xriazo-maste pola ruxa.
   the summer need-N/A.1PL many clothes
   ‘During the summer we need many clothes.’
   (Embick 2004:143)

(2) Dispositional Middles
a. This book sells well.

b. This book reads easily.
includes the TAM-sensitive ‘middle’ (m) morpheme at the leftmost periphery of the verbal complex, followed by another prefix, a-. The nature of these two morphemes will be fully unpacked in chapter 4.

(49) a. Thinto ng-a-lef-ai. (>ngalfeni)
    bird     M-A-fly-2/3nsgS
    ‘(The) birds are flying.’

b. Ni (fáfi) k-f-a-mayuk-e. (>kwamayuke)
    Insg.ABS bath M,β-NON.FUT-A-bathe-InsgS
    ‘We bathed.’

These morphological properties are correlated with a number of syntactic features which distinguish middles from unaccusatives. Before we examine these, I first show that the middle class is semantically heterogeneous, made up of the following semantic subtypes.

(50) **Semantic subtypes of middle verbs**

   a. Reflexives and reciprocals

   b. Anticausatives

   c. Untransitives

---

11 These two prefixes can be broken up by maximally one aspect-related morpheme, as exemplified in (49b).
2.2.1 Semantic subtypes of middles

2.2.1.1 Reflexives and reciprocals

The largest semantic subclass of middle verbs consists of reflexive and reciprocal expressions. They include inherent reflexives which denote actions performed by the subject on his or her own body (or a part of the body).12

(51) Inherent reflexive middles

a. Ke (fáfi) ng-a-mayuk-Ø.
   1sg.ABS bath M.α-A-wash-sgS
   ‘I am washing/bathing.’

b. Ke (wanaku) ng-a-rèwayak-Ø. (>ngarwayak)
   1sg.ABS clothing M.α-A-dress-sgS
   ‘I am getting dressed.’

c. Ke fak yèfi ng-a-rèfer-Ø. (>ngarfer)
   1sg.ABS jaw hair M.α-A-shave-sgS
   ‘I am shaving my beard.’

d. Ke sóka ng-a-fitar-Ø.
   1sg.ABS hand M.α-A-wash-sgS
   ‘I’m washing my hands.’

These verbs alternate with their non-reflexive transitive counterparts.

(52) Transitive counterparts

a. Ngam-o fur y-mayuk-Ø. (>yèmáuyuk)
   mother-ERG baby 3sgmO.α-wash-sgS

---

12I assume that the nominal expressing a body part (or clothing) (51b) forms a lexical compound with the verb.
‘Mother is giving a/the baby a bath.’

b. Karthanggai-o nènggai (wanaku) ng-rèwayak-∅. (>ngèrwayak)
woman-ERG child clothing 3sgfO.x-dress-sgS
‘A/the woman is dressing a/the girl.’

c. Kèn fi fák yèfi y-rèfer-∅. (>yèfer)
1sg.ERG 3ABS jaw hair 3sgmO.x-shave-sgS
‘I am shaving his beard.’

d. Kèn fo y-fitar-∅. (>yèfitar)
1sg.ERG coconut 3sgmO.x-wash-sgS
‘I am washing a/the coconut.’

In principle, all transitive verbs, including those that don’t involve one’s own body (part), can undergo alternation to the middle form to express reflexive events.\(^{13}\)

(53) **Non-inherent reflexives**

a. Fi t-a-mial-∅ bènibèni-ka.
3ABS M.γ-A-see.RST-sgS mirror-LOC
‘S/he saw herself/himself in the mirror.’

b. Fi t-a-lan-∅.
3ABS M.γ-A-kill.RST-sgS
‘S/he killed herself/himself.

Middle verbs can also express reciprocal relations, as in (54). Their transitive counterparts are shown in (55). Reciprocal middles are generally ambiguous with plural reflexives.

(54) **Reciprocal middles**

\(^{13}\)There are a few exceptions, which I take to be lexical gaps. Verbs like ‘dance’ and ‘bark’ only appear in the middle form, lacking a simple transitive variant (but see 5.3.1). These are descriptively equivalent to what has been referred to as ‘deponent middles’ (*media tantum*) in the Indo-European literature. Such verbs are characterized by not having an active transitive counterpart.
a. Yekal bar-fo ng-a-rir-ai. (>ngariri)  
   man back-ABL M.x-A-scratch-2/3nsgS  
   ‘(The) men are scratching each other’s backs.’

b. Fi ng-a-rèfèkèn-ai. (>ngarfèkènì)  
   3ABS M.x-A-hug-2/3nsgS  
   ‘They are hugging each other.’

c. Fi yelèmbá ng-a-fèk-wa-ai. (>ngafèkwài)  
   3ABS two M.x-A-hit/kill-PFV.DPST-2/3nsgS  
   ‘They(2) fought/killed each other (long ago).’

(55) **Transitive counterparts**

a. Kèn fo y-rir-Ø. (>yèrìr)  
   1sg.ERG coconut 3sgmO.x-scratch-sgS  
   ‘I am scraping a/the coconut.’

b. Kèn fi s-rèfèkèn-Ø. (>sèrfèkèn)  
   1sg.ERG 3ABS 3sgmO.y-hug.RST-sgS  
   ‘I hugged him.’

c. Nafo yekal l-fèk-wa-Ø Daru-n. (>lèfèkwà)  
   3sg.ERG man 2/3nsgO.x-hit/kill-PFV.DPST-sgS Daru-LOC  
   ‘S/he killed the men in Daru (long ago).’

2.2.1.2 Anticausatives

Anticausatives form another semantic subclass of middle verbs. They typically refer to spontaneous, non-externally caused changes of state verbs such as *break, open, and tear* (Smith 1978, Alexiadou 2010). They alternate productively with their transitive counterparts, as shown in (56)-(57).
Anticausative middles

a. Mèngg k-f-a-tringgan-∅. (>kwatringgan)
   ‘house M.β-NON.FUT-A-break-sgS
   ‘A/the house collapsed.’

b. Ndótar t-a-rèfunt-∅. (>tarfunt)
   door M.γ-A-open.RST-sgS
   ‘A/the door opened.’

c. Sá wantaka t-a-lèr-ant-∅.
   bark skin M.γ-A-tear.RST-sgS
   ‘(The) paper tore (recently).’

Transitive counterparts

   man child-ERG house-LOC door 3sgmO.β-NON.FUT-break-sgS stone-INSTR
   (>sèftringgan)
   ‘A/the boy broke a/the door with a/the stone.’

b. Kèn ndótar s-rèfunt-∅. (>sèrfunt)
   1sg.ERG door 3sgmO.γ-open.RST-sgS
   ‘I opened a/the door.’

c. Kèn sà wantka s-lèrant-∅. (>sèlèrant)
   1sg.ERG bark skin 3sgmO.γ-tear.RST-sgS
   ‘I tore (the) paper.’

2.2.1.3 Agentives

Last but not least, agentives form another large semantic subclass of middle verbs; they include prototypical examples of unergatives such as fly, dance, run, walk, and laugh. Unlike
reflexive/reciprocal and anticausative middles, a large number of agentive middles require the presence of a modifying nominal which occurs adjacent to the lexical verb. I assume that such constructions involve V+N complex predicates which enter the derivation as such, i.e., they are lexical compounds. In some cases, the semantic connection between the verb and the nominal in these constructions is far from transparent. In (58b-e), for example, the nominals yak ‘run,’ mbèrse ‘play/laughter/fun,’ mèr ‘neck,’ and molmol ‘road.REDUP’ combine with the verbs yikan ‘carry,’ mbèrse ‘hug,’ nggar ‘break,’ and maria ‘walk,’ respectively, to derive the meanings ‘run,’ ‘play/laugh/laugh/have fun,’ ‘nod,’ and ‘wander.’

(58) a. Thinto ng-a-lèfan-ai. (>ngalfani)
    bird M.α-A-fly-2/3sgS
    ‘(The) birds are flying.’

b. Ke yak ng-a-yikan-∅. (>ngekan)
    1sg.ABS run M.α-A-carry-sgS
    ‘I am running.’

c. Fi mbèrse ng-a-mbèr-∅.
    3ABS play/laughter/fun M.α-A-hug-sgS
    ‘S/he is playing/laughing/having fun.’

d. Ke mèr t-a-nggar-∅.
    1sg.ABS neck M.γ-A-break.RST-sgS
    ‘I nodded.’

e. Ke molmol ng-a-maria-∅.
    1sg.ABS road.REDUP M.α-A-go-sgS
    ‘I am wandering/walking about.’

14The precise meaning is pragmatically determined.
Since virtually all verbs having agentive semantics are expressed as morphological middles, this suggests that there is no dedicated “unergative” class as such in Ranmo. In other words, all verbs which have the semantics of unergative verbs (*fly, run, bark, etc.*)—agentives—form a subset of the broader class of middle verbs. They are “derived” from transitive verbs the same way reflexives/reciprocals and anticausatives are. The only difference is that agentive predicates often require N+V lexical compounds.

When the nominal is absent from the N+V compound, a semantically reflexive/reciprocal interpretation should result. For example, when we remove the N from the compound break+neck (translated as ‘nod’) in (58d), we are left with the reflexive interpretation of break.

\[(59)\] Kewán k-f-a-nggar-an-Ø.  (>kwanggaran)
\[
\text{many M.Ø-NON.FUT-A-break-MULT-sgS}
\]
\[\text{‘Many broke.’}\]

But there are cases where the presence of an N is obligatory. The removal of the nominal mbèrse ‘play/laughter/fun’ from (58c) does not result in a grammatical string with the reflexive interpretation ‘hug oneself,’ as shown in (60a). I take the ill-formedness of this sentence to be entirely accidental, i.e., ‘hug’ is simply a very strange verb to reflexivize in Ranmo. In principle, there is nothing to rule out such reflexivization. Note that the sentence is significantly improved under a reciprocal interpretation involving a plural subject (60b). To express ‘hug oneself,’ another verb, rèfukèn ‘grab,’ is used (60c).

\[(60)\] a. ??Fi ng-a-mbèr-Ø.
\[
3\text{ABS M.Ø-A-hug-sgS}
\]
Intended: ‘S/he is hugging herself/himself.’

b. ?Fi ng-a-mbèr-ai. (>ngambri)
   3ABS M.α-A-hug-2/3nsgS
   ‘They are hugging each other/??themselves.’

c. Ke ng-a-rèfukèn-Ø. (>ngarfukèn)
   1sg.ABS M.α-A-grab-sgS
   ‘I’m hugging myself’ (lit. ‘I’m grabbing myself’).

To be clear, I am not saying that lexical compounding is the defining feature of agentive middles. As shown in (51c-d), inherent reflexive middles can also utilize a lexical compound containing an unmodified body part nominal. Moreover, other predicate types, including unaccusatives, show this property as well. In (61), for example, *yar, yartar,* and *fewa* are all assumed to be part of N+V lexical compounds. (Note that agreement is with the subject.)

(61) a. Ke yar w-rèmbèr-ndar. (>wèrèmbèrndar)
   1sg.ABS sleep 1sgO.α-sleep-IPFV.RPST
   ‘I was sleeping.’

b. Ke yartar b-f-rèmbè b-kemá támber. (>bèfermbèr)
   1sg.ABS dream 1sgO.β-NON.FUT-sleep today night.
   ‘I slept last night.’

c. Fe fewa n-lorar. (>nèlorar)
   2ABS smell 2sgO.α-arrive
   ‘You smell’ (lit. you arrived (with) smell).

Therefore, lexical compounding in agentives should be seen as expressing a general feature of Ranmo.
2.2.2 Split-S agreement

Having looked at the individual properties of unaccusatives and middles, we now probe deeper into the nature of the split in agreement between the two classes. Cross-linguistically, splits in agreement and case marking are conditioned by one of the factors in (62).

(62) **Factors conditioning split ergativity**

(Dixon 1994:70)

a. The tense or aspect or mood of the clause (“aspectual split”)

b. The semantic nature of the core nominal arguments (“person split”)

c. The semantic nature of the main verb (“split intransitivity”)

We can quickly see that the split between unaccusatives and middles is neither an aspectual split nor a person split, i.e., it is not caused by certain nominal features (e.g., 1st/2nd person, pronominal, etc.) or by certain tenses/aspects (e.g., imperfective, progressive).

The choice of agreement pattern is not determined by the TAM of the clause. As shown in (63)-(64), the verbs *arrive* and *fly* are invariably expressed as an unaccusative and as a middle, respectively, in all possible TAM environments in Ranmo, including the present progressive and the past perfective, the two opposite ends of the hierarchy in (65).

(63) a. Sèu y- lorar. (>yèlorar)
   Sèu 3sgmO.x-arrive
   ‘Sèu is arriving.’

b. Ni ngg-f- lorar. (>nggèlorar)
   lnsg.ABS lnsgO.β-NON.FUT-arrive
   ‘We arrived.’
(64) a. Ke  ng-a-minjar-∅. (>ngaminjar)
   bird m.ə-A-fly-sgS
   ‘I am sitting on top.’

b. Ni  k-f-a-fakalk-e. (>kwafakalke)
   Insg.abs m.β-non.fut-A-sit.on.top-1nsG
   ‘We sat on top.’

(65) Universal directionality of aspectual splits (Dixon 1979, 1994)

\[
\begin{array}{c c c}
\text{ergative} & \rightarrow & \text{non-ergative} \\
\text{perfective} & >> & \text{imperfective} & >> & \text{progressive}
\end{array}
\]

The same examples also show that agreement does not vary according to nominal features (such as person); if a verb shows O agreement (only) with one kind of nominal on the hierarchy in (66) (e.g., 1st person), then it also shows O agreement with all other nominal types on the hierarchy (e.g., proper noun, 3rd person, etc.) in (66).

(66) Universal directionality of person splits (Dixon 1979, 1994)

\[
\begin{array}{c c c c c c}
\text{ergative} & \rightarrow & \text{non-ergative} \\
\text{common} & >> & \text{proper} & >> & \text{demonstratives} & >> & \text{1st/2nd-person} \\
\text{nouns} & & \text{nouns} & & \text{3rd-person} & & \text{pronouns}
\end{array}
\]

We are then left with (62c), the semantics of the main verb, as the trigger of split-S agreement in Ranmo. Typically, split-S systems are sensitive to the semantic category of voluntary control. Indeed, we have on one side of the split unaccusatives, which prototypically denote non-volitional, non-controlled events or states whose participants bear a non-Agent role (e.g., Patient, Undergoer, Experiencer, and so forth). And on the other side of the split we have middles, at least a subset\(^{15}\) of which are agentive verbs denoting volitional, controlled events whose participants bear an Agent role.

\(^{15}\)The fact that the middle class also includes anticausatives, prototypical instances of unaccusatives in many other languages, indicates that we cannot solely rely on semantics to determine the classification of verbs in Ranmo.
This semantic contrast is often correlated with a structural difference in the position of the subject. This is the unaccusative/unergative distinction, schematized again in (67) (cf. Perlmutter 1978, Burzio 1986, Chomsky 1981). Unaccusatives have an (underlying) internal argument but no external argument, while unergatives have an external argument but no internal argument.

(67)  

\begin{align*}
\text{a. Unaccusative} & \quad \text{b. Unergative} \\
\begin{array}{c}
vP \\
\text{VP} \\
\text{DP} \\
\text{DP} \\
\text{vP} \\
\text{VP} \\
\text{V}
\end{array}
& \quad \begin{array}{c}
\text{VoiceP} \\
\text{Voice'} \\
\text{DP} \\
\text{vP} \\
\text{Voice} \\
\text{VP} \\
\text{v} \\
\text{V}
\end{array}
\end{align*}

The fact that unaccusatives show O agreement and middles show S agreement is prima facie evidence that the two types of verbs have the structures in (67). But why should the unaccusative/unergative distinction lead to a difference in agreement in Ranmo? In English, for instance, no difference in agreement is observed between unaccusative and unergative verbs.

(68) Uniform agreement in English unaccusatives and unergatives

a. Mary work-s all day long.

b. The hunter arrive-s home late every night.
In the rest of this chapter, I discuss further syntactic differences between middles and unaccusatives, as a first step to answering that question. Middles and unaccusatives behave differently with respect to the following tests.\(^{16}\)

(69) **Syntactic tests distinguishing middles and unaccusatives**

a. Transitivity alternation

b. External possession

c. Emphatic reflexive anaphors

### 2.2.2.1 Transitivity alternation

One syntactic diagnostic with respect to which middles and unaccusatives vary is transitivity alternation. Only middles alternate productively with transitive verbs. Examples of middle-transitive alternation were shown in section 2.2.1, some of which are repeated below.

(70) a. Fi t-a-mial-Ø bènìbèni-ka.
    3ABS M.\(\gamma\)-A-see.RST-sgS mirror-LOC
    ‘S/he saw herself/himself in the mirror.’

    b. Nafa ke tw-mial-ai. (>tomialèi)
    3nsg.ERG 1ABS 1sgO.\(\gamma\)-see.RST-2/3nsgS
    ‘They saw me.’

(71) a. Fi t-a-lan-Ø.
    3ABS M.\(\gamma\)-A-kill.RST-sgS
    ‘S/he killed herself/himself.

\(^{16}\)Agentivity—a common diagnostic of external argumenthood—is *not* a good indicator of external argumenthood in Ranmo (as in many other languages as well). We saw that the middle class, which includes all agentive/semantically unergative verbs, also includes anticausatives, which are considered to be prototypical instances of unaccusative verbs, such as *break* and *tear*, as well as verbs like *fall* and *collapse*. 
2. Transitivity alternation

2.2.2.2 External possession

External possession serves as another diagnostic of internal vs. external argumenthood. It is well-known in the typological literature that external possession is restricted to internal arguments (Baker 1988, Payne and Barshi 1999, among others). If the arguments of middles are external arguments, it is predicted that they would not be able to undergo external possession for the same reason the subjects of transitive clauses cannot (in Baker 1988, this restriction is accounted in terms of Chomsky 1981’s Empty Category Principle).

Indeed, external possession is only possible with unaccusatives, not middles.\(^{17}\)

---

\(^{17}\)In chapter 5, I will deal more extensively with external possession in Ranmo, which is analyzed as a type of applicative construction.
(72) **EXTERNALIZING AN UNACCUSATIVE SUBJECT ✓**

a. Ke nènggai-tha w-ra. (>wora)
   lsg.abs child-ADJZ 1sgO.x-be
   ‘I have (a) child(ren)’ (lit. ‘I am of a child(ren).’)

b. **Ntone** yelo-fe buk w-a-ra.
   1sg.GEN three-only book 1sgO.x-A-be
   ‘I only have a few book.’

(73) **EXTERNALIZING A MIDDLE SUBJECT ✗**

a. Nènggai t-a-mints-∅.
   child M-Y-A-sit.down.RST-sgS
   ‘A/the child sat down.’

b. *Ntone nènggai w-a-mints-∅.
   1sg.GEN child 1sgO.x-A-sit.on.top.RST-sgS
   Intended: ‘My child sat down.’

**2.2.2.3 Emphatic reflexive anaphors**

Perhaps the most telling syntactic test for differentiating the structures of middles and unaccusatives is the ability to take optional emphatic reflexive anaphors. These are morphologically complex expressions made up of an ergative pronominal plus the suffix -wá, whose function is not entirely clear at present.\(^{18}\) They are so-called because when they are overtly present, their function is emphatic in addition to being reflexive. That is, they

\(^{18}\) It has traditionally been said that when anaphors are morphologically complex, they are universally local, in contrast to morphologically simplex ones which make up the long-distance type (Faltz 1977, Pica 1987). I assume anaphors in Ranmo emphatic reflexives are local anaphors, like English *himself*, Dutch *zichzelf*, etc. Indeed, they require a local antecedent, as we will see below. That said, more recent work indicates that several complex anaphors can be long distance bound as well (e.g., in English and French), so morphological complexity may not be the best indicator of the precise status of an anaphor.
put some kind of focus on the participant with which it shares its referential identity—the subject. Crucially, this co-argument must be the subject of a middle verb, but not that of an unaccusative, as shown by the contrast between (74) and (75).

(74) a. Fi nafo-wá t-a-mial-Ø bènibèni-ka.  
   3ABS 3sg.ERG-WÁ m.γ-A-see.RST-sgS mirror-LOC  
   ‘S/he saw HERself/HIMself in the mirror.’

   b. Fi nafo-wá t-a-lan-Ø.  
   3ABS 3sg.ERG-WÁ m.γ-A-kill.RST-sgS  
   ‘S/he killed HERself/HIMself.

   c. Ndótar t-a-rèfunt-Ø nafo-wá.  
   door M.γ-A-open.RST-sgS 3sg.ERG-WÁ  
   ‘A/the door opened by itself.’

(75) *Fer nafo-wá y-rèfik. (>yèrfik)  
   tree 3sg.ERG-WÁ 3sgmO.α-grow  
   Intended: ‘A/the tree is growing ITself/by itself’ or ‘a/the tree itself is growing.’

The ability of middle subjects to serve as the antecedents of anaphors\(^\text{19}\) suggests that they

\(^{19}\)There is another environment in which these anaphors can (optionally) occur, and that is when they are in the Benefactive role coreferential with the subjects of transitive clauses.

(1) a. Fi (nafo-wá) mei s-f-loman-Ø.  
   (>sèfloman)  
   3ABS 3ERG-WÁ fire 3sgmO.β-NON.FUT-make-sgS  
   ‘S/he made herself/himself a fire.’

   b. Fi (nafo-wá) windiwindi n-lèn-Ø.  
   (>sènlèn)  
   3ABS 3ERG-WÁ bike 3sgmO.γ-PROX-hit/kill.RST-sgS  
   ‘S/he bought herself/himself a bike.’

These constructions minimally differ from their transitive counterparts (2) in that the subject bears absolutive instead of ergative case. This subject controls S agreement, and the direct object controls O agreement, just as in simple transitives.

(2) a. Nafo mei s-f-loman-Ø.  
   (>sèfloman)  
   3ABS fire 3sgmO.β-NON.FUT-make-sgS  
   ‘S/he made a fire.’

70
are in an external argument position from which they can bind their anaphor. In contrast, the inability of unaccusative subjects to do the same confirms that they are internal arguments. The ungrammaticality of (75) reflects a Condition A violation: there is no position where the anaphor can be licensed, nor is there an eligible minimal c-commanding subject to bind it.

A brief word on anticausatives and agentives is in order. The anticausative examples in (56) are compatible with reflexive readings (e.g., ‘a/the door opened (by) itself’) as well as with emphatic readings (e.g., ‘a/the door itself opened’) in the presence of an emphatic reflexive anaphor (discussed in section 2.2.2.3), as shown in (76a). They are also compatible with postpositional phrases like ‘because of the wind’ (76b).

(76)  a. Ndoτar t-a-rɛfund-∅ nafo-wá. (>tarfund)
     door M.γ-A-open.RST-sgS 3sg.ERG-WÁ
     ‘A/the door opened (by) itself’ or ‘a/the door itself opened.’

   b. Ndoτar t-a-rɛfund-∅ kó-mo. (>tarfund)
     door M.γ-A-open.RST-sgS wind-SRC
     ‘A/the door opened because of the wind.’

I suggest that the self-forms in (1), unlike those in middles, are in adjunct positions to the subject rather than serving as true bound anaphors that constitute a noun phrase by themselves. Therefore, more accurate translations of (1) should be ‘s/he made [for herself/himself] a fire’ and ‘s/he bought [for herself/himself] a bike.’ English, too, shows this argument/adjunct contrast, which correlates with a reflexive/intensifier contrast.

(3)  a. The writer criticized himself.

   b. The writer himself did not bring up the issue.
I suggest that anticausatives are simply a subset of reflexives with a change of state reading. This means that anticausatives will require anaphor binding the same way semantically reflexive and reciprocal constructions do (see section 4.1).

<table>
<thead>
<tr>
<th></th>
<th>Unaccusatives</th>
<th>Middles</th>
</tr>
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<tbody>
<tr>
<td>Agreement</td>
<td>O agreement</td>
<td>S agreement</td>
</tr>
<tr>
<td>Transitivity alternation</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>External possession</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Emphatic reflexive anaphor</td>
<td>No</td>
<td>Yes</td>
</tr>
</tbody>
</table>

Table 2.6: Properties of unaccusatives and middles

2.3 Chapter summary

In this chapter, I discussed the properties of three basic predicate types in Ranmo, transitives, unaccusatives and middles.

(77) Basic predicate types in Ranmo

a. Transitive

Kèn wanaku y-fitar-Ø. (>yəfitar)
1sg.ERG clothing 3sgmO.α-wash-sgS

‘I’m washing (the) clothes.’

b. Unaccusative

Fer y-rèfik. (>yèrfik)
tree 3sgmO.α-grow

‘A/the tree is growing.’
c. **Middle**

\[
\begin{align*}
\text{Fi} & \quad \text{ng-a-lesar-∅} \quad (>\text{ngalesar}) \\
\text{1sg.ABS M.α-A-groan-SgS} & \\
\end{align*}
\]

‘He is groaning.’

Semantically one-place verbs can be divided into two classes on the basis of their agreement pattern: unaccusatives show O agreement (ergative-patterning) while middles show S agreement (non-ergative-patterning). This seems like a case of split intransitivity, a type of split ergativity usually described to be triggered by the semantics of the main verb (as opposed to tense/aspect or nominal features). This difference in agreement is indeed correlated with semantic differences between the two classes. But as we observed, the middle class is much more semantically heterogeneous than the unaccusative class, encompassing agentives, reflexives/reciprocals, and anticausatives. Since the latter two are prototypical instances of unaccusatives in many language, it is clear that a pure semantics-based generalization of split intransitivity in Ranmo will be inadequate.

Syntactic tests involving external possession and emphatic reflexive anaphors show that the subjects of middles are external arguments. Moreover, the fact that middles but not unaccusatives can alternate with transitive verbs indicates that middles result from the “demotion” of the direct object rather than the subject, in a sense to be clarified (in chapter 4).
Chapter 3

Configurational case assignment

This chapter explores case assignment in Ranmo. The domain of case in Ranmo is theoretically intriguing for at least two reasons. The first concerns the source of ergative case. The current literature is dominated by two views on this topic: either ergative is an inherent case assigned to thematic agents by transitive $v$ (or Voice), or it is structurally assigned by T or $v$, making it essentially identical to nominative in all respects except for morphology. On both these views, a given functional head (transitive $v$ or T) is directly responsible for assigning ergative case. However, we find that the distribution of ergative case in Ranmo is not what one would expect if a functional head was directly responsible for its assignment.

The second reason why case in Ranmo is important for syntactic theory is because it poses a challenge to the mainstream generative view that case is the reflex of agreement/Agree (Chomsky 2000, 2001). On this view, we expect a one-to-one correspondence between case
and agreement (as between nominative and finite T, for example). However, no such correspondence can be found in Ranmo.

I propose that the full range of case marking patterns in Ranmo can be accounted for if we posit that case and agreement in Ranmo do not interact with each other at all. Agreement proceeds in the usual manner (through the probe-goal relation) as within Chomsky’s Agree framework, but without resulting in case assignment. Instead, case is assigned configurationally, following rules of dependent case assignment in the style of Marantz (1991). As we will see in chapter 5, the dependent theory can also account for typologically unusual patterns including the assignment of ergative case to the subjects of (some) unaccusatives as well as an unexpected distributional overlap inherent dative case and structural absolutive case.

In section 3.1, I discuss a number of case-agreement mismatches in Ranmo, which pose a challenge to the view that case is agreement-assigned. As an alternative, in section 3.2, I propose a configurational approach to case assignment in Ranmo, using the notion of dependent case (Marantz 1991). Finally, section 3.3 illustrates the application of dependent case assignment in various clausal constructions.

3.1 Dissociation of case and agreement

In chapter 1, I summarized several arguments made by Baker (2015) for the dissociation of case and agreement. Two of these arguments pertain to Ranmo. The first concerns complications posed by the fact that Ranmo is a morphologically ergative language whose
subjects are variably marked (either as ergative or absolutive). Yet these two cases trigger
the same kind of agreement in a number of constructions—a clear case of case/agreement
dissociation. The second argument concerns issues with O agreement. All the examples
shown thus far link O agreement with absolutive case, but in fact this one-to-one correspon-
dence breaks down in a number of situations, where O agreement can be linked to dative
and ergative case.

3.1.1 Mismatch 1: Issues with ergative case marking

A sufficiently general theory of case and agreement would be one that accounts for erga-
tive languages/patterns as well as accusative ones. Unlike accusative languages in which
(nominative) case closely tracks (subject) agreement, ergative languages like Ranmo present
a number of mismatches between case and agreement.

For example, (78a) is a transitive clause whose subject is ergative case-marked, and (78b)
is a middle clause whose subject is absolutive case-marked. While the subjects are variably
marked, they agree in the same manner with the same designated functional head (T).

(78)  a. Nafa ngai y-fèk-ai. (>yèfèki)
      3nsg.ERG pig  3nsgO.3-kill-2/3nsgS
      ‘They are killing (the) pigs.’

1 Agreement in Ranmo will be fully discussed in chapter 4. Here I only intend to show the big picture,
namely, that one type of morphological agreement (S or O) does not lead to one type of case marking.
b. **Fi k-f-a-yintar-ai.**

   $3\text{ABS} \text{M.}_\beta\text{-NON.FUT-A-fall-2/3nsgS}$

   ‘They fell.’

The examples above show not only that the same head can be associated with multiple cases (i.e., T with ergative and absolutive), but also that the same case can be associated with multiple heads. There are two instances of absolutive case in these examples (i.e., the direct object in (78a) and the subject in (78b), yet these identically-marked noun phrases show different kinds of agreement. The absolutive object in (78a) shows O agreement, which is most likely associated with $v$, the usual locus of object agreement, whereas the absolutive subject in (78b) agrees with T, as we just discussed.

There is another environment in which absolutive case is associated with $v$, and that is, of course, in unaccusative clauses.

(79) **Fi th-f-lorar.**

   $3\text{ABS} 2/3\text{nsgO.}_\beta\text{-NON.FUT-arrive}$

   ‘They arrived.’

Like the subject of (78b), the subject of (79) is absolutive case marked, but it shows O agreement instead of S agreement. So the relationship between case and agreement breaks down in both directions: (i) absolutive case can be associated with multiple heads, $v$ and T, and (ii) a designated functional head ($v$ or T) can each be associated with both ergative and absolutive case.

These facts would be very difficult to capture under any account that requires case to be assigned under agreement with a designated functional head. A more plausible account...
would be one that posits no inherent relationship between the two morphological phenomena. Such an account may take one of the following forms: (i) ergative case is not a structural case, but an inherent one associated with a particular $\theta$-role (or a set of related $\theta$-roles), or (ii) ergative case is structural, but it is assigned configurationally in Marantz (1991)'s sense, i.e., in the presence of another nominal (within some well-defined locality domain).

The first view—that ergative case is an *inherent* case—is indeed a very popular one, taken by Aldridge (2008, 2012), Legate (2002, 2008), Mahajan (1989, 2012), and Woolford (1997, 2006), among others. The basic consensus among these researchers is that ergative case is assigned to the specifier of the functional head responsible for assigning an external argument (often Agent, though not always) $\theta$-role—most likely transitive $v$ or Voice. Unlike structural case which is assigned/checked in the syntax on the basis of closest c-command irrespective of $\theta$-roles, it is assigned to a noun phrase in its merged position, where its thematic interpretation is determined.

I reject the hypothesis that ergative is an inherent case in Ranmo for two reasons. First, there are instances of ergative case *not* being assigned where it is expected if it is inherent case, namely, in middle clauses. In chapter 2, we concluded that middles contain an external argument, just like transitive verbs do. If the ergative-as-inherent-case hypothesis is correct, then, we predict both middle and transitive subjects to receive ergative case, but only the subjects of transitives receive ergative case, as shown in (78). Moreover, in other constructions, we see instances of ergative case *being* assigned in the *absence* of such a head. This will be elaborated on in the next section.
The alternative view maintains that ergative is a structural case, but it does not require a functional head to assign case directly. Rather, on this view, case is assigned configurationally, i.e., on the basis of the c-command relationships between noun phrases themselves. This would make case logically independent of agreement since it is independent of the presence of functional heads. This is precisely the stance that I will take for Ranmo. As it turns out, perhaps around half of the world’s languages require this alternative modality of case assignment (Baker 2015). This means that case theory is more parameterized than we originally thought. That is, whether case is assigned as a reflex of agreement/Agree is a point of cross-linguistic variation. In this vein of thinking, Baker proposes the macroparameter in (80).

\[(80)\] \textbf{The Case Dependence of Agreement Parameter (CDAP)} F agrees with DP/NP only if F values the Case feature of DP/NP (or vice versa). (Baker 2015:38)

Ranmo would be a language for which the parameter in (80) is set “no” while for many Indo-European languages, it is set “yes.” We therefore conclude that ergativity in the nominal domain is a heterogeneous phenomenon with both inherent and structural sources.

3.1.2 Mismatch 2: Issues with O agreement

The bulk of the discussion surrounding the relationship between case and agreement has centered around subject agreement. But a significant number of the world’s languages show object agreement in addition to subject agreement. Out of a sample of 108 languages
surveyed in Baker (2008), approximately 50% were shown to display overt object agreement (e.g., Basque, Fijian, Warlpiri, Nahuatl, Ojibwa, etc.).

As seen in (78a), Ranmo has both overt object agreement and overt case marking. However, the two do not track each other the same way that nominative case and subject agreement do in some languages. We saw that O agreement in Ranmo is associated with the objects of transitive clauses as well as with the subjects of unaccusative clauses, which are both absolutive case-marked. However, there are instances in which an argument bearing some other case controls O agreement.

One such instance is shown by ditransitive/applicative constructions (extensively discussed in 5). In these structures, it is invariably the indirect/applied object, not the direct object, which triggers O agreement, even though it is not in the absolutive: it can be either in dative case (81a) or genitive case (81b).

(81)  

a. Kèn mbun yanjè n-a-yibar-∅. (>nebar)  
   1sg.ERG 2sg.DAT meat 2sgO.α-A-slice-sgS  
   ‘I am cutting the meat for you.’

b. Nafo nafne sòka y-a-fitar-∅.  
   3sg.ERG 2sg. GEN hand 3sgmO.α-A-wash-sgS  
   ‘S/he is washing his hand.’

Dative and genitive are inherent cases in Ranmo, associated with a Benefactive and a Possessor 0-role, respectively. As I will show in chapter 5, these cases are inherently assigned by a vP-internal functional head. v itself plays no role in assigning case to these arguments.

In fact, O agreement can even be triggered by a noun phrase bearing ergative case. This
is illustrated by complex predicates containing the verb ‘emit,’ as in (217). These predicates obligatory take an experiencer-type subject which is ergative case-marked. An analysis of these constructions is provided in section 5.3.2.

(82)  

\[ a. \text{Tasai-}o \text{ yuwar wá-a-ran.} \]  
\text{Tasai-ERG crying 3sgfO.\text{-}x-A-emit}  
‘Tasai is crying.’

\[ b. \text{Gidion-}o \text{ wel ban s-a-ran.} \]  
\text{Gidion-ERG fart 3sgmO.\text{-}y-A-emit}  
‘Gidion farted.’

O agreement, then, can take place with a noun phrase bearing \textit{any} case in Ranmo: absolutive, dative, genitive, or ergative.\(^2\) No one-to-one correspondence exists between a functional head and case in Ranmo.

Following Baker (2015), I conclude that agreement provides a good theory of some cases in some languages, but it does not provide a good theory of all cases in all languages. There must then be some other source of structural case that a good portion of the world’s languages make use of.

### 3.2 Dependent case assignment

We have seen that the distribution of ergative and absolutive case in Ranmo cannot be accounted for in terms of assignment by functional heads. Enter configurational case assignment (Marantz 1991, Bittner and Hale 1996, Yip et al. 1987). On this approach, case

\(^2\)See Baker (2015) for a similar situation in Amharic and Cuzco Quechua (p. 36-39).
is assigned on the basis of the relations between noun phrases themselves rather than by a functional head directly. This mode of assignment must be couched within the context of the case realization disjunctive hierarchy, which governs the order in which different types of morphological case are assigned.

(83) Case realization disjunctive hierarchy (Marantz 1991:24)

a. Lexically governed case

b. “Dependent” case (accusative and ergative)

c. Unmarked case (environment-sensitive)

d. Default case

First, lexical (non-structural) case is assigned to all noun phrases which are selected by lexical items such as adpositions or verbs that govern so-called “quirky case.” In Marantz (1991)’s original formulation of the hierarchy, he does not include inherent case in Woolford (2006)’s sense, but I include this alongside lexical case. Whereas lexical case is determined by the lexical properties of the head which assigns it (the verb or the adposition), inherent case is inherently associated with specific θ-positions. One example is dative case assigned to the applied argument position, which is associated with a Benefactive θ-role (see Woolford 2006). Lexical/inherent case marking precedes all structural case marking.

Second, all those nouns which have not been assigned lexical/inherent case are subject to a rule of dependent case assignment. The core idea behind this most innovative part of the proposal is that the assignment of some structural cases is contingent on there being
two distinct noun phrases within some well-defined locality domain. In Marantz’ original formulation, this meant the two noun phrases have to be both “governed by V+I” (basically, be within the same clause). Moreover, dependent case assignment is parameterized to be either “assignment up” or “assignment down,” which results in the assignment of either ergative or accusative case, respectively. The original formulation of dependent case is stated in (84).

(84) Dependent case is assigned by V+I to a position governed by V+I when a distinct position governed by V+I is:

   a. not ‘marked’ (not part of a chain governed by a lexical case determiner)
   b. distinct from the chain being assigned dependent case

   Dependent case assigned up to subject: **ergative**

   Dependent case assigned down to object: **accusative**         (Marantz 1991:25)

In more contemporary terms, the two noun phrases under evaluation for dependent case assignment are said to enter into “case competition,” which is allowed by their being in an asymmetric c-command relation to each other. Moreover, Baker (2010a, 2014, 2015) replaces the locality condition that the two noun phrases be “governed by V+I” in (84) with the condition that they be in the same spell out domain in the sense of Chomsky’s (2000, 2001) phase theory, in conformity with the more contemporary notion of a phase as the basic unit of a syntactic derivation.

The updated general schema for dependent case assignment is provided in (85), which assumes the standard version of c-command defined in (86).

83
**Dependent case assignment**

If XP bears c-command relationship Y to ZP in local domain WP, then assign case V to XP.  

(Baker 2015:111)

**c-command**

X c-commands Y if X does not contain Y and the first node that properly contains X contains Y.

The two specific rules corresponding to ergative and accusative case assignment are stated in (87).

**Dependent case assignment rules**  

(Baker 2015:48-49)

a. **Ergative**

If there are two distinct noun phrases in the same spell out domain such that noun phrase 1 c-commands noun phrase 2, then value the case feature of noun phrase 1 as **ergative** unless noun phrase 2 has already been marked for case.

b. **Accusative**

If there are two distinct noun phrases in the same spell out domain such that noun phrase 1 c-commands noun phrase 2, then value the case feature of noun phrase 2 as **accusative** unless noun phrase 2 has already been marked for case.

Finally, all noun phrases that still remain caseless are assigned **unmarked case**. Marantz notes that unmarked case “may be sensitive to the syntactic environment; for example, in a language **gen** may be the unmarked case for NPs inside NPs (or DPs) while **nom** may be
the unmarked case inside IPs” (p. 24).³

He also discusses general default case, which is assigned when noun phrases cannot receive case for whatever reason. Schütze (2001) identifies a range of environments in which nominals cannot receive case, and therefore receive some sort of default in many languages. In English, for example, default case is accusative; it occurs in constructions involving left dislocation and apposition, ellipsis, gapping, coordination, and modified pronouns. Default case assignment applies to all non-case-receiving positions. In this respect, default case is an instance of the application of the Elsewhere Principle (Kiparsky 1973), i.e., an instance of morphology making available default spell out rules for morphemes which are not realized by more specific ones. I will not discuss default case in this dissertation. The simplified version of Marantz’s disjunctive case hierarchy (the one which I will refer to throughout this dissertation) is shown in (88).

(88) **Disjunctive case hierarchy** (Marantz 1991)

Lexical/inherent case >> dependent case >> unmarked case

Since on this approach, case assignment does not rely on the presence of a functional head *per se*, it is logically independent of agreement, which is the desired result for Ranmo. This is not to say that functional heads are completely irrelevant in the theory of dependent case. While they do not *directly* assign (structural) case, they are still necessary insofar as they define domains of case assignment. This will be discussed further below.

³As it turns out, dependent case also shows domain-sensitivity. For example, ergative is the dependent case assigned in the domain of a T head in some languages whereas it is the dependent case assigned in the domain of both a T head and a v head in other languages. Ranmo will be shown to be of the latter type.
There are three ways in which a noun phrase can be assigned morphological case in Ranmo.

(89) **Case assignment in Ranmo**

a. It can get **inherent case** from the head which $\emptyset$-marks the noun phrase;

b. it can get **dependent case** according to the rule in (90); or

c. it can get **unmarked case** if it is an elsewhere (as-of-yet-caseless) noun phrase.

(90) **Dependent case assignment in Ranmo**

a. If there are two distinct noun phrases in the same spell out domain such that noun phrase 1 c-commands noun phrase 2, then value the case feature of noun phrase 1 as **ergative** unless noun phrase 2 has already been marked for case.

b. All as-of-yet-caseless noun phrases are assigned unmarked **absolutive** case.

Inherent/non-structural case, which is the first kind of case to be assigned, will be discussed in chapter 5. Below I discuss two aspects of dependent case assignment which have bearing on how case features are spelled out: (i) domains of case assignment and (ii) the “soft” (vs. “hard”) nature of the $v$ head.

### 3.2.1 Domains of case assignment, VP and TP

The general schema for dependent case assignment is repeated in (91).

(91) **Dependent case assignment**

If XP bears c-command relationship Y to ZP in local domain WP, then assign case
V to XP. (Baker 2015:111)

An important aspect of this schema to be considered is the “local domain WP.” That is, what is/are the derivational unit(s) within which c-command relationships are considered for case assignment?

As we will see, there are in fact multiple locality domains for case assignment in Ranmo. I show that each of these corresponds to a spell out domain in the sense of Chomsky’s (2000, 2001) phase theory. Chomsky proposes that syntactic derivations undergo semantic and phonological interpretation in incremental chunks, or “phases.” Once a phase head merges, its complement is shipped off to the interfaces for spell out. Once spell out is complete, syntactic operations (e.g., movement and agreement) can target the phase head and constituents in its edge (specifiers and adjuncts), but not those in its domain (complement).

Chomsky posits two phase cycles, vP and CP. The spell out domains of these phases are their complements, VP and TP. I assume, following Baker (2015), that the case feature is assigned precisely when these domains undergo spell out. When v merges, its complement VP is spelled out, and the c-command relationship(s) between noun phrases in that domain are considered for case assignment. Likewise, when C merges, its complement TP is spelled out, and the c-command pairs in that domain are considered for case assignment.

Let us see how this plays out in Ranmo, taking the simple case of a transitive clause.

(92) Kèn fo y-rir-∅.

1sg.erg coconut 3sgmO.α-scrape-sgS

4In the next chapter, I will argue there is another spell out domain headed by v, namely XP, which includes VP.
‘I am scraping a/the coconut.’

The rule in (90) states that if a noun phrase c-commands another noun phrase in the same locality domain, the higher one is marked ergative. Indeed, the higher of the two arguments in (92) is marked ergative, while the lower one is marked absolutive. The derivation goes as follows: first, a VP is formed, containing the lexical verb and the nominal fo ‘coconut.’ This phrase undergoes spell out when v, a phase head, merges. In this phase domain, only one nominal is present (fo); there is no case competition and absolutive is assigned to this nominal. Next, Voice introduces the external argument in its specifier. Then T selects VoiceP and C selects TP, causing it to undergo spell out. In this phase domain, there is only one argument, namely kên ‘I,’ so this argument should receive unmarked absolutive case; this of course is not what happens. The subject receives ergative case, as though it were sensitive to the presence of the internal argument which has already been spelled out in the previous stage of derivation (fo).

As a solution to this, I adopt Baker’s view that in fact, the contents of VP can remain visible for dependent case assignment at the spell out of the next phase cycle. This possibility arises from the parametric property of v. That is, languages can differ with respect to whether the v phase head is “hard” or “soft.” If v is a hard phase head, then the contents of its VP complement are invisible for the subsequent syntactic derivation after spelling out. If it is soft, the contents of its complement remain visible in the next stage of derivation as long as only new c-command relationships are considered at later spell outs.\footnote{C is always assumed to be a “hard phase head”: its complement is invisible for later operations.} I further assume
that the “next stage of derivation” must be a domain which involves a distinct phase head than the previous one, namely a C. If a vP (or a VoiceP which contains it) is selected by another v phase head, as is possible in some biclausal constructions (see section 3.3.2), then the contents of vP/VoiceP on the first cycle will not be considered for dependent case assignment at that stage of derivation. This is stated in (93).

(93) \( v \) is a “soft” phase head

The contents of its complement remain visible for dependent case assignment in the next stage of derivation involving a distinct phase head, C.

There really doesn’t seem to be any way around (93) given the present state of affairs. It is simply a fact that ergative case is assigned only in the presence of another nominal, even when it is part of the previous stage of derivation.⁶

If no pair of noun phrases is present in a given clause, but only a single noun phrase, then that argument receives unmarked absolutive case. This is illustrated by unaccusative clauses, as in (94).

(94) a. Fer y-rèfik. (>yèrfik)
     tree.\textbf{ABS} 3sgmO.\textit{a}-grow
     ‘A/the tree is growing.’

     b. Ke baba-ka w-ia.
     1sg.\textbf{ABS} well-\textit{ALL} 1sgO.\textit{a}-go
     ‘I’m going to the well.’

⁶Baker (2015) points out that Kayne (1994)’s LCA already “depends on collecting a list of pairs of elements such that one asymmetrically c-commands the other for the determination of word order; dependent case assignment can operate off this same list” (239). Dependent case assignment can operate on the same principle.
The two case domains (VP and TP) and their respective structural cases are shown below. The structure of VP simply is not big enough to warrant dependent case assignment in Ranmo, i.e., it does not project a specifier.

<table>
<thead>
<tr>
<th></th>
<th>Dependent</th>
<th>Unmarked</th>
</tr>
</thead>
<tbody>
<tr>
<td>TP</td>
<td>Ergative</td>
<td>Absolutive</td>
</tr>
<tr>
<td>VP</td>
<td>N/A</td>
<td>Absolutive</td>
</tr>
</tbody>
</table>

Table 3.1: Case domains and their structural cases (partial)

3.3 Environments of dependent case assignment

The above proposal predicts that we would see dependent case whenever two nominals are present in the same spell out domain. It also predicts that dependent case would be assigned to a nominal in the TP spell out domain if there is a nominal present in the complement of \( v \). Let us see the effects of dependent case assignment in specific grammatical environments.

3.3.1 Raising-to-object

An apparent exception to the clause-boundedness of ergative case assignment is demonstrated by the example in (95), in which the subject of an embedded finite clause seems to trigger ergative case on the matrix subject across a clausal boundary.
‘I saw mom was planting yams.’

However, this is a raising-to-object construction, in which the subject of an embedded finite CP complement raises past C (Postal 1974, Kuno 1979, Bruening 2002). This construction is used with perception verbs like see and hear in Ranmo.

Unfortunately, I don’t have an example where an adverb appears at the left edge of the embedded CP, which can be used to diagnose the position of the embedded subject (i.e., whether it is inside or outside the embedded CP). However, we have an even surer indication that this is indeed raising-to-object: as shown in (96a), the subject can scramble past the matrix verb. By deduction, I take that the subject ngam in (96b) to be at the edge of the embedded CP. It is now in the same locality domain (TP) as the matrix subject, as evidenced by the fact that the matrix verb shows agreement with it. The raised subject triggers ergative case on the matrix subject.

(96) a. Kèn ngam₁ t-mial-∅ [t₁ fèfè y-wèr-ndar-∅].
    1sg.ERG mom 3sgfO.γ-see.RST-sgS yam 3sgmO.ɔ-plant-IPFV.RPST-sgS
    (>tèmial, yèwèrndar)

Here is another such example, where the subject appears at the left periphery of the matrix clause:

(1) [Bengam a Amy]₁ fèna l-mial-∅ [t₁ munjin y-far-ntar-ai].
    Bengam and Amy DEM 3nsgO.γ-see.RST-sgS ant 3sgmO.ɔ-get-IPFV.RPST-2/3nsgS
    (>lèmial, yèfàntari)

‘I saw Bengam and Amy catch an ant.’
‘I saw mom was planting yams.’

b. Kèn  t-mial-∅ ngamŋi [tį fèfè y-wèr-ndar-∅].
1sg.ERG 3sgfO.γ-see.RST-sgS mom yam 3sgmO.a-plant-IPFV.RPST-sgS
(>tèmial, yèwèrndar)

‘I saw mom was planting yams.’

c. ?Kèn  t-mial-∅ ngam-oŋi [tį fèfè
1sg.ERG 3sgfO.γ-see.RST-sgS mom-ERG yam
y-wèr-ndar-∅].  (>tèmial, yèwèrndar)
3sgmO.a-plant-IPFV.RPST-sgS
‘I saw mom was planting yams.’

One last point to be made about raising-to-object in Ranmo is that it seems we have
to allow for raising to take place either before or after dependent case marking. In (96c),
both the matrix and embedded subjects are ergative case-marked, whereas in (96b), the
embedded subject is absolutive case-marked. I take this contrast to follow from a difference
in the timing of dependent case assignment relative to raising. In (96b), the embedded
subject raises before its case feature can be valued under the influence of the object fèfè at
the spell out of (embedded) TP. By contrast, in (96c), the embedded subject raises after it
has received ergative case under the influence of the object (thought this is slightly degraded).

3.3.2 ECM

Now consider a sentence involving an infinitival verb, which is a kind of nominalization.
The verb root is followed by a nominalizing suffix followed by an oblique (allative) suffix.

(97) Kèn  t-mial-∅ [VoiceP ngam fèfè wèr-se-ka].
1sg.ERG 3sgfO.γ-see.RST-sgS mom yam plant-NMLZ-ALL
‘I saw mom planting yams.’

In (97), the embedded complement as a whole counts as the object of the matrix perception verb ‘see.’ This is essentially a case of ECM, though we want to abstract from saying that absolutive is assigned by the matrix v head, as in the traditional sense of ECM.

Rather, case assignment proceeds as follows. First, when the (embedded) v merges, it triggers the spell out of its VP complement, which is demarcated by the lowest arc in (99). Since there is no two nominals in this domain, the single argument féfé (‘yams’) gets unmarked absolutive case. Next, the subject ngam (‘mom’) merges in the specifier of Voice, and the entire Voice Phrase gets selected by the matrix verb ‘see.’ Once v merges above it, the VP complement containing ‘mom’ gets spelled out. At this point, one may expect the direct object ‘yams’ to be reconsidered for case assignment, with the result that ‘mom’ receives ergative case due to the “soft” nature of v. But in fact, the embedded object ‘yam’ does not trigger ergative case on the embedded subject ngam. This is because we are on a cycle that is non-distinct from the previous one, i.e., we’re on another vP cycle rather than on a CP cycle. This is according to (98).

(98) v is a “soft” phase head

The contents of its complement remain visible for dependent case assignment in the next stage of derivation involving a distinct phase head, C.

We have evidence for (98) in the form of a contrast between (97) and (96c), a raising-to-object construction. In the latter, the contents of vP are reconsidered at the next stage of
derivation because the spell out domain across which dependent case assignment applies is a TP, not another vP.

When the matrix v head merges, it will probe and agree with the closest argument it can find in its c-command domain. This argument is ‘mom’ in Spec,VoiceP. Indeed, it does control object agreement on the verb, showing third singular feminine features.

At the final stage of derivation, C merges, causing the spell out of its TP complement. Since this phase cycle is distinct from the previous one (a vP cycle), the contents of the domain of the previous phase cycle will be reconsidered for dependent case assignment. ‘Mom’ will trigger ergative case on the matrix subject.

(99) ECM
3.3.3 Restructuring

Another environment in which we see an effect of dependent case assignment is restructuring. In restructuring environments, the matrix verb selects a VP complement instead of a CP complement (cf. Bobaljik and Wurmbrand 2003, Wurmbrand 2004). This is schematized in (100).

(100) Restructuring

In Ranmo, restructuring occurs under the phasal/aspectual verbs ‘start’ and ‘finish.’ The restructuring complement has an infinitival verb, a kind of nominalization, to which (usually) the goal suffix is attached, as exemplified in (101).

(101)  

a. Yekal-o [mèngg yar-se-r  s-rèkès-∅.  (>serkes)  
man-ERG house build-NMLZ-GOAL 3sgmO.γ-start.RST-sgS  
A/the man started to build a house.’

b. Karthènggai-o [nènggaia sika-se  th-rèkès-∅.  (>therkes)  
woman-ERG children shout.at-NMLZ 3nsgO.γ-start.RST-sgS
‘A/the woman started to yell at the children.’

c. Kèn [fi fueka-se-r | t-rèkses-∅. (ɛtèrkes)

lsg.erg 3ABS grow-NMLZ-GOAL 3sgfO.γ-start.RST-sgS

‘I started to lift her up.’

Restructuring has a crucial effect on agreement and dependent case assignment. The matrix verb is able to agree with the object in the restructuring environment—a result that follows because the embedded object is within the same phase/clause as matrix $v$. Moreover, the object ‘house’ is able to trigger ergative case at the spell out of TP, in accordance with (90) and (98).

### 3.4 Chapter summary

In this chapter, we accounted for the (partial) distribution of ergative and absolutive case in Ranmo using the rule of dependent case assignment, repeated below.

(102) **Dependent case assignment in Ranmo**

<table>
<thead>
<tr>
<th>a. If there are two distinct noun phrases in the same spell out domain such that noun phrase 1 c-commands noun phrase 2, then value the case feature of noun phrase 1 as ergative unless noun phrase 2 has already been marked for case.</th>
</tr>
</thead>
<tbody>
<tr>
<td>b. All as-of-yet-caseless noun phrases are assigned unmarked absolutive case.</td>
</tr>
</tbody>
</table>

Crucially, the parameterization of $v$ as a soft phase head allows for the contents of its spell out domain, VP, to be available at the next stage of derivation, the CP phase cycle.
(103) \textit{v} is a “soft” phase head

The contents of its complement remain visible for dependent case assignment in the next stage of derivation involving a distinct phase head, \(C\).

The condition in (103) ensures that ergative case is assigned to the embedded subjects of raising-to-object constructions under the influence of the embedded object (since the phase head that is merged is a \(C\)), but not on those of constructions involving a smaller infinitival complement (since the next phase head that merges is just another \(v\)).

All the examples provided in this chapter dealt with constructions showing an ergative-absolutive pattern of agreement. The next two chapters will include a discussion of dependent case assignment in the context of middle verbs and applicative constructions. We will see that middle verbs and applicatives are characterized by a distinct case assignment domain, \(XP\), which is another complement of \(v\).
Chapter 4

Middle verbs and their objects

In chapter 2, we saw morphological and syntactic evidence for the external argumenthood of the subjects of middles. This suggests that the basis of split-S agreement between them and unaccusatives is, basically, the unergative-unaccusative distinction (Perlmutter 1978, Burzio 1986). The question we now have to address is why this distinction should lead to two observably different patterns of agreement in Ranmo. English likewise has the unergative-unaccusative distinction, but the two types of intransitive verbs show the same pattern of agreement in which the nominative case-marked subject is always cross-referenced on a finite T head by a suffix, irrespective of whether the verb is unergative or unaccusative.

(104) a. Mary work-s all day long.

b. The hunter arrive-s home late every night.

It is not immediately clear how one can motivate a system of agreement that discrimi-
nates the underlying positions of the targets of agreement. Suppose that there are two heads involved in agreement in Ranmo (this is expected since transitive verbs realize subject and object agreement in two non-contiguous positions in the verbal complex). One conceivable “discriminatory” agreement system might be where the probe on one of these heads is deactivated in the context of a sole internal argument, while the probe on the other head is deactivated in the context of a sole external argument, working within the Agree/feature checking framework (Chomsky 2000, 2001). But what syntactic principles would govern such selective behavior? (And what additional syntactic principles would we need to ensure that this selective behavior does not arise in the context of transitive verbs?) Ideally, the syntactic mechanism responsible for overt agreement would be held constant across all syntactic environments and the observable differences would fall out from other independent differences between unaccusatives and middles.

This chapter will indeed conclude that Ranmo split-S agreement can be captured without recourse to a context-sensitive agreement mechanism or a special set of agreement rules active only in the non-ergative portion of the grammar (middles), but not in the ergative portion (unaccusatives and transitives). This conclusion hinges on a proper understanding of the nature of middles. In section 4.1, I propose that middles are in fact syntactically transitive despite being semantically one-place. Specifically, they project a null anaphoric object which is coindexed with and bound by their external argument. Since anaphors are NPs, middles are in essence an instance of pseudo-noun incorporation, which is proposed to be characterized by an extra layer of functional structure above VP.
Section 4.2 discusses the consequences of this proposal for how we understand split-S agreement in Ranmo. First, adopting Preminger (2009, 2011)’s model of agreement, I argue that both unaccusatives and middles are instances of “agreement failure,” where the operation responsible for overt agreement is invoked, but fails to culminate successfully—that is, without leading to a derivational crash, contra Chomsky (2000, 2001). The transitive PNI analysis of middles, coupled with the independently motivated theoretical assumption that agreement can fail, allows us to cast split-S agreement as epiphenomenal—just as other (better-studied) types of split ergativity have recently been argued to be (see section 4.2.3). There is no split as such in Ranmo agreement, only pseudo-noun incorporation, which is a general phenomenon attested in languages with a nominative-accusative alignment as well.

Finally, section 4.3 discusses a small class of morphologically middle verbs which are unique in that they can take non-anaphoric NP objects, overt or null. Unlike anaphors, these objects can trigger ergative case on the subject; this is new evidence for the theory of ergative as dependent case (Bittner and Hale 1996, Marantz 1991).

4.1 Middles instantiate PNI

In chapter 2, the following characteristics of middle verbs were observed.

(105)  CHARACTERISTICS OF (SEMANTICALLY ONE-PLACE) MIDDLE VERBS¹
   a. They are semantically one-place.
   b. They are a semantically heterogeneous class, which includes reflexives/reciprocals, anticausatives, and semantic unergatives/agentives.

¹In section 4.3, we examine a small class of middles which show different properties.
c. They show S agreement but no O agreement.
d. Their subjects are absolutive case-marked.
e. Their subjects are external arguments.
f. They show special prefixal morphology (the middle prefix plus the a- prefix).
g. They alternate with transitive verbs.
h. They do not allow external possession.
i. They can take an emphatic reflexive anaphor.

Their semantically intransitive nature, combined with syntactic evidence for the external argumenthood of their subjects provided by the external possession test, preliminarily suggests the following structure, in which the only argument projected is an external argument in Spec,VoiceP, as in (106). However, in section 2.2.2.3, we also saw that middles show transitive behavior, i.e., they can license emphatic reflexive anaphors.

(106) Structure of the middle verb (tentative)

Another aspect of middle verbs that needs to be accounted for is their special morphology consisting of the middle prefix and the a- prefix. The most obvious hypothesis is that these are some kind of derivational morphology indicating that the verbs have been derived
from their transitive counterparts. (Recall that all middle verbs in principle can undergo transitivity alternation.) One question that arises, though, is why the derivational process—if that is indeed what they are reflecting—would involve two prefixes instead of one. What is the role and nature of each of these, and how are they related to each other?

As we will see, the facts about the morphology of middle verbs will fall out straightforwardly from a transitive analysis of middle verbs. Specifically, they take an anaphor object that is pseudo-noun incorporated. The term “pseudo-noun incorporation” first appeared in Massam (2001) with reference to a particular type of construction in Niuean (Oceanic). Niuean is a VSO language with an ergative-absolutive system of case marking. Canonical clauses in Niuean begin with a tense/aspect particle; they are exemplified in (107).²

(107) CANONICAL CLAUSES IN NIUEAN (Massam 2001:155-157)

a. Ne kai e Sione e tau talo aki e huki.
   PST eat erg Sione abs pl taro with abs fork
   ‘Sione ate the taros with a fork.’

b. Ne tohitohia Sione.
   PST writing abs Sione
   ‘Sione was writing.’

c. Takafaga tumau nī e ia e tau ika.
   hunt always emph erg he abs pl fish
   ‘He is always fishing.’

These sentences contrast with so-called pseudo-noun incorporation (PNI) constructions, exemplified in (108).

²The Niuean examples below are cited as coming from Massam (2001), but they originally appeared in Seiter (1980).
PNI constructions differ from canonical transitive clauses in several important ways. First, the word order is no longer VSO, but VOS. The constituency of VO is shown by the fact that an adverb must follow the object rather than precede it (compare (107c) with (108a)). Second, the PNI object cannot be preceded by any functional elements including a relative clause, number marker, possessor, and determiner. It can, however, be modified by an adjective (108b). Third, there is a change in case alignment: in PNI, the subject now bears absolutive case whereas the object bears no case morphology; this renders the PNI sentence formally intransitive.

Massam proposes that the differences between canonical transitive sentences and PNI sentences basically boil down to one thing: the nature of the object merged. In transitive sentences, the object merged is a full DP, which obligatorily undergoes object shift to a position outside the $vP$—the Absolutive Phrase (below, “KP”)—in order to check the D (or EPP) feature associated with absolutive case (109a). Subsequently, an agent DP will merge in Spec,$vP$, checking ergative case in situ. Finally, the VP will undergo predicate fronting in order to check the predicate feature on I, along the lines of Pearson (2007), resulting in
the VSO(X) order characteristic of Niuean clauses (109b).

(109) a. Niuean transitive clause (object shift)

b. Niuean transitive (object shift) → VSO

In PNI sentences, on the other hand, the object merged is a bare NP. It therefore fails to undergo object shift to KP, since this position only attracts DPs (110a). Presumably, according to the author, this is because NPs lack a Case feature (since Case is assumed to be present on an extended functional head, not on N). Instead, the agent DP argument
appears in Spec,KP, where it checks the absolutive Case feature. Finally, the NP object fronts along with the verb to the predicate position in the clause. This accounts for the VOS order (110b).

(110) a. Niuean PNI (no object shift) before predicate fronting

b. Niuean PNI (no object shift) after predicate fronting → VOS

The analysis hinges on the hypothesis that Niuean can choose to merge either an NP or a DP constituent as the complement of the verb, with differing syntactic consequences (cf. Chierchia 1998, Bošković 2008). This is allowed for by the articulated views of nominal architecture, in which an NP constituent can include the noun and its modifiers, but
excludes any functional material including relative clauses, number markers, case markers, and possessors.

The NP status of PNI objects is also supported by its semantic properties. These objects are interpreted as non-specific indefinites. They are existentially quantified and take narrow scope with respect to all other operators (cf. Bittner 1994, Van Geenhoven 1998, Massam 2001, Farkas & De Swart 2003, Chung & Ladusaw 2004, Dayal 2011). Massam’s analysis accounts for the semantic properties of PNI objects, if we can correlate their non-referential nature with the absence of functional projections above the NP-layer.

4.1.1 A new characterization of PNI

A crucial aspect of Niuean PNI objects is that at some point in the derivation (specifically, before predicate fronting), they are more deeply embedded than their canonical transitive counterparts. This, I claim, is the defining property of PNI.

(111) Defining property of PNI

The PNI object must be more deeply embedded than the canonical transitive object (at some point in the derivation).

For Massam, (111) is derived by requiring the PNI object to remain in situ, while the canonical transitive object undergoes case-motivated object shift so that the derived position of the latter (i.e., before predicate fronting) is structurally higher (or “less embedded”) than that of the PNI object before predicate fronting. This means that PNI must be understood in relative rather than absolute terms. Its core property is not adjacency between the verb
and the object *per se*, but rather it is characterized by the object being closer to some reference point—say, *v*—at some point in the derivation *relative to* when the object merged is a DP/ϕP argument.

This relative understanding of PNI allows for an alternative way to characterize PNI. That is, the syntactic and semantic effects of (111) can be derived by positing additional functional structure above VP in the case of PNI, but not in the case of canonical transitive clauses. Specifically, I propose that the PNI object (henceforth NP object) requires the presence of a corresponding functional projection on the clausal spine above VP, which I will simply refer to as “XP.” This is schematized in (112a).

![Diagram of PNI and Canonical Transitive structures]

(112)  

This is essentially a licensing requirement on NPs: NPs must be specially licensed by a *vP*-internal functional head, X (but see section 4.4). This immediately accounts for the restricted distribution of NP arguments; they can only occur in the direct object position of transitive clauses\(^3\) and never in a subject position outside *vP* or even an indirect object (“dative”) position. On the other hand, when the verb selects a ϕP, this argument is directly

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\(^3\)In chapter 5, we will see that they can also occur in unaccusatives, but only in the presence of a higher applied argument.
licensed under Agree with the $v$ head, which selects a VP as its immediate complement.\footnote{Alternatively, it is possible, as suggested by C.-T. James Huang, that X is present not only in the case of PNI but in all other construction types as well. In other words, in canonical transitives, too, $v$ selects XP, and X selects VP containing a V and $\varphi$P. The difference between PNI and canonical transitives then is derived by the fact that in the former, X serves as the host of an overt ‘light verb’ (spelled out as $a$-), which is correlated with the presence of an NP as in, for example, DO+$SОНG$ ‘sing.’ By contrast, in canonical transitives, X is phonologically null and does not realize a light verb, and this is correlated with the presence of a full-fledged $\varphi$P direct object. This is a plausible alternative, but if we concede that there is in fact a phonologically null X present in transitives, we would then have to bring back object shift as an ingredient of PNI just as in Massam (2001) (in order to capture the difference in object agreement between PNI and canonical transitives).}

This means that the ability of V to take either a $\varphi$P or an NP is directly correlated with the ability of $v$ to select either a VP or an XP, respectively, as its complement.

I propose that middles instantiate the PNI structure in (112a). How is this so? Recall that middles can take reflexive anaphors (which are often null). I contend that anaphors are referentially defective bare NPs\footnote{Another way to describe anaphors is that they are -R (not referentially independent) elements which satisfy the condition on A-chains.}, following Chomsky (1986), Keenan (1988), and Reuland and Reinhart (1995). This would be in line with the uncontroversial claim that anaphors are feature-deficient relative to pronouns. This is supported by the fact that cross-linguistically, anaphors differ from pronouns in that they lack a full specification of $\varphi$-features (Chomsky 1981, Bouchard 1982). This explains why they cannot be used as demonstratives, referring to some entity in the world. Binding, therefore, may be understood as the procedure assigning the content necessary for their referential interpretation (Reuland and Reinhart 1995:245).

Even English anaphors, which show a full $\varphi$-feature specification ($himself, ourselves, etc.$) have been deemed to be deficient relative to pronouns in another respect, namely,

\begin{enumerate}
\item \textbf{Condition on A-chains}\hspace{1cm} (Reuland and Reinhart 1995:255)
\item A maximal A-chain ($\alpha_1, \ldots, \alpha_n$) contains exactly one link – $\alpha_k$ – which is $+R$.
\end{enumerate}

108
with respect to Case (Reuland and Reinhart, 1995). This is because anaphors lack a nominative/accusative opposition unlike pronouns and other DPs (she/hers, they/them, etc.). In assuming with Chomsky (1981) that Case is among the $\varphi$-feature bundle, Reuland and Reinhart (1995) take this to suggest that English anaphors are in fact $\varphi$-feature deficient, just like anaphors in other languages.

In the same vein, I argue that Ranmo emphatic-reflexive anaphors are featurally deficient relative to $\varphi$P arguments, even though they are able to express $\varphi$-feature information. For example, ‘myself’ in Ranmo (k`enwá) is a complex expression made up of an ergative case-marked pronoun specified for $\varphi$-features (k`en) and a topic-like element -wá; however, I believe that these expressions are not inherently endowed with $\varphi$-features in the same way that pronouns are. Or perhaps they are not present at least when they first enter the derivation, in which case the $\varphi$-features may reflect some kind of a post-syntactic copying process.
mechanism.\textsuperscript{6}

This means that middle verbs can be viewed as a type of PNI proposed in (112a): their object is an NP contained within a VP that is selected by a \(v\)P-internal functional head. What distinguishes middles from more general types of PNI like the Niuean kind (see also section 4.3) is that there is an anaphoric relation between the external argument and the NP object.

(113) Anaphor binding in middles

\textsuperscript{6}There is also empirical evidence from other languages showing that anaphoric objects are bare NPs. In Q’anjob’al (Mayan), for instance, the regular transitive form of the verb is used for reflexive sentences, as in (1a).

(1) Q’anjob’al

a. Reflexive

\begin{center}
Maktxel max y-il \textbf{s-ba}\?
\end{center}

\begin{center}
who ASP ERG3-see \textbf{GEN3-SELF}
\end{center}

‘Who saw herself?’

b. Extended reflexive

\begin{center}
Maktxel max s-b’on \textbf{s-na}\?
\end{center}

\begin{center}
who ASP 3ERG-paint \textbf{3ERG-house}
\end{center}

‘Who painted his\textsubscript{i/*j} (own) house?’ (Coon et al. 2014:225-226)

Independent evidence from word order and the availability of determiners indicates that the bold-faced objects in (1) are NPs, not full DPs as in canonical transitive clauses. First, word order in Q’anjob’al is typically VSO, but with with reflexives, it must be VOS. Second, noun classifiers are possible on the objects of transitive clauses, but impossible on (extended) reflexive objects (Coon et al. 2014).
The structure in (113) characterizes all three semantic subtypes of middles discussed in section 2.2.1—reflexives/reciprocals, anticausatives, and agentives, exemplified again in (114).

(114) a. Reflexive/Reciprocal

Ke ng-*(a)-rir-∅.
l1sg.abs m.∅-a-scratch-sgS

‘I am scratching myself.’

b. Anticausative

Glas ng-*(a)-wá-∅.
glass m.∅-a-break-sgS

‘(The) glass is breaking.’

c. Agentive

Thinto ng-*(a)-lēfen-∅.
bird m.∅-a-fly-sgS

‘A/the bird is flying.’
There is morphological evidence for this projection: the prefix \textit{a-} is the overt realization of its head. What this means is that all middle verbs, whether they have a reflexive/reciprocal \textit{interpretation} or not, are reflexivized in the sense they require anaphoric binding shown in (113). There are two \( \partial \)-roles present in this structure, an Agent and a Patient. Even those sentences that have an anticausative or agentive \textit{interpretation} are characterized by this relation. Thus, the semantic interpretation of the agentive verb in (114c), for example, is built on the coreferential relation between an agent (\textit{a/the bird}) and a patient (\textit{a/the bird}). The literal translation of (114c) should therefore be ‘\textit{a/the bird is flying itself}.’ This analysis extends to all anticausatives as well as those agentives (unergatives) like ‘run’ and ‘play’ which are built on lexical compounds based on transitive verbs like ‘carry’ and ‘hug’ (see (58b-c)).

The \textit{a-} prefix occurs immediately adjacent to the verb root. I suggest that the verb root undergoes head movement through this morpheme and then the middle morpheme, which is realized on \( v \) (see section 4.2), in order to derive the reverse order of the stem prefixes \([ng-a\text{-ROOT}]\) in accordance with the Mirror Principle (Baker 1985).

\begin{itemize}
\item[(115)] \textbf{a. Before head movement} \hspace{2cm} \textbf{b. After head movement}
\end{itemize}
4.1.2 XP as a distinct case domain

The proposal above hinges on the hypothesis that the Ranmo verb can select either an NP or a \( \varphi P \) as its complement (cf. Chierchia 1998, Bošković 2008). Moreover, the choice between NP and \( \varphi P \) is directly correlated with whether \( v \) selects XP or VP as its complement. In chapter 3 we saw that VP, the complement of the phase head \( v \), constitutes a case assignment domain of its own, distinct from TP. Now we must add to the inventory of case assignment domains XP since it, too, is a complement of \( v \). Just as VP undergoes spell out when it is selected by \( v \) in transitive and unaccusative clauses, so too will XP (containing VP) undergo spell out when it is selected by the same phase head.

I propose that the XP domain has its own distinctive unmarked case, which I will refer to as “accusative.”\(^7\) Unmarked accusative case is assigned only in this domain and nowhere else; this is in contrast to absolutive case which has a much wider distribution. Accusative is not morphologically distinguishable from absolutive case which is the unmarked case associated with the VP and TP domains. They are both realized as zero/null. At the time XP is spelled out, there is only one argument, namely the anaphor. Therefore, no dependent case will be assigned\(^8\), and the anaphor will be assigned unmarked\(^9\) accusative case.

\(^7\)This sense of accusative should not be confused with accusative in the sense of low dependent case assigned in accusative languages as well as in tripartite languages.

\(^8\)One may ask whether dependent case can ever be assigned in this domain. Earlier I said that the structure of VP is not rich enough to warrant dependent case assignment. So far it seems that the same can be said of XP. In chapter 5, however, we will see that there can be dependent case assignment in the XP domain.

\(^9\)Actually, the term “unmarked” is a bit misleading. In Ranmo, absolutive and accusative case are both truly unmarked in the sense they are not realized with any overt affixal material. But take partitive case, for instance, which is analyzed as “unmarked” case in VP in Finnish (Baker 2015). But this case has an overt suffix of its own, \( -a \).
The individual cases and their associated case domains are summarized below.

<table>
<thead>
<tr>
<th>Dependent</th>
<th>Unmarked</th>
</tr>
</thead>
<tbody>
<tr>
<td>TP</td>
<td>Ergative</td>
</tr>
<tr>
<td>VP</td>
<td>N/A</td>
</tr>
<tr>
<td>XP</td>
<td>??</td>
</tr>
</tbody>
</table>

Table 4.1: Case and spell out domains

Once the vP cycle has been completed, Voice will merge, introducing an external argument. Then T will merge, followed by C. This phase head will trigger the spell out of TP.

There is only one nominal element, the external argument, in this domain; therefore, we expect it to be assigned absolutive case, but since v is a soft head in Ranmo (116), we need to consider any other nominal contents from the previous phase of derivation for dependent case assignment.

(116) v is a “soft” phase head

The contents of its complement remain visible for dependent case assignment in the next stage of derivation involving a distinct phase head, C.

Indeed, there is a noun phrase that remains visible from the previous phase of deriv-

(1) Finnish
   a. Tuo-n karhu-n/karhu-t.
      bring-1sS bear-ACC/bear-PL.ACC
      ‘I’ll bring the (a) bear/the bears.’
   b. Tuo-n karhu-j-a.
      bring-1sS bear-PL-PART
      ‘I’ll bring (some) bears.’

Therefore, I use “unmarked” in the strictly Marantzian sense, i.e., it refers to case that is assigned to the noun phrase that still remains to be case-assigned after dependent (and lexical/inherent) case has been assigned, i.e., it is “non-dependent” case.
tion, namely, the NP anaphor; however, this will *not* trigger dependent case on the subject because the anaphor is non-distinct from the subject (recall distinctness of noun phrases is a condition for dependent case assignment; see (90). They are coindexed and therefore cannot be distinguished for the purposes of dependent case assignment. The subject therefore receives unmarked case associated with TP, which is absolutive.

4.2 Explaining the middle prefix

The proposal that middles are a special type of PNI provided a straightforward account of the prefix *a*- as the morphological realization of X. In this section, I show that the proposal also straightforwardly explains the nature of the middle prefix. In a nutshell, I argue that the middle prefix is the morphological realization of an object agreement probe that has failed to find an appropriate \( \varphi \)P goal. An important consequence of this proposal is that there is no split-S agreement as such in Ranmo; there is only transitive agreement with successful or failed object agreement. Ranmo, therefore, is not a split-S ergative language. We will see the significance of this proposal in relation to recent theoretical work on other types of split ergativity (section 4.2.3).

4.2.1 Ranmo agreement basics

I begin by laying out some theoretical assumptions of my proposal regarding agreement in Ranmo. I adopt the standard minimalist framework in which agreement relationships are
established via the syntactic operation Agree, which establishes a feature-checking relation between an uninterpretable, unvalued instance of a feature F (a probe) and an interpretable, valued instance of F (a goal) which it asymmetrically c-commands.

(117) **Agree**

a. An unvalued feature F (a probe) on a head scans its c-command domain for another instance of F (a goal) with which to agree.

b. If the goal has a value, its value is assigned as the value of the probe.

According to Chomsky, Agree ensures the elimination of uninterpretable features, elements which are illegible at the interfaces and therefore must be deleted before the end of the derivation. Once Agree takes place, the uninterpretable \( \varphi \)-features on the probe get valued (and deleted), as in (118b).

Chomsky identifies the T(ense) head as the host of uninterpretable \( \varphi \)-features, i.e., the probe. One piece of evidence for this is that subject agreement morphemes are often expressed as portmanteaus showing allomorphy for tense (and/or aspect and/or mood). This is easy to see in English: *I look-ed* vs. *he look-s.*
Ranmo presents a slight complication to the generalization that subject agreement is realized on T. In Ranmo, S agreement morphemes are constant across all tense/aspect environments. This suggests that S agreement is not realized on the head which encodes tense/aspect information. I suggest that the agreeing head/probe is actually an Agr head, which I assume comes into the derivation adjoined to T, as in (119). T hosts tense/aspect features exclusively.

(119) **The locus of S agreement in Ranmo**

![Diagram](image)

(119) predicts independent realizations of agreement and tense, which is borne out, as shown in (120).

(120) Fo ng-a-yintar-wa-ai. (>ngentarwai)
coconut m.ə-A-fall-PFV,DPST-2/3nsgS
‘(The) coconuts fell (long ago).’

However, for simplicity’s sake, I will omit the Agr head in my trees below. S agreement will be shown to be realized on T. Ranmo transitive verbs also show object agreement, which is realized with one of the prefixes from the O series. In Baker (2012)’s survey of 108 languages, the second most likely agreeing head was identified to be transitive v.10

---

10Approximately 50% of languages in the world (193/378) show object agreement as well as subject
I propose that both T and v enter the derivation with uninterpretable, unvalued instances of \( \varphi \)-features which probe their c-command domain for interpretable instances, in accordance with (117). The most local argument in v’s c-command domain is the internal \( \varphi P \) argument, whereas the most local argument in T’s c-command domain is the external argument projected by Voice. These heads agree with their most local argument, as schematized in (121a).

(121)  

a. **TRANSITIVE**

\[ \begin{array}{c}
\text{TP} \\
\downarrow \\
\text{VoiceP} \quad \text{T} \\
\downarrow \\
\varphi P \\
\downarrow \\
\varphi \text{P} \quad \text{Voice'} \\
\downarrow \\
\varphi P \quad \text{Voice} \\
\downarrow \\
\text{VP} \quad \text{v} \\
\downarrow \\
\varphi P \quad \text{V} \\
\end{array} \]

b. Ninta mam s-f-yikan-e mèngg-fa.  
1nsg.ERG fish 3sgmO.β-NON.FUT-carry-1nsgS house-all  
‘We carried a/the fish to the house.’

An important feature of O agreement is that it shows contextual allomorphy for TAM, as illustrated in (122) (and in many other examples above).

(122)  

a. w-fitar-ndar-ai  
1sgO.α-wash-RPST.IPFV-2/3nsgS  
‘You(pl)/they were washing me.’

agreement (Siewierska 2005).
b. \textbf{b-f-yutnang-∅}
   \text{1sgO.β-NON.FUT-make-sgS}
   ‘S/he/you made me.’

c. \textbf{tw-rikl`em-∅}
   \text{3sgmO.γ-hide.RST-sgS}
   ‘S/he/you hid me.’

This is initially puzzling from a cross-linguistic point of view, since object agreement, being associated with \textit{v}, should not show sensitivity to TAM, information that is typically encoded higher up in the clause structure, above the \textit{vP/VoiceP} event structure. But recall that there are two slots in the verbal complex that encode TAM information in Ranmo, as shown again in Table 4.2.

<table>
<thead>
<tr>
<th>Inflectional prefixes</th>
<th>Stem</th>
<th>Suffixes</th>
</tr>
</thead>
<tbody>
<tr>
<td>O agreement</td>
<td>(inner)</td>
<td>(Valence)</td>
</tr>
<tr>
<td>TAM</td>
<td>TAM</td>
<td>TAM</td>
</tr>
</tbody>
</table>

Table 4.2: Ranmo verbal template

I argue that O agreement realized on \textit{v} shows sensitivity to \textit{inner} TAM, which is encoded on a low aspectual projection that is closer to the root than outer TAM. It is realized to the left of the root, whereas outer TAM is realized to the right.

The availability of two agreeing heads/probes in a language raises important questions about what happens in intransitive contexts, where agreement seems to be realized on a single head only. This issue is raised by both unaccusatives and middles, so let’s look at unaccusatives first, which show O agreement only. Crucially, their subjects show the same kind of allomorphy for inner TAM as the direct objects of transitive clauses. In (123), the
third singular feminine agreement morpheme is spelled out one way (i.e., as \textit{ng-}, which is from the \textit{\textalpha{}-series}) in the environment of progressive recent past (123a), whereas it is spelled out another way (\textit{twá-}, from the \textit{\textgamma{}-series}) in the environment of perfective distant past (123b) (cf. 122).

\begin{enumerate}
\item[(123)]
\begin{enumerate}
\item[\textbf{a.}] Fi \textbf{ng-}lor-ar-ndar. \texttt{3ABS 3sgf.O.\textalpha{}-arrive-IPFV.RPST} (>ngélorarndar) \\
\texttt{She was arriving.}
\item[\textbf{b.}] Fi \textbf{t-}lor-wa. \texttt{3ABS 3sgfO.\textgamma{}-arrive.RST-PFV.DPST} (>télorwa) \\
\texttt{She arrived (long ago).}’
\end{enumerate}
\end{enumerate}

We saw in transitive clauses that O agreement is realized on \textit{v}. This means that the locus of subject agreement in unaccusatives is \textit{v}, not \textit{T}. This is interesting from a cross-linguistic perspective because of the generalization in (124).

\begin{enumerate}
\item[(124)] T(ense) is the category most likely to show subject agreement. (Chomsky 2000, 2001)
\end{enumerate}

Important evidence that unaccusative subjects agree with \textit{v} rather than \textit{T} comes from the differences in agreement between eventive and stative unaccusatives. The two subclasses of unaccusatives constitute morphologically and syntactically distinct groups (see section 2.1.2.2). In the domain of agreement, whereas all eventive unaccusatives make use of one set of agreement prefix series, stative unaccusatives make use of another set of agreement prefix series. The two sets are shown again below.
Table 4.3: Stative O series

<table>
<thead>
<tr>
<th></th>
<th>α:STAT</th>
<th>β:STAT</th>
</tr>
</thead>
<tbody>
<tr>
<td>1sg</td>
<td>w-</td>
<td>b-</td>
</tr>
<tr>
<td>1dl/2sg</td>
<td>n-</td>
<td>ngg-</td>
</tr>
<tr>
<td>3sgm</td>
<td>y-</td>
<td>s-</td>
</tr>
<tr>
<td>3sgf</td>
<td>ng-</td>
<td>k-</td>
</tr>
<tr>
<td>2/3dl</td>
<td>l-</td>
<td>th-</td>
</tr>
<tr>
<td>pl</td>
<td>wá-</td>
<td>bw-</td>
</tr>
</tbody>
</table>

Table 4.4: Eventive O series

<table>
<thead>
<tr>
<th></th>
<th>α</th>
<th>β</th>
<th>γ</th>
</tr>
</thead>
<tbody>
<tr>
<td>1sg</td>
<td>w-</td>
<td>b-</td>
<td>tw-</td>
</tr>
<tr>
<td>1nsg</td>
<td>n-</td>
<td>ngg-</td>
<td>ntên-</td>
</tr>
<tr>
<td>2sg</td>
<td>n-</td>
<td>ngg-</td>
<td>ntên-</td>
</tr>
<tr>
<td>2nsg</td>
<td>th-</td>
<td>th-</td>
<td>th-</td>
</tr>
<tr>
<td>3sgm</td>
<td>y-</td>
<td>s-</td>
<td>s-</td>
</tr>
<tr>
<td>3sgf</td>
<td>ng-</td>
<td>k-</td>
<td>tè-</td>
</tr>
<tr>
<td>3nsg</td>
<td>th-</td>
<td>th-</td>
<td>th-</td>
</tr>
</tbody>
</table>

Why should the shape of agreement vary according to the lexical semantics (eventive vs. stative) of the verb in Ranmo? This makes sense if the agreeing head is $v$ rather than $T$. $v$ is often the functional head which contains information about eventivity and stativity, so it makes sense that, assuming there are two types of $v$ (eventive and stative), there might be differences in agreement exponence. Of course, this would mean that Ranmo is a counterexample to the generalization in (124), making it somewhat of a typological anomaly in regard to agreement.

However, I argue that this is not true. I propose that agreement in Ranmo unaccusative clauses proceeds in exactly the same manner as in transitive clauses. That is, in both clause types, both $T$ and $v$ probe. The only difference is that in unaccusatives, $T$ is spelled out with default (3rd singular) agreement, which happens to be null/zero in Ranmo. In other words, Ranmo unaccusatives constitute an empirical domain of so-called “agreement failure” in the sense of Preminger (2009, 2011, 2014).

His model offers an alternative view of how to enforce the obligatoriness of agreement. According to the standard Chomskyan view, ($\varphi$-)agreement is required to render the unin-
terpretable \( \varphi \)-features interpretable. It necessarily leads to the deletion of interface-illegible elements before the derivation comes to an end. On this view of agreement, the ungrammatical status of sentences like (125) is due to the presence of unvalued \( \varphi \)-features on the agreement probe, T.

(125) *The candidate speak.

In Preminger’s system, however, the obligatoriness of agreement is enforced in terms of an obligatory agreement operation, the overt product of which is morphological \( \varphi \)-agreement. In other words, the syntactic operation responsible for the appearance of an agreement morpheme must be invoked, but need not lead to successful valuation of uninterpretable features. Therefore, this system allows for cases of uninterpretable features surviving the derivation unvalued. One empirical domain which has motivated this model of agreement is dative intervention, defined in (126).

(126) **Dative intervention**

A dative DP/PP is able to block agreement from targeting a more embedded NP, but is unable to transfer its own \( \varphi \)-features to the agreement host.

This phenomenon gives rise to “default” (e.g., 3rd person singular) agreement, as exemplified by Icelandic in (127).

(127) **Icelandic**

\[
\text{Morgum studentum liki/*lika verkið}
\text{many students.PL.DAT like.3SG/*3PL the.job.NOM}
\]
‘Many students like the job.’

(Preminger 2011:104)

(128) shows that this agreement isn’t with the next highest (nominative) argument (‘the job’), since the same effect arises when no additional argument is present.

(128) Strákunum leiddist/*leiddust
    the.boys.PL.DAT bored.3SG/*3PL

‘The boys were bored.’

(Preminger 2011:104)

Preminger proposes that dative intervention is an instance of failed agreement proper: a case where the operation responsible for morphological $\varphi$-agreement is invoked, but fails to culminate successfully (i.e., fails to value the uninterpretable features of the probe). He cites a number of other empirical domains which instantiate agreement failure, and I refer the reader to his work for more extensive discussion on the obligatory-operations model of agreement and its advantages over Chomsky’s (un)interpretability model of agreement in capturing phenomena like dative intervention.

Consider how this obligatory-operations model can capture agreement in Ranmo without recourse to special rules. I propose that Ranmo unaccusatives present another empirical domain of failed agreement. First, in the case of transitives, both $v$ and $T$ probe and successfully agree, leading to the valuation of their uninterpretable features. Each head will agree with the closest c-commanded goal: for $v$, it is the internal argument; for $T$, it is the external argument, as shown in (121).

Unaccusatives differ from transitive clauses only in that they lack a Voice projection which introduces an external argument (Kratzer 1996). In other words, I do not say that the
transitive/intransitive distinction is determined by the features of the \( v \) head; there is only a single (eventive)\(^{11}\) \( v \) head, which is present in both unaccusative and transitive contexts. In other words, \( v \) does not contain transitivity information in Ranmo, but is simply a kind of verbalizer and the locus of O agreement.

In the derivation of an unaccusative, both \( v \) and T probe, but the latter fails to agree. \( v \) will be the first agreeing head to merge and enter into agreement with the sole internal \( \varphi P \) argument present. This will result in the spell out of O agreement. Once T merges, it, too, will probe, but it will be unable to find any argument to agree with, leading to an instance of “agreement failure.” This could be for one of two reasons: it could be because the sole internal argument is within the complement domain of the phase head \( v \), so by the Phase Impenetrability Condition (Chomsky, 2000), T cannot target this argument. Alternatively, T’s agreement with the internal argument can be ruled out by some version of the Activity Condition (Chomsky 2000, 2001), which basically blocks agreement with the same argument twice. Failed agreement does not lead to ungrammaticality in this model of agreement.

(129) a. **UNACCUSATIVE (FAILED AGREEMENT AT T)**

\(^{11}\)There is also a stative \( v \) head, which will be discussed below.
b. Fer y-rèfìk. (>yèrfik)  
   tree 3sgmO.α-grow  
   ‘A/the tree is growing.’

Typically, agreement failure gives rise to “default,” often 3rd person singular, agreement. In Ranmo, these features are spelled out as zero/null. This explains the apparent absence of S agreement on unaccusative verbs.

An important advantage of this proposal is that agreement is made completely uniform between transitive and unaccusative clauses. Crucially, O agreement in unaccusatives need not be taken as a counterexample to the cross-linguistic generalization in (124). In Ranmo unaccusatives, T (the locus of S agreement) participates in syntactic agreement just as much as v (the locus of O agreement) does. It is just that T results in agreement failure, an independently motivated phenomenon, due to being unable to find a goal to agree with, which results in default agreement spell out.
4.2.2 Split-S agreement is not split ergativity

In the derivation of a middle verb, we have the reverse situation: \( v \), not \( T \), will fail to agree. \( v \) will obligatorily probe for \( \varphi \)-features, but the only nominal that is present within its c-command domain is an NP, which lacks \( \varphi \)-features. Therefore, \( v \) will fail to agree. Typically, failed agreement results in the spell out of 3rd person singular \( \varphi \)-features, so we might predict all middle verbs to have the prefix \( y^- \) (3sgmO.\( \alpha \)) or \( s^- \) (3sgmO.\( \beta / \gamma \)) by way of marking failed/default O agreement. But there are instead dedicated prefixes for failed O agreement in Ranmo\(^\text{12} \), and these are precisely what I have been referring to as the middle morpheme. Just like (successful) O agreement, the middle shows allomorphy for inner TAM: \( ng^- \) (m.\( \alpha \)), \( k^- \) (m.\( \beta \)), and \( t^- \) (m.\( \gamma \)). This is completely expected if the middle is realized on \( v \), the locus of O agreement, which is close to inner TAM.

\begin{center}
\textbf{(130) Failed agreement at} \( v \) \textbf{in middles}
\end{center}

\[\text{\includegraphics{middle-diagram.png}}\]

\(^{12}\)I think it is simply a matter of choice determined by the language’s lexicon and morphology how unvalued \( \varphi \)-probes will be spelled out. It just so happens that Ranmo does not use 3rd person singular agreement morphology to realize failed O agreement. There is in principle nothing to rule out this possibility, however.
We can now see that the middle morpheme and O agreement are two sides of the same coin. I update the O series table as below.

<table>
<thead>
<tr>
<th></th>
<th>(\alpha)</th>
<th>(\beta)</th>
<th>(\gamma)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1sg</td>
<td>w-</td>
<td>b-</td>
<td>tw-</td>
</tr>
<tr>
<td>1nsg</td>
<td>n-</td>
<td>ngg-</td>
<td>nt'en-</td>
</tr>
<tr>
<td>2sg</td>
<td>n-</td>
<td>ngg-</td>
<td>nt'en-</td>
</tr>
<tr>
<td>2nsg</td>
<td>th-</td>
<td>th-</td>
<td>th-</td>
</tr>
<tr>
<td>3sgm</td>
<td>y-</td>
<td>s-</td>
<td>s-</td>
</tr>
<tr>
<td>3sgf</td>
<td>ng-</td>
<td>k-</td>
<td>t'e-</td>
</tr>
<tr>
<td>3nsg</td>
<td>th-</td>
<td>th-</td>
<td>th-</td>
</tr>
<tr>
<td>(\emptyset) ('middle')</td>
<td>ng-</td>
<td>k-</td>
<td>t-</td>
</tr>
</tbody>
</table>

Table 4.5: O series and the middle morpheme

This means that there are two instances of failed agreement in Ranmo, one at T (in unaccusatives) and one at \(v\) (in middles). An important consequence of this proposal is that we no longer have to characterize middles as constituting the non-ergative side of split-S agreement. All semantically one-place verbs which are morphologically middle are in fact transitive in the sense that they take an NP direct object. Their intransitive-like semantic properties as well as absolutive case marking on the subject arise because this NP argument is coindexed with the external argument. Thus, dependent (ergative) case assignment fails to apply. Split-S agreement, therefore, turns out to be an epiphenomenon of something more general that is attested in languages of all alignment types, namely pseudo-noun incorporation.
4.2.3 Contextualizing split intransitivity

The conclusion above is significant especially within the context of the split ergativity literature, the bulk of which has centered around aspectual and person splits. It has been shown that the “split” (non-ergative) portions of these two types also involve more clausal structure. Coon and Preminger (2012) argue that both aspectual and NP-type splits are the result of a bifurcation of the clause into two distinct case/agreement domains. On this analysis, it straightforwardly follows that A arguments would show non-ergative properties (e.g., absolutive case marking) in the “split” portions of the grammar because they are in fact, structurally speaking, intransitive subjects.

(131) Factors conditioning split ergativity (Dixon 1994:70)

a. The tense, aspect, or mood of the clause (“aspectual split”)

b. The semantic nature of the core arguments (“person split”)

c. The semantic nature of the main verb (“split intransitivity”)

4.2.3.1 Aspectual splits

In Basque, for example, the subjects of (non-ergative-patterning) progressive constructions are in the unmarked absolutive form (including in the transitive), whereas those of (ergative-patterning) perfective constructions receive ergative case, in conformity with (133).

(132) Basque

a. Non-progressive: ergative
emakume-a-k  ogi-a  ja-ten  
woman-DET-ERG  bread-DET  eat-IMPF

‘The woman eats (the) bread.’

b. **Progressive: “split”/non-ergative**

woman-ART.ABS  bread-ART.ABS  eat-NML-LOC  PROG  AUX(be)

‘The woman is eating the bread.’  (Coon and Preminger 2012:9-10)

(133) Universal directionality of aspeсtual splits  (Dixon 1979, 1994)

\[
\begin{array}{c|c}
\text{ergative} & \text{non-ergative} \\
\text{perfective} & \text{imperfective} & \text{progressive}
\end{array}
\]

Laka (2006) and Coon and Preminger (2012) argue that progressive “split” forms in Basque are biclausal, involving added structure. Specifically, a progressive auxiliary (ari) embeds a locative-marked subordinate clause containing the verb and the object, as schematized in (134).

(134) **Basque progressive (132b)**

![Diagram](image-url)
This straightforwardly explains the two intransitive characteristics of the subjects of progressive constructions with regard to case marking and agreement. First, the A argument receives absolutive, not ergative case, because it is not a “transitive” subject. Rather, it is the intransitive subject of an auxiliary whose complement is an oblique locative phrase. Any theory of case can rule out ergative case marking on the subject. On a theory of ergative as dependent case (as in Marantz 1991) because the embedded argument cannot trigger ergative on the subject because it is in a different locality domain. On a theory where case is assigned by functional heads, ergative case marking is ruled out because the structure in (134) lacks the functional head that assigns ergative case (e.g., transitive $v$). Moreover, the O argument fails to trigger agreement in progressive constructions because it is in an embedded clause, separated from the phase domain which contains the agreeing head.

The same factor which triggers the appearance of these aspect-based splits—added structure in progressives, for example—also exists in nominative-accusative systems, but in these systems, transitive and intransitive subjects pattern together, thereby obscuring these “splits.”

### 4.2.3.2 Person splits

Coon and Preminger (2012) provide similar arguments for NP-based splits, arguing that some of these, too, can be accounted for using a clausal bifurcation analysis. In Mocho’ (Mayan) and Kham (Tibeto-Burman), for instance, the choice of ergative vs. accusative case marking or agreement is governed by whether the subject is local (1st/2nd person) or non-local (3rd person) as part of the fixed directionality of person splits shown in (137).
1st/2nd person pronouns are more likely to show a non-ergative pattern of agreement/case marking than 3rd person arguments in both languages.

(135) Mocho’

(Larsen and Norman 1979)

a. maaqi-Ø
go.up-3ABS
‘He went up.’

b. ii-maaqi
1ERG-go.up
‘I went up.’

(136) Kham

(Watters 2002:66)

a. no-ye la: sōih-ke-o.
he-ERG leopard.ABS kill-PRFV-3
‘He killed a leopard.’

b. ŋa: la: ŋa-sōih-ke
I leopard.ABS 1-kill-PRFV
‘I killed a leopard.’

(137) Universal directionality of person splits

(Dixon 1979, 1994)

<table>
<thead>
<tr>
<th>ergative</th>
<th>non-ergative</th>
</tr>
</thead>
<tbody>
<tr>
<td>common nouns &gt;&gt;</td>
<td>proper nouns &gt;&gt;</td>
</tr>
</tbody>
</table>

The lack of ergative case on first and second person subjects is predicted if they require a corresponding functional projection. The presence of this functional projection disrupts the assignment of ergative case just as the additional PP structure (the complement selected by the auxiliary) does in the Basque progressive. This additional structure is deemed to be ParticipantP, which is the host of the [+participant] feature. This feature is absent when a third person argument merges.
These bifurcation analyses provide a unified story for split ergativity phenomena that are described to have different sources (certain aspects or nominal features). However, we see that the non-ergative portions of both these types of splits involve additional structure, specifically, a functional projection that is sandwiched between VP and $vP$.

This is precisely what characterizes Ranmo middles, which are an instance of split intransitivity, the third type of split ergativity. The appearance of middles shifting out of the ergative alignment was attributed to PNI, which also involves an additional functional projection above VP as a kind of licensing requirement on NPs. Evidence from all three types of split ergativity, therefore, converges on the same conclusion: split ergativity is epiphenomenal. The appearance of all three split types reduces to independently observable structural differences between the ergative and non-ergative portions. Taken together, then, these analyses point to the major conclusion that we need not posit a third type of alignment system (a “split” type) alongside the ergative and accusative ones.
4.3 Non-anaphoric middles

In section 4.1, we saw that in principle all transitive verbs can be “made” into middle verbs by merging an NP object that is coindexed with and bound by the external argument, as schematized again in (139a). I cast this as a special subtype of PNI (“special” because it involves anaphor binding). It would then be theoretically possible to conceive of a more general version of (139a), namely, one in which there is no such binding relation between the external argument and the NP object, as illustrated in (139b).

(139) **Two types of middles**

a. **Anaphor binding**

b. **No binding ("general PNI")**
Indeed, there is a small class of morphologically middle verbs which can take a non-anaphoric NP object, either in addition to or instead of an anaphor. I will refer to these as **non-anaphoric middles**.

Besides the presence of non-anaphoric NP material, what most distinguishes non-anaphoric middles from anaphoric middles is that their subjects receive ergative case marking. Non-anaphoric middles show heterogeneous properties with respect to semantics and case marking on the object, but are almost always semantically transitive. They can be roughly classified into the following types: general PNI and semi-antipassives. In both types, the theme phrase must be non-referential/non-specific.

### 4.3.1 General PNI

General PNI middles, a subtype of non-anaphoric middles, differ from anaphoric middles in that they are semantically two-place. However, they also differ from transitive clauses in that they cannot take $\varphi P$ internal arguments (or more generally, any material deemed to
be hosted above the NP-layer in the extended nominal phrase, including NumP). Their objects are overt non-anaphoric NPs, and this explains their non-referentiality, lack of case marking, and number neutrality—all properties of PNI. General PNI middles include the verbs drink and learn. The objects of these verbs can be modified even though they cannot take an NP-external functional layer, as shown in (140).

(140) General PNI

a. Kèn (fèna) kom ng-a-yuna-∅. (>ngona)
   1sg.ERG that water m.ə-A-drink-sgS
   ‘I am drinking (that) water.’

b. Kèn ta ng-a-saming-∅ mbane Ranmo tabe.
   1sg.ERG FUT m.ə-A-teach-sgS 2sg.gen Ranmo word/language

The proposal that middle objects are NPs predicts that any material deemed to be hosted above the NP-layer in the extended nominal phrase cannot be part of the structure of the middle object. This immediately excludes all pronouns and proper names, which include at least a qP-layer. This is borne out. Neither a pronoun (1a) nor a proper noun (2a) is licit with a middle verb.

(1) a. *Nafo ke ng-a-fitar-∅.
   3ERG 1ABS m.ə-A-wash-sgS
   Intended: ‘He is washing me.’

b. Nafo ke w-fitar-∅. (>wofitar)
   3ERG 1ABS 1sgO.ə-wash-sgS
   ‘He is washing me.’

(2) a. *Kèn Jon ng-a-fitar-∅.
   1ERG Jon m.ə-A-wash-sgS
   Intended: ‘I am washing John.’

b. Kèn Jon y-fitar-∅. (>yēfitar)
   1sg.ERG Jon 3sgmO.ə-wash-sgS
   ‘I am washing John.’

The middle form of fitar ‘wash’ (or the lexical compound sóka fitar ‘hand wash’) is licit only when it is used anaphorically, as in (3).

(3) Ke (sóka) ng-a-fitar-∅.
   1sg.ABS hand m.ə-A-wash-sgS
   ‘I am washing (myself/my hands).’

14But see (140), in which general PNI objects are compatible with a modifying demonstrative or possessive.

15This effectively rules out the noun incorporation analysis in the sense of Baker 1988 et seq. The objects in (140) are not adjoined to the lexical V head via head movement, as incorporated nouns are. Note that they form independent syntactic units apart from the verb.
‘I will learn your Ranmo language.’

The verbs in (140) show alternation with transitive variants.

(141) TRANSITIVE

a. Kën kom y-yuna-∅. (>yuna)
   1sg.ERG water 3sgmO.x-drink-sgS
   ‘I am drinking water.’

b. *Kën ta y-saming-∅ mbane Ranmo tabe.
   1sg.ERG FUT 3sgmO.x-teach-sgS 2nsg,GEN Ranmo word/language
   Intended: ‘I will teach your Ranmo language.’

c. Mbambo safat fën ke b-f-saming-ente bol yir-se.
   last week 2sg.ERG 1sg,ABS 1sgO,β-NON,FUT-teach-IRR ball make-NMLZ
   (>bousamingente)
   ‘Last week you taught me how to make a ball.’

I take this alternation to reflect a difference in the type of nominal phrase selected by the verb. Middles take an NP while transitives take a φP. Both the middle and transitive forms of the verb yuna ‘drink’ take the same nominal kom ‘water’ as their argument; this indicates that this nominal can be either an NP or φP. Not all general PNI objects can project an extended nominal phrase (specifically a φP). In (140b), for example, the nominal tabe ‘word/language’ is compatible with the middle form of the verb seming ‘teach,’ suggesting its NP status (140b), but not with the transitive form of the verb (141b). Instead, the object selected by the transitive form must be the ‘teachee,’ an animate φP argument (141c).

The object status of the theme phrases in (140) is confirmed by their obligatoriness, semantic closeness to the verb, and extraction. When they are A’-moved, the interrogative
pronoun used is the same form that is used to indicate object extraction from transitive clauses. This is shown in (142)-(143).

(142) **Object extraction from middle clauses**

a. Fèn ‍ro ‍k-f-a-yuna-∅?  
   2ERG what M.β-NON.FUT-A-drink-sgS  
   (>%kwona)  
   ‘What did you drink?’

b. Fèn ‍ro ‍k-f-a-seming sèkora-n?  
   2ERG what M.β-NON.FUT-A-teach school-LOC  
   ‘What did you learn in school?’ (lit. ‘what did you teach yourself in school?’)

(143) **Object extraction from transitive clauses**

a. Fèn ‍ro ‍y-luwar-an-∅?  
   2ERG what 3sgmO.x-look.for-MULT-sgS  
   (>yèluwaran)  
   ‘What did you look for?’

b. Fèn ‍ro ‍y-na-∅?  
   2ERG what 3sgmO.x-eat-sgS  
   (>yèna)  
   ‘What did you eat?’

There is, however, an important way in which general PNI objects in Ranmo (appear to) differ from PNI objects in other languages, and that is with respect to modification. It is cross-linguistically common for languages to allow adjectival modification of PNI objects, as illustrated by Niuean, Chol, and Tongan (144). Ranmo is the same way (see (151b)).

(144) **Adjectival modification of PNI objects**

a. **Niuean**  
   (Massam 2001:160)

   Ne kai sipi mo e ika mitaki a Sione.  
   PST eat chip COMTV ABS fish good ABS Sione
‘Sione ate good fish and chips.’

b. **CHOL** (Coon 2010, as reported in Levin and Preminger 2015)

Tyi i-tsäñ-s-ä [ cha’-kojty kolem wakax ] k-papa.
PRF A3-die-CAUS-TR two-NC.4legs big cow A1-father

‘My father killed two big cows.’

c. **TONGAN**

Ball et al. 2004

Na’e tō manioko kiʻi ‘a Sione.
pst plant cassava small abs sione

‘Sione planted small cassava.’

At the same time, modification by functional elements like possessors, numerals, and demonstratives is generally illicit in PNI, as shown by Niuean, Chamorro (Chung and Ladusaw 2004), Chol (Coon 2010), Sakha and Tamil (Levin 2015), and many other languages show the same restriction.

(145) a. **NIUEAN**

*Ne vali fale ha Mele a Sione.
pst paint house GEN Mele abs sione

‘Sione paints Mele’s house.’

b. **NIUEAN**

*Kua ama taha kalahimu a ia.
PERF hunt one crab abs he

‘He is hunting one crab.’

c. **CHOL**
Tyi i-ch’il-i (*illi) ja’as ji’ii x-k’alaal.
PRF A3-fry-TR this banana DET CL-girl

‘The girl fried bananas.’

By contrast, Ranmo PNI objects are able to be modified by both demonstratives (140a) and possessives (140b). I suggest, however, they do not in fact diverge from the cross-linguistic ban on NP-external functional material in PNI constructions. This is because the nominal demonstrative and possessive in Ranmo are in fact adjectival.16

First, fêna ‘that’ is a demonstrative modifier rather than a determiner, the prototypical D head. This is evidenced by the fact that fêna has a much less constrained distribution than demonstratives realizing a D head in other languages. For example, it can either precede or follow the noun head (146a-b). It can occur clause-finally outside an extended nominal phrase (146c), clearly not where one expects D to go. We also see fêna being used as a kind of focus marker17 (146d).

(146) a. Nafo y-yibar-$Ø$ ngai fêna. (>yibar)
   3ERG 3sgmO.a-cut pig that
   ‘He is cutting up the meat.’ (Pig-hunt.1.29)

b. Yekal wetri ng-a-yur-ndar-$Ø$ fêna fotar-mo. (>gorndar)
   man fear M.a-A-be-IPFV-sgS that snake-SRC
   ‘The man was afraid of that snake.’

c. Mam mara s-f-yikan-$Ø$ fêna? (>sefikan)
   fish to.where 3sgmO.b-NON.FUT-carry-sgS that
   ‘Where did you carry the fish to?’ (Wh-questions.023)

16The same has been suggested for Diyari PNI by Polinsky (in press).

17Diessel (1999) claims that the source of focus markers is a demonstrative, drawing on data from several languages showing morphological relatedness between focus markers and identificational demonstratives.
d. Yekal-o s-f-na-∅ fëna lofo fia-r
   man-ERG 3sgmO,β-NON.FUT-eat-sgS that after hunt-GOAL
   t-a-laf-∅. (>sèfna)
   M.γ-A-leave.RST-sgS
   ‘The man ate before going hunting’ (lit. ‘the man ate, after that he went hunting’).

It’s probably fair to say that fëna has multiple functions in Ranmo. The full distribution
and properties of fëna are outside the scope of the current discussion, but it seems reason-
able to conclude that it behaves radically different from D, which has a far more limited
distribution.

Next, consider possessives (140b). Typically, possessives are thought to instantiate a D
head, as in (147a). But there is another type of possessive, which is modificational in nature,
which might have the structure in (147b) (Munn 1995).

(147)  a. Regular possessive

    DP
      /  \
     /    \  
    DP   D'
      /  \
     /    
    D   NP D   NP
         |    |    
      a   man   's shoe

b. Modificational possessive

    DP
      /  \
     /    \  
    D   NP
         /  \
        /    
      a   NP N'
          |    
       man's shoe
I suggest that the ability of possessives to occur in Ranmo general PNI has a straightforward answer if they have the structure in (147b) rather than (147a). The adjectival nature of Ranmo possessives is supported by the fact that they can occur in typical adjectival positions, including the predicate position of a copula (148).

(148) Náne mbintu **ntone** keke y-n-ra. (>yenra)
    this land **1sg-GEN** NEG 3sgmO.α-PROX-be
    ‘This land is not mine.’

The non-D (adjectival) status of possessives and demonstratives is also consistent with the fact that Ranmo lacks overt D-items like determiners and quantifiers such as *every*. This would potentially make Ranmo a DP-less language on a par with Chinese or Serbo-Croatian (Bošković 2008, Bošković and Gajewski 2009). One characteristic which strongly suggests this is that Ranmo expresses universal quantification in a very different way than languages which do have a true D-realizing universal quantifier, such as English.

As shown in (149), for example, Ranmo expresses universal-like quantification not by using a true quantifier like English ‘every,’ but the adjective *kewán*, which roughly means ‘many.’ This element is compatible with nouns bearing plural morphology (not singular like English ‘every’) (149a) and with pluractional verbs (149b).

(149) a. Kewán nènggai-a sóka k-f-a-fal-aí. (>kwafali)
    many child-PL hand M.β-NON.FUT-A-hold-2/3nsS
    ‘Many/all the children are holding each other’s hands.’

b. Yaforse kewán kèn kom ng-a-yuna-ngan-∅. (>ngonangan)
    morning many 1sg.ERG water M.α-A-drink-MULT-sgS
    ‘Every morning/many mornings, I drink water.’

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A similar state of affairs is revealed in Warlpiri (Australian), which is also argued to lack the D category and therefore uses the cardinality nominal *panu* meaning 'large group' to express universal-like quantification (Bittner and Hale 1995). Note that in (150), *panu* is ambiguous between 'many' and 'all' just like Ranmo *kewán*.

(150) **Warlpiri** (Bittner and Hale 1995:21)

\[
\begin{align*}
\text{Panu ka-rna-jana nya-nyi.} \\
\text{many PRES-1sgS-3plO see-NONPAST} \\
\text{‘I see many of them.’ ‘I see all of them.’ ‘I see them, who are many.’ ‘I see a large group (of them).’ ‘I see the large group (of them).’ ‘I see them, who are a large group.’}
\end{align*}
\]

The general PNI class also includes complex predicates. An example of this is the predicate meaning ‘smell,’ which is formed by combining the verb *karak* ‘pull’ with the nominal *fewa* ‘smell.’ Since this nominal forms an interpretive unit with the verb, it cannot be A’-extracted like the other general PNI objects exemplified above in (140). However, it can include modificational material such as an adjective and a possessive (151b-c).

(151) a. Ngatha-ngo fewa k-f-a-karak-Ø. (>$kwakarak) \\
\text{dog-ERG smell M.β-NON.FUT-A-pull-sgS} \\
\text{‘A/the dog smelled (something).’}

b. Kèn bèl fewa ng-a-karak-Ø. \\
\text{1sg.ERG bad smell M.α-A-pull-sgS} \\
\text{‘I am smelling something bad.’}

c. Ngatha-ngo tauri-ane fewa t-a-kar-Ø. \\
\text{dog-ERG wallaby-GEN smell M.γ-A-pull.RST-sgS} \\
\text{‘A/the dog smelled a/the wallaby.’}
The choice of the verb appearing in these examples—*karak* ‘pull’—is especially informative because it can also give rise to the reciprocal interpretation of ‘pull’ (with a plural subject), as in (152).

(152) Ni ng-a-karak-e.
1nsg.abs m.α-α-pull-1nsgS
‘We are pulling each other.’

Presumably, this reciprocal reading is associated with the presence of a null NP anaphor in the object position—the same position in which *fewa* ‘smell’ occurs. This, of course, leads to the prediction that the anaphoric use of the complex predicate meaning ‘smell’ would be ungrammatical. This is borne out. (153) is ungrammatical because both *fewa* and a null anaphor cannot simultaneously be licensed in the same object position in (153). This is strong evidence that anaphoric expressions are a type of PNI.

(153) *Ngatha fewa ng-a-karak-∅.
dog smell m.α-α-pull-sgS
Intended: ‘A/the dog is smelling itself.’

Finally, general PNI middles present a domain of dependent case assignment. In anaphoric middles, anaphor binding prevents the NP object from triggering ergative case on the subject from which it is non-distinct. However, in general PNI, the overt NP object is non-anaphoric with the subject and therefore qualifies as a trigger of dependent case just as much as a φP object does in transitive clauses. Note that the difference in case marking between anaphoric middles and general PNI middles can only be accounted for using configurational rules of dependent case assignment.
The alternative view is that ergative is inherent case assigned by transitive v/Voice (cf. Aldridge 2008, 2012; Legate, 2002, 2008; Mahajan 1989, 2012; Woolford 1997, 2006, among others). This theory correctly predicts that ergative case would be assigned to the subjects of transitive verbs in Ranmo, but it also incorrectly predicts that the subjects of middle verbs should invariably be assigned ergative case irrespective of the nature of the object and its relation to the subject. But as we saw, ergative case assignment to the subject of a middle verb is dependent on there being a non-anaphoric object. Thus, Ranmo middle verbs provide new evidence against the inherent view of ergative case in favor of the configurational approach to case assignment.

4.3.2 Semi-antipassives

Semi-antipassives form another subclass of non-anaphoric middles. Like general PNI, they involve semantically transitive predicates whose subject is ergative case-marked. But in contrast to general PNI, their patient-like phrase takes an oblique case marker, usually the goal suffix (-r) (154). The oblique case marking is correlated with the non-referentiality and non-specificity of the phrase as well as with the absence of O agreement on the verb, in whose place the middle morpheme appears (an instance of failed O agreement), along with the a-prefix. Semi-antipassives include verbs describing hunting-related events including chase and sneak up on.

(154) SEMI-ANTIPASSIVES
a. Kên ngai-ar ng-a-yinngiar-∅. (>ngenggiar)
   1sg.ERG pig-GOAL M.∅-A-chase-sgS
   ‘I am chasing around (i.e., hunting) for pigs.’

b. Kên tauri-r ng-a-miku-∅.
   1sg.ERG wallaby-GOAL M.∅-A-sneak.up.on-sgS
   ‘I’m searching for wallabies.’

Note that their transitive counterparts\(^{18}\) are associated with meanings that imply more direct impact on the patient/theme (‘chase’ instead of ‘hunt for’; ‘sneak up on’ instead of ‘search for’).

(155) **TRANSITIVE**

a. Kên ngai Yinggiar-∅. (>yinggiar)
   1sg.ERG pig 3sgmO.∅-chase-sgS
   ‘I am chasing a/the pig.’

b. Kên tauri y-a-miku-∅.
   1sg.ERG wallaby 3sgmO.∅-A-sneak.up.on-sgS
   ‘I’m sneaking up on a/the wallaby’ (with the import of ‘I’ve spotted a wallaby’).

A handful of semi-antipassives are cognition verbs which are formed by combining the verb *yur* ‘do’ with some expression containing the word *fam* ‘thought,’ as exemplified in (156).

(156) **EXAMPLES OF COGNITION SEMI-ANTIPASSIVES**

a. *fam ngor* ‘thought do’ (‘think (of/about)’)

\(^{18}\)Note that (155b) contains the *a*-prefix along with *O* agreement. The nature of constructions like this one will be discussed in chapter 5.
b. *fam to ngor* ‘thought COMPL do’ (‘remember’)

c. *fam menmen ngor* ‘thought meditation do’ (‘meditate (on)’)

I assume that these expressions are formed by lexical compounding. All of the verbs in (156) can optionally take a theme phrase\(^\text{19}\), which takes the source suffix -mo, as illustrated using the verb ‘think’ in (157b-c). When the theme phrase is animate, this suffix must be preceded by the genitive suffix (157c).

(157) **Semi-antipassives taking the source suffix**

a. K`en fam ng-a-yur-∅. (⟩ngor)
   1sg.ERG thought M.α-A-do-sgS
   ‘I am thinking.’

b. K`en ngambu ka-mo fam t-a-yur-∅. (⟩tor)
   1sg.ERG other place-SRC thought M.γ-A-do-sgS
   ‘I thought of another place.’

\(^\text{19}\)It is also possible for the predicate *fam ngor* to (be subcategorized to) select a CP complement.

(1) a. Ninta fam ng-a-yur-e [CP náne candidat-o tombe k-i-yur-∅]. (⟩ngore, kior)
   1nsg.ERG thought this candidate-ERG win M.ι-FUT-do-sgS
   ‘We thought this candidate would win.’

b. K`en fam (nara) ng-a-yur-∅ [CP fi bètw’a ng-ra]. (⟩ngor)
   1sg.ERG thought this M.α-A-do-sgS 3ABS right 3sgfO.α-be
   ‘I think she is right.’

I assume that the number and type(s) of phrases that a verb can select are defined by its subcategorization. *Fam ngor*-type predicates are predicates which have two subcategorization options, much like English *discover*, which can select either a DP or CP as its complement.

(2) a. Mary discovered the [DP story].

b. Mary discovered [CP that the story is real].
c. Kên  ntone ngawès-ane-mo  fam  k-f-a-yur-∅.
   1sg.ERG 1sg.GEN grandmother-GEN-SRC thought M.β-NON.FUT-A-do-sgS
   (>kèfor)

   ‘I thought of my grandmother.’

The fact that fam ‘thought’ is part of a lexical compound rather than an object is evidenced by the fact that it does not trigger O agreement when it is used in transitive variants. The verb instead shows agreement with an animate φP argument.

(158) Transitive

   a. Kên  ngawès  fam  ng-yur-∅.  (>ngur)
      1sg.ERG  grandmother  thought  3sgfO.α-do-sgS
      ‘I am thinking of/about grandmother.’

   b. Nafo  ke  fam  w-yur-∅.  (>wur)
      3sg.ERG  thought  1sg.ABS  1sgO.α-do-sgS
      ‘S/he is thinking of/about me.’

Semi-antipassives are so-called because they show many, but not all, of the hallmark properties of antipassive constructions. A common description of antipassives is that they are derived from their transitive counterparts by “suppressing” or “demoting” the object.20

The term “antipassive” (Silverstein 1976) was first coined to indicate that the construction is a mirror image of the passive, whose defining property is the “suppression” or “demotion” of the highest-ranking argument, the subject. The subject can be expressed either as a by-

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20 Antipassive constructions have been argued to be correlated with ergativity by some (e.g., Silverstein 1976, Dixon 1979), but see Heath 1976, Davies 1984, and Polinsky 2005 for counterclaims. Antipassivization is also described as a process that overcomes restrictions imposed by syntactic ergativity in some languages (e.g., a restriction on extraction of ergative subjects). Ranmo is not a syntactically ergative language.
phrase or a null existential argument without altering the truth conditions of the sentence (Goodall 1993, 1999).

In the antipassive, it is the patient-like argument (the object) that is “suppressed” or “demoted,” which results in an oblique expression. This has the effect of changing the underlying A argument into an S argument in terms of case marking and agreement, presumably because antipassivization involves the absorption of objective case (absolutive or accusative). As a result, the VP-internal argument position is saturated and the verb is unable to assign case. This results in the logical subject receiving absolutive case instead of ergative case. If a logical object appears, it is analyzed as an adjunct (Polinsky in press).

Moreover, the antipassive verb is often overtly marked with detransitivizing (‘antipassive’) morphology. Finally, the changes in object status/appearance and verbal morphology are often accompanied by a subtle change in verb meaning. The Chukchi antipassive construction shows all of these characteristics.

(159) **CHUKCHI (RUSSIA)**

(Kozinsky et al. 1988:652)

a. **ANTIPASSIVE**

\[
\text{?aaček-øt} \quad \text{ine-nl?etet-γ?et} \quad \text{kimit?-e}
\]

\[
youth-PL(ABS) \quad \text{ATPS-carry-3PL.SBJ load-INSTR}
\]

‘(The) young men carried a load.’

b. **TRANSITIVE**

\[
\text{?aacček-a} \quad \text{kimi?-ø} \quad \text{ne-nl?etet-øn}
\]

\[
youth-ERG \quad \text{load-ABS 3PL.SBJ-carry-3SG.OBL}
\]

‘(The) young men carried away the/a load.’

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Note that Ranmo semi-antipassives are like the Chukchi antipassive construction in all respects except with regard to case marking on the subject. As we saw in (155) and (157), oblique case marking of the logical objects of semi-antipassives is not correlated with absolutive case marking on the subject. Like those of general PNI, the subjects of semi-antipassives retain ergative case.

I argue that this point of divergence can be straightforwardly accounted for under the dependent theory of ergative case (Marantz 1991). But first, let us consider the syntactic status of the oblique theme phrases of semi-antipassives.

4.3.2.1 On the status of semi-antipassive objects

There are two possibilities with respect to the syntactic status of the logical objects of semi-antipassives. The first is that they are truly oblique case-marked noun phrases (as opposed to PPs)—in much the same way that English of+NP (e.g., a picture of John) is considered to be a realization of a noun phrase in genitive case, rather than a true PP (Chomsky 1986:193-194).

The second is that they are adjunct PPs whose head realizes the oblique case marker (which would mean that it is a postposition). This immediately raises the question of what, then, if any, occupies the verb’s complement position. It could be that, as in most standard analyses of the antipassive/noun incorporation, an abstract nominal constituent is base-generated inside VP, but it undergoes head movement, absorbing absolutive/accusative case. Since the VP-internal argument position is saturated, the verb cannot assign case to
its object, and there is no violation of the Theta Criterion (Polinsky in press, Baker 1988). Alternatively, there is no head movement or case absorption of any kind, but a covert nominal element is present in the object position throughout the entire course of the derivation. Its Theme role is transmitted to the adjunct PP element via coindexation.

The first possibility—that oblique phrases are arguments in object position—can be ruled out using a subextraction test. As shown in (160a), it is not possible to subextract from an oblique theme phrase, which suggests it is an adjunct. Subextraction from the DP object of a transitive clause, on the other hand, is prohibited, as in (160b).

(160) Oblique theme phrases are islands

a. *Fèn mentei tauri-r ng-a-miku-∅?
   2ERG how many wallaby-GOAL M.∅-A-sneak.up.on-sgS
   ‘How many wallabies are you searching for?’

b. Fèn mentei tauri l-huwarar-∅?
   2ERG how many wallaby 2/3nsgO.∅-look.for-sgS
   ‘How many wallabies are you looking for?’

Additional evidence for the adjunct status of semi-antipassive objects comes from the verb meaning ‘remember,’ which is expressed by the phrase fam to yur ‘think+COMPL+do.’ This can take a noun phrase like ‘his name’ which lacks any sort of case marking, as shown in (161b). In the transitive variant, this noun phrase does not control O agreement (161c). Rather, the verb shows agreement with the bearer of the name instead. This suggests that the direct object position of the transitive form is occupied by a silent pro which controls agreement. Therefore, a more accurate translation of (161c) is ‘we remembered him/her
with regard to his/her name.’ This indicates that the logical objects of semi-antipassives have the syntactic status of modifying adjunct nominals and are not true arguments.

(161) MIDDLE

a. Fam to t-a-yur-∅. (>tor) thought COMPL M.γ-A-do-sgS
   ‘I/s/he remembered.’

b. Ninta fam to k-f-a-yur-e nafne ye. (>kèfor) Insg.ERG thought COMPL M.β-NON.FUT-A-do-1nsgS 3sg.GEN name
   ‘We remembered his/her name.’

c. Ninta fam to s-yur-e nafne ye. (>sure) Insg.ERG thought COMPL 3sgmO.γ-do-1nsgS 3sg.GEN name
   ‘We remembered his name.’

Since the subjects are ergative case-marked, what these data suggest is that there is a null (non-anaphoric) argument in the object position, which qualifies as a trigger of dependent case. In summary, we have the following three types of middle constructions and their properties (Table 4.6). Under the proposal, both anaphoric/reflexive constructions and semi-antipassives are subsumed under the phenomenon of PNI.

4.4 A note on the alternative approach: assignment by a functional head

An obvious alternative to the proposal that NPs receive special unmarked case associated with the alternative PNI configuration is to say that they are directly licensed by a special
object case assigning functional head. This account is another way of spelling out the same empirical fact, but it does not make reference to a “case assignment domain” in Marantz (1991)’s sense.

Under this account, the functional head X projects in order to *license* NPs (as opposed to introducing a special domain of case assignment). The account that NP objects are more deeply embedded than $\varphi$P objects is taken to follow from the requirement to project a special case-licensing functional head above VP. The licensing and assignment of accusative case in middle clauses is schematized in (162a). NPs cannot appear without it as shown in (162b). This head would have overt morphological realization, *a-,* and the structural case assigned by it would be referred to as accusative case, which is morphologically unmarked.

(162)  a. NP licensed (ACC assigned)

<table>
<thead>
<tr>
<th></th>
<th>Anaphoric</th>
<th>Non-anaphoric General PNI</th>
<th>Semi-antipassives</th>
</tr>
</thead>
<tbody>
<tr>
<td>NP object type</td>
<td>anaphor</td>
<td>overt, non-anaphoric</td>
<td>null, non-anaphoric (coindexed with an adjunct PP)</td>
</tr>
<tr>
<td>Subject case</td>
<td>Absolutive</td>
<td>Ergative</td>
<td>Ergative</td>
</tr>
<tr>
<td>Examples</td>
<td>All reflexivized transitives (reflexives/reciprocals, general PNI, agentives)</td>
<td><em>learn, drink, smell</em></td>
<td><em>chase, sneak up on</em></td>
</tr>
</tbody>
</table>

Table 4.6: Types of middle constructions
This account, in principle, will capture the facts just fine, but it would mean that we have to posit a hybrid system of case assignment in Ranmo, namely, one in which some structural cases (ergative, absolutive) are assigned by configurational rules of case assignment (Bittner and Hale 1996, Marantz 1991) while others (accusative) are assigned by functional heads (Chomsky 2000, 2001).

The hybrid approach has already been defended for the case system of Sakha by Baker (2010a). In their system, the distribution of accusative and dative case in Sakha (Turkic) is accounted for configurationally, while the distribution of nominative and genitive case is accounted for in terms of case assignment by functional heads.

The authors defend that such a combination of principles and rules is not incoherent. They suggest that (163) and (164) are not two independent systems of case assignment, but rather two ways of valuing a case feature within a single system. The system they conceive of is in line with Chomsky’s conception of Case theory. They argue for a system in which all argumental noun phrases enter the derivation with an unvalued case feature, as in Chomsky (2000). This case feature, if structural, can be valued in one of two ways: (i) by entering into an agreement relationship with a nearby functional head (the

---

21 An unvalued case feature can alternatively get lexical case from the verb that selects it.
standard Chomsky way) or (ii) by getting case according to configurational rules of dependent case assignment. The relevant rules, as applied to Sakha, are stated in (164)-(163).

(163) **Configurational rules**

a. If there are two distinct argumental NPs in the same VP-phase such that NP1 c-commands NP2, then value the case feature of NP1 as dative unless NP2 has already been marked for case.

b. If there are two distinct argumental NPs in the same phase such that NP1 c-commands NP2, then value the case feature of NP2 as accusative unless NP1 has already been marked for case. (Baker 2010a:639)

(164) **Case assignment by functional heads**

If a functional head $F \in \{T, D\}$ has unvalued phi-features and an NP $X$ has an unvalued case feature [and certain locality conditions hold], then agreement happens between $F$ and $X$, resulting in the phi-features of $X$ being assigned to $F$ and the case associated with $F$ (nominative or genitive) being assigned to $X$. (Baker 2010a:639)

Syntactic derivations proceed cyclically, and if a phase of the derivation undergoes spell out when it contains a noun phrase whose case feature has not been valued, the derivation will crash (this essentially derives the Case Filter). Finally, the valued case features are realized at PF during Vocabulary Insertion in accordance with the assumptions of Distributed Morphology.

While such a system is in principle possible, it still draws on the assumptions and prin-
ciples of two different modalities of case assignment. For reasons of parsimony, it would be more desirable to have an account based on a single modality. In fact, Levin and Preminger (2015) conclude that a hybrid approach to Sakha case assignment is under-motivated and show that an account that is based entirely on configurational rules of case assignment is possible.

Here is their line of argumentation. As mentioned above, Baker (2010a), following Chomsky, conceives of case assignment as the reflex of agreement (i.e., the valuation of an unvalued case feature through Agree). They take for granted that agreement with T/D conditions the assignment of nominative/genitive case. However, warning against taking the association between agreement and case as causation, Levin and Preminger (2015) mention that the reverse is possible, i.e., the presence of nominative-/genitive-marked nominals conditions the application of agreement, rather than the other way around (see Bittner and Hale 1996 for the original idea, and Bobaljik 2008 and Preminger 2011 for later developments of it).

On this approach, the presence of “appropriate” case marking on a nominal conditions agreement with that nominal. Case is configurationally assigned, and the appropriateness of a target nominal is evaluated along the Revised Moravcsik Hierarchy (Bobaljik 2008, building upon Moravcsik 1974, 1978).

(165) Revised Moravcsik Hierarchy
unmarked case >> dependent case >> lexical/oblique case

For each language, some contiguous span of the hierarchy is chosen and any noun phrases bearing any of the case markings within that span will be an eligible agreement target. Sakha has the parametrization in (166). Since unmarked case is nominative in Sakha, only
nominative case-marked noun phrases would be targeted for agreement in this language.

(166) **Revised Moravcsik Hierarchy**

\[ \text{unmarked case} \gg \text{dependent case} \gg \text{lexical/oblique case} \]

*accessible for agreement*

This alternative view of case assignment in Sakha—combined with the independently supported conclusion that when an agreement probe fails to find a nominal to agree with, the result is not ungrammaticality, but rather, the characteristic spell out associated with unvalued features on the probing head (Preminger 2009, 2011, 2014)—ensures that we can account for case in Sakha using just the configurational approach without recourse to case assignment by functional heads.

Given that Sakha is the only language that has ever been described to require a hybrid approach in the literature (to the best of my knowledge), and now even that is met with some challenge, it seems reasonable to conclude that it is under-motivated and the best way to capture the case phenomenon is with a single modality of assignment.

Moreover, Baker (2008, 2015) himself points out that the dependence of case assignment on agreement with a functional head is subject to parametric variation\(^{22}\), as stated in (167).

(167) **The Case Dependence of Agreement Parameter (CDAP)**

F agrees with DP/NP only if F values the Case feature of DP/NP (or vice versa).

On this view, the choice between the configurational approach and the agreement ap-

\(^{22}\)Note that I am not saying that functional heads are completely irrelevant in configurational approaches; they are required to define domains of case assignment in which distinct case markings arise.
proach is a matter of macroparametric setting. In other words, one expects (167) to hold of all functional heads in the relevant languages, not just one particular functional head (Baker 2008, ch. 5). A hybrid approach goes against the generality of parameters like (167).

For these reasons, I will not defend the hybrid approach for Ranmo. It works just as well to say that accusative case is simply unmarked case that is associated with a special domain of case assignment, XP; it is not assigned directly by the head X.

### 4.5 Chapter summary

This chapter concluded that split-S agreement in Ranmo is only apparent. The apparent non-ergative pattern (S agreement) instantiated by middle clauses is due to PNI (NP argumenthood), which is schematized in (168a).

\begin{align*}
(168) & \quad \text{a. PNI} \\
 & \quad \begin{array}{c}
 vP \\
 \downarrow
 \end{array} \\
 & \quad \begin{array}{c}
 XP \\
 \downarrow
 \end{array} \\
 & \quad \begin{array}{c}
 VP \\
 \downarrow
 \end{array} \\
 & \quad \begin{array}{c}
 X \\
 \downarrow
 \end{array} \\
 & \quad \begin{array}{c}
 NP \\
 \downarrow
 \end{array} \\
 & \quad \begin{array}{c}
 V \\
 \end{array}
 \end{align*}

\begin{align*}
(168) & \quad \text{b. Canonical transitive} \\
 & \quad \begin{array}{c}
 vP \\
 \downarrow
 \end{array} \\
 & \quad \begin{array}{c}
 VP \\
 \downarrow
 \end{array} \\
 & \quad \begin{array}{c}
 \phi P/\ast NP \\
 \downarrow
 \end{array} \\
 & \quad \begin{array}{c}
 V \\
 \end{array}
 \end{align*}

The presence of an NP object is correlated with an additional layer of functional structure immediately above VP, XP; this phrase, being a complement of the phase head $v$, constitutes its own domain of case assignment in which special unmarked case ("accusative") is assigned to the NP object.
Under this proposal, a “split-S” or “active-inactive” characterization of Ranmo agreement is no longer necessary or viable. We reduce the appearance of split intransitivity in Ranmo to differences in object type (NP vs. \( \varphi P \)) and corresponding clausal properties. NP objects are correlated with more clausal structure.

This is a significant result in light of what has been concluded from recent theoretical work on the other two types of split ergativity (aspect-based and NP-based). All three types involve additional functional structure between VP and \( vP \).

(169) **Added functional structure in split ergativity**

a. **Split-S** 

\[
\begin{array}{c}
\text{XP} \\
\text{VP} \\
\text{NP} \\
\text{VP} \\
\text{V}
\end{array}
\]

b. **Aspectual split**

\[
\begin{array}{c}
\text{PP} \\
\text{VP} \\
\text{VP} \\
\text{DP} \\
\text{V}
\end{array}
\]

c. **Person split**

\[
\begin{array}{c}
\text{ParticipantP} \\
\text{Participant} \\
\text{VP} \\
\text{V} \\
\text{ObjDP}
\end{array}
\]

This proposal captures semantically one-place middles (reflexives/reciprocals, anticausatives, agentives), general PNI, and semi-antipassives in a unified way: their objects are NPs which require a corresponding XP projection. Only in semantically one-place middles is there anaphor binding between the NP object and the external argument. This accounts for the divergence in subject case marking between them on the one hand (absolutive) and general PNI and semi-antipassives on the other (ergative). This is summarized in (170) and in Table 4.6.
Types of NP objects and their respective PNI constructions

Middles

- Anaphoric
- Non-anaphoric

  - General PNI
  - Semi-antipassives
Chapter 5

The other side of the coin:

applicatives

In the previous chapter, I proposed a new way of thinking about pseudo-noun incorporation (cf. Massam 2001): PNI arises when $v$ selects a complement that is one functional node larger than VP. In other words, NPs require the presence of a corresponding functional projection on the clausal spine, XP. This proposal captures the “more deeply embedded” nature of PNI objects without requiring A-movement (i.e., object shift) on the part of a DP/$\varphi$P argument. It had the important consequence of casting split-S agreement in Ranmo as epiphenomenal: its source is PNI (which is attested in languages of all alignment types), combined with failed object agreement in the sense of Preminger (2009, 2011, 2014). No special rules of agreement are required in Ranmo: it is ergative through and through.
This chapter provides further language-internal evidence for XP. Specifically, I argue that XP also appears in applicative constructions, in which case its head has the additional function of introducing an argument in its specifier. In canonical applicatives, this argument is theta-marked by and receives inherent case from X (section 5.2). In non-canonical applicatives, this argument receives structural case according to configurational rules of dependent case assignment (section 5.3).

This proposal provides a unified account of middles (object-demoting) and applicatives (object-promoting), two construction types which appear to share very little in common at first: they are both instances of PNI. This predicts that the direct objects of applicative constructions would exhibit NP-like properties, and I argue that Person-Case Constraint effects are evidence of this.

5.1 Further evidence for XP: applicatives

I have put off the discussion of applicative constructions until now, and for a good reason. It is because the proposal provided for middles in the previous chapter extends straightforwardly to applicatives. I argue that applicatives are, at their core, a type of PNI: just like middles, they are characterized by an extra layer of functional structure above VP, XP. As such, the direct (basic) objects (theme arguments) of applicatives are expected to show NP-like properties (more on this below).

What distinguishes applicatives from middles is simply that in the former, X is able to introduce and theta-mark an argument in its specifier—the applied argument. X, then,
can be said to come in two “flavors”: expletive and thematic. The first characterizes middle clauses while the second characterizes applicative constructions. This is schematized in (171).

(171) a. “Expletive” X in middle  
\[ \text{\ldots} \]
\[ \text{XP} \]
\[ \text{v} \]
\[ \text{VP} \]
\[ X_{\emptyset} \]
\[ \text{NP} \]
\[ V \]

b. “Thematic” X in applicative  
\[ \text{\ldots} \]
\[ \text{XP} \]
\[ \text{v} \]
\[ \varphi P_{[\text{DAT}]} \]
\[ X' \]
\[ \text{Benefactive} \]
\[ \text{VP} \]
\[ X_{\emptyset} \]
\[ \text{NP} \]
\[ V \]

The idea of an “expletive” applicative head is not new. Georgala et al. (2008) and Georgala (2012) distinguish between thematic applicatives and athematic (or raising) applicatives, the latter of which “function as an expletive head, introducing no additional argument but serving as a licenser for the highest eligible DP selected by the lexical verb” (ii). The authors assume that raising applicatives have an EPP feature which is satisfied by attracting the closest DP in its c-command domain (hence the label “raising” applicative). In their work, this argument is most often the indirect object of low applicatives in the sense of Pylkkänen (2002, 2008). The two types of applicatives are schematized in (172).

(172) Georgala et al. 2008:181

---

1It has been widely recognized that applicative constructions split into two types crosslinguistically: (i) high applicatives which relate a non-core argument to the event described by the verb and (ii) low applicatives which relate a non-core argument to the direct object (the Theme argument). Accordingly, the high applicative head merges VP-externally (1a), while the low applicative head merges VP-internally (1b).
a. **Thematic applicative**: Appl introduces an argument in its specifier

\[
\text{[ApplP DP}_{\text{benefactive}} \text{ [Appl' Appl [VP V DP ]]}]
\]

b. **Raising applicative**: Appl licenses the highest argument in VP

\[
\text{[ApplP DP}_{\text{recipient}} \text{ [Appl' Appl [VP t}_{\text{recipient}} \text{ [V' V DP ]]}]}]
\]

I diverge from Georgala (et al.) in two ways. First, my proposal establishes an important connection between X and the *lowest* argument (direct/basic object) in its c-command domain, which is an NP. In Ranmo, the highest argument in the \(v\)P domain is licensed under Agree with \(v\). Second, I do not assume that X has an [EPP] feature which is satisfied by the A-movement of a lower argument to its specifier since there is no strong evidence for a high/low applicative distinction in Ranmo (see footnote 1).

The expletive/thematic distinction in X has a correlate in the more familiar functional category \(v\): unaccusative \(v\) and transitive \(v\). The former is an “expletive” head in the sense that it does not introduce/theta-mark any argument, whereas the latter is “thematic” in

![Diagram](1)

---

163
that it introduces and theta-marks an external argument\(^2\) it projects.

Thematic applicative constructions in Ranmo may be categorized into two types, canonical and non-canonical. Canonical applicatives are constructions in which the applied argument is theta-marked and inherently case-marked by the head which introduces it, X, as shown in (171b). This is the standard assumption in most analyses of applicative constructions (Pylkkänen 2002 et seq.). In non-canonical applicatives, on the other hand, the applied argument receives structural case assigned by configurational rules, as we will see in section 5.3. From a synchronic perspective, the relationship between the two types of applicatives can be captured as inherent case assignment (in canonical applicatives) bleeding structural case assignment (in non-canonical applicatives), following the disjunctive case hierarchy in (173).

\[
\text{(173) Disjunctive case hierarchy (Marantz 1991)}
\]

\[
\text{Lexical/inherent case} \gg \text{dependent case} \gg \text{unmarked case}
\]

### 5.2 Canonical applicatives

Thematic X in (171b) is, for all intents and purposes, equivalent to Pylkkänen (2002)'s High Applicative (HAappl), also projected above VP, as in (174).

\[
\text{(174) High applicative}
\]

\(^2\)Here, I am conveniently excluding the possibility that a Voice head serves as the introducer of an external argument (cf. Kratzer 1996).
High applicatives introduce a non-core participant to the event described by the verb. This is exemplified by the Chaga (Bantu) benefactive applicative construction.

(175) **Chaga**
(Bresnan and Moshi 1993 as cited in Pylkkänen 2002:17)

N-á-í-lyi-í-à
FOC-1s-PRES-eat-APPL-FV

‘He is eating food for his wife.’

Pylkkänen draws out parallels between high applicatives and the external argument introducing head, Voice. Voice is a functional head which denotes a thematic relation that holds between the external argument and the event described by the verb. According to Kratzer (1996), Voice combines with the predicate (the vP) via an operation called *Event Identification*.

(176) **Event Identification**

\[ <e, <s, t>> <s, t> \rightarrow <e, <s, t>> \]
Event Identification allows one to add various conditions to the event described by the verb. Voice adds the condition that the event has an agent (or an experiencer) while High Appl adds the condition that the event has a benefactive, a malefactive or an instrumental. The semantic compositionality of high applicatives is shown in (177).

(177) **Chaga benefactive**

\[
\text{He} \quad \lambda x. \lambda e. \text{Eating}(e) \& \text{Agent}(e, x) \& \text{Theme}(e, \text{food}) \& \text{Benefactive}(e, \text{wife})
\]

\[
\text{Voice} \quad \lambda e. \text{Eating}(e) \& \text{Theme}(e, \text{food}) \& \text{Benefactive}(e, \text{wife})
\]

\[
\text{wife} \quad \lambda x. \lambda e. \text{Eating}(e) \& \text{Theme}(e, \text{food}) \& \text{Benefactive}(e, x)
\]

\[
\text{Appl}^{\text{BEN}} \quad \lambda e. \text{Eating}(e) \& \text{Theme}(e, \text{food})
\]

(178) **High Appl**

\[
\lambda x. \lambda e. \text{Appl}(e, x)
\]

(Pylkkänen 2002:21)

Thematic X does the same thing that HAppl does semantically. Following Pylkkänen, I assume that the inventory of functional heads includes several different X heads, two of which are relevant to Ranmo: the ones responsible for the assignment of the Benefactive and Possessor roles. These \( \theta \)-roles are associated with distinct inherent cases, dative and genitive, respectively.

\[3\text{Collapsing Appl}^{\text{BEN}}, \text{Appl}^{\text{INSTR}}, \text{Appl}^{\text{LOC}} \text{and so forth.}\]
5.2.1 Dative benefactives

In the applicative construction (179a), the non-core argument (Jon) is introduced in Spec,XP, where it receives a Benefactive \( \emptyset \)-role from X (cf. the transitive variant in (179b)).

Inherent dative case \(-(n)\text{an}\) is assigned as a reflex of this \( \emptyset \)-role assignment.

(179) a. Kèn Jon-an ndótar s-a-rèfunt-\( \emptyset \). \( (>\text{sarfunt})\)  
1sg.ERG Jon-DAT door 3sgmO.\( \gamma \)-open.RST-sgS  
‘I opened a/the door for Jon.’

b. Kèn ndótar s-rèunt-\( \emptyset \). \( (>\text{serfung})\)  
1sg.ERG door 3sgmO.\( \gamma \)-open.RST-sgS  
‘I opened a/the door.’

(180) a. Kèn mban yanje ngambitawá th-f-a-yibar-\( \emptyset \).  
1sg.ERG 2nsg.DAT meat all 3nsgO.\( \beta \)-NON.FUT-A-slice-sgS  \( (>\text{thèfebar})\)  
‘I sliced (the) meat for you all.’

b. Kèn yanje s-f-yibar-\( \emptyset \). \( (>\text{sèfibr})\)  
1sg.ERG meat 3sgmO.\( \beta \)-NON.FUT-slice-sgS  
‘I sliced (the) meat.’

The goal arguments of ditransitives (give, show, and send) also receive dative case; thus, I include them in the dative benefactive class as well.

(181) a. Nafo ngambi mam tw-a-nèt-\( \emptyset \) ntun. \( (>\text{twant})\)  
3sg.ERG one fish 1sgO.\( \gamma \)-A-give.RST-sgS 1sg.DAT  
‘S/he gave me one fish.’

b. Ngam-o tatakuse s-a-rifel-\( \emptyset \) nafan nènggai-an.  
mom-ERG letter 3sgmO.\( \gamma \)-A-send.RST-sgS 3sg.GEN child-DAT  
‘Mother sent her child a/the letter.’
In all of the applicative examples, there is an additional morpheme present which is not in the transitive variants, namely the *a*-prefix. Another characteristic is that it is the applied object, not the basic object, which controls O agreement. The phonological exponents cross-referencing these benefactive arguments are identical to those cross-referencing the internal arguments of simple transitive and unaccusative clauses *except* in the third person singular feminine category. There are two phonological exponents associated with this category, as shown in Table 5.1. In each column, the one to the left is associated with a transitive direct object or an unaccusative subject, whereas the one to the right is associated with an indirect/applied object. For all other person/number(/gender) categories, the same exponent is used for both internal argument positions.

<table>
<thead>
<tr>
<th></th>
<th>α</th>
<th>β</th>
<th>γ</th>
</tr>
</thead>
<tbody>
<tr>
<td>1sg</td>
<td>w-</td>
<td>b-</td>
<td>tw-</td>
</tr>
<tr>
<td>1nsg</td>
<td>n-</td>
<td>ngg-</td>
<td>nt`en-</td>
</tr>
<tr>
<td>2sg</td>
<td>n-</td>
<td>ngg-</td>
<td>nt`en-</td>
</tr>
<tr>
<td>2nsg</td>
<td>th-</td>
<td>th-</td>
<td>th-</td>
</tr>
<tr>
<td>3sgm</td>
<td>y-</td>
<td>s-</td>
<td>s-</td>
</tr>
<tr>
<td>3sgf</td>
<td>ng-/wè-</td>
<td>k-/?bó-</td>
<td>tè-/twá-</td>
</tr>
<tr>
<td>3nsg</td>
<td>th-</td>
<td>th-</td>
<td>th-</td>
</tr>
</tbody>
</table>

Table 5.1: O series

Case marking in dative benefactive constructions proceeds as follows. First, a VP is formed, which includes the lexical verb and an NP object. The presence of this NP requires the projection of a functional projection above VP, namely XP. Its specifier projects a non-core argument which is assigned a Benefactive θ-role. Next, *v* is merged, triggering the

---

4The NP status of the basic objects of applicatives will be discussed below.
spell out of XP. Since it is the complement of a phase head, it constitutes a case assignment domain (see section 4.1.2). At this point, XP contains two arguments. The argument in Spec,XP is a theta-position; therefore, it will receive inherent (dative) case first, following the case disjunctive hierarchy in (173). The remaining noun phrase in the direct object position will subsequently be assigned unmarked case associated with XP, namely accusative (morphologically indistinguishable from absolutive). Next, Voice will combine with XP and introduce an external argument in its specifier. This will be the only argument that remains to be case assigned at the spell out of TP, i.e., upon the merger of C, the next phase head. Crucially, on this cycle, since $v$ is a soft phase in Ranmo, the nominal contents of its complement are still visible to trigger ergative case. There are two noun phrases in this domain: the dative benefactive argument and the accusative NP object. They will (perhaps redundantly) trigger ergative case on the external argument.

5.2.2 External possession constructions

In section 4.3.1, I mentioned that possessive pronouns (‘genitives’) in Ranmo are adjectival in nature rather than representing a D category. They have the structure in (182).

(182) Ranmo possessive phrase
However, it is not always the case that genitives function as modificational material; they can sometimes display argument-like properties. Consider, for example, the paradigm below.

(183) a. Kën nafne sóka wá-a-fitar-∅. (wá-afitar)
    1sg.ERG 3sg.GEN hand 3sgmO.α-A-wash-sgS
    ‘I am washing her hand.’

b. ??Kën nafne sóka y-fitar-∅. (yèfitar)
    1sg.ERG 3sg.POSS hand 3sgmO.α-wash-sgS
    Intended: ‘I am washing his/her hand.’

In (183a), the genitive nafne behaves as a verbal argument, as evidenced by its ability to control O agreement (the basic object does not trigger agreement). This is a classic property of external possession, a phenomenon in which a nominal is syntactically encoded as a dependent of the verb but understood as the semantic possessor of one of its co-arguments (see Payne and Barshi 1999 for a cross-linguistic overview of external possession constructions).

In many languages, external possession is obligatory when the entity possessed is inalienably possessed (Kayne 1975; Guéron 1985; Cheng and Ritter 1987; Yoon 1990; Vergnaud and Zubizarreta 1992). This is true of Ranmo as well, as shown by the ill-formedness of (183b). It
is well-known that languages with special morphological marking for inalienability vary with respect to which subset of the relations in (184) they mark as inalienable (Heine 1997:11-12).

(184) **INALIENABLE RELATIONS CROSS-LINGUISTICALLY** (list provided in Myler 2014)

a. Body parts

b. Kinship roles

c. Relational concepts like ‘top,’ ‘bottom,’ ‘interior,’ etc.

d. Parts of other items, like ‘branch,’ ‘handle,’ etc.

e. Physical and mental states, like ‘strength’ and ‘fear,’ etc. (Lichtenberk 1985)

f. Nominalizations, where the possessee is a verbal noun, for example ‘his singing,’ ‘the planting of bananas’

g. Clothes that are being worn (as opposed to hanging in a wardrobe somewhere)

are often treated as inalienable

As far as transitive clauses are concerned, only body parts\(^5\) require being expressed in

\(^5\)In fact, only *some* body parts are considered inalienably possessed. Many grooming or body care verbs require a *simple* transitive form referencing either the \(\varphi\)-features of the possessor of the body part (1a) or the body part itself (1b). In constructions of the first type, it is as though the body part nominal forms a lexical compound with the verb, or it is only adverbial/adjunct, as seen from the fact it can even be omitted, though its meaning is recoverable from the context (1c).

(1)  
\begin{align*}
a. & \text{Kèn } \text{fi } \text{fák } \text{yèfi } y \text{-rèfer-Ø.} \quad (>\text{yèrfer}) \\
& 1\text{sg.ERG } 3\text{ABS chin hair } 3\text{sgmO. } \text{x-shave-sg}S \\
& \text{‘I am shaving his beard.’} \\
\hline
b. & \text{Kèn } \text{lambil } l\text{-tar-Ø.} \quad (>\text{létar}) \\
& 1\text{sg.ERG finger nails } 3\text{sgO. } \text{x-clip-sg}S \\
& \text{‘I’m clipping my/someone’s nails.’} \\
\hline
c. & \text{Kèn } \text{fi } \text{ng-rèndar-Ø.} \quad (>\text{ngèrndar}) \\
& 1\text{sg.ERG } 3\text{ABS } 3\text{sgfO. } \text{x-comb-sg}S \\
& \text{‘I am combing her hair.’}
\end{align*}
an external possession construction (EPC) in Ranmo. If the possessor of a body part noun remains internal to the possessum \( \varphi P \) (internal possession), as in (183b), the sentence is ungrammatical.

I argue that the two instances of the genitive represent a modifier-argument distinction: in internal possession, genitives function as possessive modifiers whereas in external possession, genitives are true arguments. This homophony is curious since in most languages that employ EPCs, external possessors bear a distinct case than internal possessors. Most typically, this case is dative, as exemplified by French, Spanish, and Hebrew in (185).

(185)  

a. FRENCH  

\[
\begin{align*}
\text{Je lui} & \quad \text{ai lavé le bras/*le fils/*la voiture} \\
\text{I 3sg.DAT} & \quad \text{have washed the arm/*the son/*the car} \\
\end{align*}
\]

‘I washed his arm/*son/*car.’

b. SPANISH  

\[
\begin{align*}
\text{Le} & \quad \text{apuntaron el número de Seguro Social.} \\
\text{3sg.DAT} & \quad \text{write.down the number of security social} \\
\end{align*}
\]

‘They wrote down her Social Security number.’

c. HEBREW  

\[
\begin{align*}
\text{’íma kiftera le-dáni } & \quad \text{’et ha-svéder.} \\
\text{Mom buttoned to-Danny ACC the-sweater} \\
\end{align*}
\]

‘Mom buttoned Danny’ sweater.’

The use of genitive case as the marker of the external possessor is indeed rare from a cross-linguistic point of view (Uehara 1999:68); however, synchronically, I suggest that the
structure of these constructions is no different from that of dative benefactive applicatives. That is, the external possessor is base generated in Spec,XP and receives a Possessor \( \theta \)-role from X. Inherent genitive case is assigned as a reflex of this \( \theta \)-role assignment. This is schematized in (186).

(186) **External possession construction**

Another significant way in which Ranmo EPCs depart from EPCs found cross-linguistically is that they are not limited to verbs describing actions. In French, for example, external possession is subject to the constraint that the verb of a possessor dative construction not describe a state (Barnes 1985:169, Guérón 2006:600).

(187) **French**

a. *Je lui ai vu le bras.

1 3sg.DAT have seen the arm

‘I have seen her arm.’

b. *Tu lui aimes les jambes.

you 3sg.DAT love the legs

‘You love his/her legs.’ (Deal 2013:9)

This constraint is fundamentally linked to the possessor affectedness constraint: the
external possessor must be affected in some way, whether physically or mentally, for the construction to be semantically coherent (e.g., Kayne 1975, Barnes 1985, Haspelmath 1999). Since stative predicates do not generally describe situations leading to physical or mental impact on the possessor, external possession is ruled out (187).

Ranmo, apparently, is not subject to this constraint. This is demonstrated by two empirical facts. First, possession is not the only semantic relation expressed by EPCs. They can also express a transfer of possession relation, either “to” the applied argument (Recipient) or “from” the argument (Source), as shown below.  

(188) a. Recipient

Kèn mbone féfé ngg-f-a-wèr-∅. (>nggèfawèr)
1sg.ERG 2sg.GEN yam 2sgO.β-NON.FUT-A-plant-sgS

‘I planted you (a/the) yam(s).’

b. Kèn féfé s-f-wèr-∅. (>sèfwèr)
1sg.ERG yam 3sgmO.β-NON.FUT-plant-sgS

‘I planted a/the yam.’

(189) a. Source

Ngatha-ngo tauri ntoné w-a-yikan-∅. (>wekan)
dog-ERG wallaby 1sg.GEN 1sgO.α-A-carry-sgS

---

6These two relations have the semantics of “low” applicative relations discussed in Pylkkänen (2002). She posits a different structure for these, shown in (1b) (cf. 174), but in Ranmo, there is no good evidence for there being a high/low distinction in the applicative (i.e., X) category. I will assume that the Possessor, Source, and Recipient relations all underlie the structure in (186) (or (174)) the choice between the three is determined pragmatically.

7In this example, the direct object precedes the Source applied argument, presumably as a result of scrambling. Agreement is still with the applied argument. I take this to suggest that agreement takes place prior to scrambling.
‘A/the dog is taking/carrying a/the wallaby away from me.’

b. Ninta ngarake-fa ta fi ng-yikan-e. (ngi kane)
1nsg.ERG garden-ALL FUT 3ABS 3sgf.ɔ-carry-ns sgS
‘We will carry her to a/the garden.’

Neither the Recipient nor the Source argument is mentally or physically affected by the transfer of possession event. I assume that for any given EPC, all three readings (Possessor, Recipient, and Source interpretations) are in principle available, but the precise meaning, the most coherent one, is determined via pragmatic inference interacting with the lexical semantics of the verb.

Another argument for the absence of the affected constraint in Ranmo is that external possession can be used very productively with *static* unaccusatives including positional verbs and the copula *be* (cf. French (187)).

(190) a. Yere-ka fari y-mil. (>yëmil)
basket-LOC rope 3sgm.ɔ:STAT-hang.POS
‘A/the rope is hanging over a/the basket.’

clothing body-ALL/clothesline-ALL 1sg.ɔ:STAT-A-hang.POS
‘(The) clothing is hanging over my body/clothesline’ (lit. ‘...over me at the body/clothesline’).

(191) a. Tafko yêmbar-en y-mil.
hat head-LOC 3sgm.ɔ:STAT-be.on.top.POS
‘A/the hat is on a/the hat’ (on some unspecified person’s head in a picture)

clothing body-ALL 1sg.ɔ-A-be.on.top.POS
‘A/the hat is on top of my head’ (lit. the hat is on top of me at the head).
(192) a. Ke nènggai-tha w-ra. (>wora)
   1sg.ABS child-ADJZ 1sgO.a-be
   ‘I have a child(ren)’ (lit. ‘I am of (a) child(ren)’).

   b. Ntone nènggai w-a-ra.
   1sg.GEN child 1sgO.a-A-be
   ‘I have a child.’

Note also that in these unaccusative examples, the object that is semantically possessed need not be a body part (inalienably possessed). In general, the external possessor need not be affected by the state described by the verb, as shown by the fact that the the possessum argument may be detached from the Possessor (190b). These constructions underlie the structure in (193).

(193) **Stative possessor unaccusative applicatives**

```
  vP
   / \                  vSTAT
  XP   vSTAT
 / \                     /
|   |                     |   |
|   |                     |   |
PGEN GEN                 GEN
   / \                     /  \
  X'  X                    X  X
  /  \                      /  \
Possessor Possessor      Possessor Possessor
   /  \                      /  \
  NP V                        VP X
```

Finally, morphological case assignment in stative possessor unaccusatives proceeds as follows. When $v$ merges, it will cause the spell out of its complement, XP. At this point, the argument associated with the Possessor role will first receive inherent genitive case. The other noun phrase in this spell out domain is the NP basic object, to which the possessor argument stands in a static relation of possession. It receives unmarked case associated with
this domain, namely accusative. vP is selected by T, and then TP is selected by C. No additional noun phrases will have merged. C will trigger the spell out of TP, at which point all noun phrases will have been case-assigned.

Here is a summary of EPCs in Ranmo.

(194) Properties of Ranmo canonical applicatives

a. EPCs express possession and transfer-of-possession.

b. EPCs are possible with stative unaccusative predicates as well as transitive predicates.

c. The possessor phrase controls O agreement (the basic object does not trigger agreement).

d. The possessor phrase is marked with genitive case.

e. The possessor need not be affected in any sense.

5.2.3 The basic objects of canonical applicatives

If applicatives are an instance of PNI with thematic X, their basic objects are expected to share certain properties with the objects of middles, which are another instance of PNI (with expletive X). Recall that the objects of middles can be anaphors and, in a limited number of cases, overt non-anaphoric PNI objects (chapter 4). Being NPs, these elements should in principle be able to serve as the basic objects of applicatives. But in fact, anaphors are not licensed in the basic object position of applicatives, as in (195); this is essentially a
ban on the applicativization of anaphoric middles.

(195)  a. **Applicativization of an anaphoric middle**

*Ken chair-ka nafan s-a-faklêm-Ø.
1sg.ERG ground-LOC 3sg.DAT 3sgmO.γ-A-sit.on.top.RST-sgS

Intended: ‘I sat on top of the chair for him’ (lit. ‘I sat myself on top of the chair for him’).

b. **Anaphoric middle**

Ke chair-ka t-a-faklêm-Ø.
1sg.ABS chair-ALL M.γ-A-sit.on.top.RST-sgS

‘I sat on top of the chair.’

The sentence in (195a), which is ungrammatical under the intended reading\(^8\), has the structure in (196).

(196) **Applicativization of anaphoric middles ruled out**

\[^8\text{It would be grammatical under the interpretation ‘I sat someone else (=pro) down on the chair for him,’ though my consultants did not like this probably for pragmatic reasons (e.g., there is no apparent benefit allotted to the referent of the dative argument for one’s sitting someone down on a chair).}\]
Anaphor binding is not subject to intervention (cf. *John showed Bill himself in the mirror*) (Charnavel and Sportiche 2016), so something else must be responsible for the ill-formedness of (195a). I suggest that the inability of anaphoric middles to take an applied argument has to do with the restriction that the benefactive or the external possession relation expressed by an applicative must refer *explicitly* to an object that undergoes possession or that serves as the currency of benefit transferred. For example, in *I sang Mary a lullaby*, the benefit afforded to Mary is a lullaby, which must be overtly represented (cf. *I sang Mary*). In (195a), there is no such object expressed; only an anaphor is present.

This predicts that when a middle verb takes an overt PNI object that is *non-coreferential* with the subject, there is in principle nothing to block applicativization. Indeed, this is

---

9Georgian is another language that seems to have this restriction (Lomashvili 2010). Although the structures in (1) contain canonically intransitive verbs, there must be an accusative theme argument (*marathon, all night, ball*) present in order to express a benefactive applicative relation.

(1) a. Nik’o-m Natia-s maratoni ga-u-rbina.  
Nik’o-ERG Natia-DAT marathon prev-APPL-ran  
‘Nik’o ran marathon for Natia.’

b. Lado-m mak’a-s mteli γ-ame u-cek’va.  
Lado-ERG Mak’a-DAT all night APPL danced  
‘Lado danced all night long for Maka.’

c. Dato-m Nadia-s burti u-gor-av-a.  
Dato-ERG Nadia-DAT ball APPLIC-rolled-TH-3O  
‘Dato rolled Nadia the ball.’ (Lomashvili 2010:223)

---

10This is essentially Pykkänen (2002)’s prediction that high applicativization should in principle be possible with unergative verbs, as in Chaga for example.

(1) Chaga  

a. N-å-í-ly-i-à m-kâ k-élyá.  
FOC-1SG-PRES-eat-APPL-FV 1-wife 7-food  
‘He is eating food for his wife.’

b. N-å-i-zric-i-à mbûyà.  
FOC-1S-PRES-eat-APPL-FV 9friend  
‘He is running for a friend.’
borne out for the verbs *smell* (‘pull+smell’) and *dance*, which take an overt PNI object (cf. (195)).

(197)  

a. **Applicativization of a non-anaphoric middle**

\[
\begin{align*}
\text{Ngatha-ngo fewa } & \text{ y-a-karak-Ø } \\
\text{dog-ERG } & \text{ smell } 3\text{sgmO.} \alpha \text{-A-pull-sgS man-GEN }
\end{align*}
\]

‘A/the dog is smelling a/the man.’

b. Ngatha-ngo fewa ng-a-karak-Ø.  

‘A/the dog is smelling (something).’

(198)  

a. **Applicativization of a non-anaphoric middle**

\[
\begin{align*}
\text{Ninta } & \text{ mbanta } \text{ yu } \text{ nafan } \text{ y-a-yibreke-e. } \\
\text{1nsg.ERG } \text{ tradition } \text{ dance } & \text{ 3sg.DAT } 3\text{sgmO.} \alpha \text{-A-dance-1nsgS }
\end{align*}
\]

‘We are dancing a traditional dance for him.’

b. Ninta mbanta yu k-f-a-yibreke-e.  

‘We danced a traditional dance.’

Another nice result of the PNI analysis of applicatives is that it is able to straightforwardly account for the Person-Case Constraint (PCC), a universal ban on local (i.e., 1st and 2nd) person internal argument clitics/agreement markers/weak pronouns in the presence of dative (or indirect object) clitics/agreement markers/weak pronouns (Bonet 1991, 1994). The simplified description is given in (199).
(199) **Person-Case Constraint**

No 1st/2nd person direct object in the presence of an indirect object.

(200) **French PCC**

a. Roger *le leur* a présenté
   Roger *3sg 3pl.DAT* has shown
   ‘Roger has shown him to them.’

b. *Roger me leur* a présenté
   Roger *1sg 3pl.DAT* has shown
   ‘Roger has shown me to them.’  
   (Couquaux 1978:211)

The PCC follows straightforwardly from the PNI analysis, combined with the well-accepted view that the domain of φ-features is internally structured (Harley and Ritter 2002, McGinnis 2005, Béjar and Rezac 2009, among others). First, it is relatively uncontroversial that gender is an inherent property of nouns; therefore, this feature will enter the derivation with the noun head. Second, it is generally assumed that a number feature projects its own independent functional projection, NumP. Finally, this phrase is dominated by a projection on which person/participant features are found—probably a DP or Part(icipant)P.

(201) **Internal structure of φ-features**

```
          DP
           \___
      D_[person] NumP
        \_\_\_\_
       Num_[number] NP
         \_\_\_\_
          N_[gender]
```
This articulated view of \(\varphi\)-features allows for distinct representations of persons. In particular, it is commonly assumed that in contrast to local persons, the third person has no person/participant feature (Anagnostopoulou 2005, Adger and Harbour 2006, Béjar and Rezac 2003, Harley and Ritter 2002, Kayne 2000, among others). I assume that the mass/count distinction in the third person category is represented by whether the NumP is projected or not.

\[\text{(202) 3RD PERSON} \quad \text{(203) 1ST/2ND PERSON}\]

\[
\begin{array}{c}
\text{NP}_{[\text{gender}]} \quad \text{Num}_{[\text{number}]} \\
\end{array}
\]

\[
\begin{array}{c}
\text{NP}_{[\text{gender}]} \quad \text{Num}_{[\text{number}]} \\
\end{array}
\]

The PNI analysis predicts that (202), but not (203), would be licensed in the basic object position of applicatives. Moreover, since we’re assuming that the third person includes an independently projected functional NumP\(^{11}\), we predict the basic objects of applicatives to be modifiable by a numerical phrase. This is borne out.

\[\text{(204) Ntun ngambi fo tw-a-fants-Ø.} \]
\[
\begin{array}{c}
1\text{sg.DAT one coconut 1sgO.γ-A-show.RST-sgS} \\
\end{array}
\]

‘X showed me one coconut.’

Numeric modification of NP objects in \textit{middle} constructions is ruled out for independent reasons: first, anaphors are \textit{bare} NPs, and second, in the limited situations where the NP

\(^{11}\text{Alternatively, numeric phrases are modifiers in Ranmo the same way (non-argumental) possessive and demonstrative phrases are.}\)
object can be non-anaphoric, it must be either a mass noun (‘dance,’ ‘smell,’ ‘run’), which excludes NumP.

This unites anaphors, general PNI objects, and 3rd person arguments under the category of “NP objects.” The first two are -RI (not referentially independent), whereas the last is +RI by virtue of having a gender and number features.

Figure 5.1: Types of NPs objects and their respective PNI constructions

Under this proposal, the PCC need not be accounted for in terms of a postsyntactic morphological filter (cf. Bonet 1991, 1994), nor does it require a licensing stipulation on 1st/2nd person arguments of the kind posited in (205).

(205) PERSON LICENSING CONDITION (PLC) (Béjar and Rezac 2003)

Interpretable 1st/2nd-person features must be licensed by entering into an Agree relation with an appropriate functional category.

Rather, PCC effects fall out straightforwardly from the inherent properties of the PNI structure.
5.3 Non-canonical applicatives

In this section, we explore so-called non-canonical applicative constructions. These differ from canonical applicatives in that the argument in Spec,XP receives structural case instead of inherent dative/genitive case. Main evidence for the structural analysis comes from the fact that the assignment of unmarked absolutive to the applied argument is correlated with the presence of a semantically and phonetically null NP in the object position, which does not qualify as a trigger of dependent case. There are both transitive and unaccusative variants of non-canonical applicatives, which I will refer to as complex transitives and complex unaccusatives, respectively.

5.3.1 Complex transitives

Consider the examples in (206). These are semantically transitive, having an agent and a patient/theme argument, which are ergative and absolutive case-marked, respectively. What immediately distinguishes these from simple transitives is their verbal morphology, which includes indirect object agreement\(^\text{12}\) and, once again, the a- prefix. I will refer to these as complex transitives, which number around half a dozen (possibly more) and include verbs like ‘bark at,’ ‘love,’ and ‘wait for/on.’

(206) **Complex transitives**

\(^{12}\)Indirect object agreement is identical in form to direct object agreement except in the 3rd singular feminine category. In canonical applicatives, it is controlled by dative benefactives or external possessors.
a. Ngatha-ngo ke w-*(a)-bi-∅.
   dog-ERG 1sg.ABS 1sgO.∅-A-bark-sgS
   ‘A/the dog is barking at me.’

b. K`en fe n-*(a)-frak-∅.
   1sg.ERG 2ABS 2sgO.∅-A-love-sgS
   ‘I love you.’

c. K`en sai y-*(a)-monangg-∅.
   1sg.ERG rain 3sgmO.∅-A-wait-sgS
   ‘I’m waiting for rain.’

d. K`en tauri y-*(a)-miku-∅.
   1sg.ERG wallaby 3sgmO.∅-A-creep.up-on-sgS
   ‘I’m creeping up on a/the wallaby.’

Generally speaking, these constructions do not themselves alternate with simple transitive variants, as indicated by the obligatoriness of the a-prefix. This suggests that complex transitive verbs cannot take qP arguments.\(^\text{13}\)

Most complex transitives do, however, alternate with middles, which we saw to have heterogeneous properties (chapter 4). Sometimes they are reflexive in meaning (207a-b)\(^\text{14}\),

---

\(^\text{13}\) There is one exception, and that is the verb *fuek*, which can be expressed as a complex transitive (with a- and indirect object agreement (*wá*- present) or a simple transitive (without a- and with direct object agreement (*ng*)- present). Between the two forms, the verb alternates in meaning between ‘raise’ and ‘lift up.’

\(^\text{14}\) I assume that *béférkase frak* (boasting+love) ‘boast’ in (207b) is a lexical compound selecting an anaphor as its object, much like *yak ngekan* (run+carry) ‘run’ selects an anaphor to derive the unergative meaning ‘run.’

---
taking a bound NP anaphor (which fails to trigger dependent case on its antecedent, the
subject). Other times, their object position is occupied by a null NP (which is coindexed
with an oblique case-marked adjunct), which does trigger ergative case on the subject (207c).

(207)  **Complex transitives alternate with middles** cf. (206)

a. Fi nafo-wá ng-a-frak-∅.
   3ABS 3sg.ERG-WÁ M.x-A-love-sgS
   ‘S/he loves herself/himself.’

b. Fi bèferkase ng-a-frak-∅ fefe-mo.
   3ABS bragging M.x-A-love-sgS yam-SRC
   ‘S/he boasts/brags about yams (i.e., his/her wealth).’

c. Ngatha-ngo tauri-r ng-a-miku-∅.
   dog-ERG wallaby-GOAL M.x-A-search-for-sgS
   ‘A/the dog is looking for wallabies.’

In this way, complex transitives are like the verb *yibrek* ‘dance,’ which is lexically specified
to only take an NP object. It takes an *overt* NP cognate object *yu* ‘dance’ (or some modified
version thereof), which also triggers ergative case\(^{15}\) on the subject, as shown in (208a).

(208)  a. Ninta (mbanta) yu/disco k-f-a-yibrek-e.  (>kweberke)
   1nsg.ERG tradition dance/disco m.β-NON.FUT-A-dance-1nsgS
   ‘We danced a (traditional) dance/disco.’

\(^{15}\) Absolutive case marking on the subject is accepted by some speakers. I do not take this variability
to reflect any structural distinction, but a kind of case neutralization/syncretism that arises in some envi-
nronments in which the NP object is a non-anaphor. For middle verbs that only take an anaphor, no such
variability is attested; ergative case marking always leads to ungrammaticality, as shown in (1).

(1)  Thinto-(∗ngo) ng-a-léfen-∅.
   bird-(ERG) M.x-A-fly-sgS
   ‘A/the bird is flying.’

186
b. *Ninta fe ngg-f-yibrek-e.
   Insg.ERG 2ABS 2sgO.β-NON,FUT-dance-1nsgS
   Intended: ??‘We danced you.’

Recall that NP-selecting verbs must take an extra layer of functional structure above VP (chapter 4). Suppose that the head of this projection, X, introduces an additional argument in its specifier. This gives us the applicative structure as we discussed in section 5.2. While yibrek ‘dance’ lacks a simple transitive variant (taking a qP object), there is nothing to prevent it from projecting a dative applied argument to express a benefactive relation between it and the event expressed by the verb phrase, as in (209).

(209) Ninta mbanta yu nafan y-a-yibrek-e. (>yebreke)
   Insg.ERG tradition dance 3sg.DAT 3sgmO.x-A-dance-1nsgS
   ‘We are dancing a traditional dance for him.’

From a synchronic perspective, complex transitives have the same underlying structure as that represented by the sentence in (209), except that structural unmarked absolutive case is assigned to Spec,XP at the spell out of XP (i.e., on the vP cycle) according to (210).

(210) Disjunctive case hierarchy lexical/inherent case >> dependent case >> unmarked case

This structure represents a case of underapplication of both inherent case and dependent case. The application of dependent case\textsuperscript{16} is blocked because a semantically and phonologi-

\textsuperscript{16}The underapplication of inherent case is discussed below.
cally empty NP object is (apparently) not “strong” enough to trigger ergative case. The structure of the complex transitive is shown in (211).

(211) **Complex transitive**

```
\[
\begin{array}{c}
\text{VoiceP} \\
\text{DP} \text{[ERG]} \\
\text{Voice'} \\
\text{vP} \\
\text{Voice} \\
\text{XP} \\
\text{DP} \text{[ABS]} \\
\text{X'} \\
\text{VP} \\
\text{X} \\
\text{NP} \\
\text{V} \\
\text{∅}
\end{array}
\]
```

I speculate that historically these null NP objects were cognate objects, but ones that are not as amenable to adjectival modification as nouns like ‘dance’ (which could even be replaced by names referring to specific types of dance, such as ‘disco’; see (208a)). Without modificational material, they contribute no semantic information beyond that contained in the verb itself. This probably meant that they did not need to be pronounced all the time,

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17 There seem to be just a few exceptions. Verbs like ‘bark’ and ‘run’ accept both ergative and absolutive case marking. I speculate that at one point in the history of these null NP objects, they were able to trigger ergative case.

18 Another way to think about these verbs is that they are in fact light verbs (like *do*) which express lexical meanings only in combination with a noun, e.g., *sleep-do* ‘sleep’ and *song-do* ‘sing.’ This is in fact how Hale and Keyser (1993) account for English unergative verbs—they underlie a syntactically transitive structure in which the N head of the object phrase incorporates into the verb, as schematized in (1).

(1) **Deriving unergative verbs in English** (Hale and Keyser 1993)
with the consequence that eventually, their phonological content got lost entirely.

I suggest that this loss of phonological and semantic content served as a catalyst for the reanalysis of inherent dative case to structural case. In order to understand why, we must first recognize that the occurrence of inherent dative case is almost always contingent on the presence of an overt NP object. This is presumably because the benefactive relation expressed by applicatives requires, at least in Ranmo, explicit reference to an object (whether concrete or abstract) which can serve as the currency of that benefit (see footnote 9).

Cognate objects can in some sense “measure” that benefit, but as some of them (unmodified ones in particular) became less and less frequently pronounced over time, the benefactive relation itself became less and less transparent, since its representation is contingent on the presence of an overt object. This by hypothesis resulted in the applied argument eventually losing its status as a benefactive, which then became dissociated from inherent dative case.

The dependent case theory can account for the emergence of absolutive case in its place. Assuming that semantically null NPs are unable to trigger dependent case on the applied argument, the reanalysis of inherent to structural case would result in the assignment of unmarked absolutive (rather than dependent ergative), which is borne out.

This proposal explains dative/absolutive alternation between inherent dative and struc-
tural “dative” (i.e., absolutive), which we find for verbs like help and say. Presumably, these verbs are well on their way to becoming fully complex transitives.

(212) a. Ntun/ke boatham!
   1sg.DAT/1sg.ABS help.IMP
   ‘Help me!’

   3sg.ERG no word 1sg.DAT/1sg.ABS 3sgmO.g-say.rst-sgS
   ‘He said no to me.’

It also fits in nicely with the cross-linguistic typology of dative case, of which there are two brands, structural and inherent (Landau 2010). Inherent dative would be associated with a specific θ-role or a bundle of related θ-roles (benefactive, malefactive, and so forth), but structural dative would be assigned in the syntax in certain configurations irrespective of θ-roles.

The structural brand is exemplified by the Sakha dative, which occurs in a number of different constructions, including ditransitives, morphological causatives, and psych verb and possessive constructions, and possessor raising in unaccusatives.

(213) SAKHA (Baker 2015:132-134)

   a. DITRANSITIVE

      Min [vp Masha-qa kinige-ni bier-di-m].
      I Masha-DAT book-ACC given-PAST-1sS

19Note that in example (212b), there is an overt cognate object that is modified. This demonstrates that the presence of a null cognate object isn’t a precondition for the emergence of complex transitives. Rather, the presence of an NP cognate object, which often became null, would have been the driving force behind the development of complex transitives.
‘I gave Masha the book.’

b. **Morphological causative**

Misha \[\text{VP} \text{Masha}-\text{qa miin-i sie-t-te}] .

Misha Masha-\text{DAT soup-ACC eat-CAUS-PAST-3sS}

‘Misha made Masha eat the soup.’

c. **Psych/possessive verb**

\[\text{TP} \[\text{VP Ejiexe [massyyna tiij]} v \text{-bet}] .\]

you\.\text{DAT dar reach NEG.AOR.3sS}

‘You lack a car.’

d. **Unaccusative possessor raising**

Misha-\text{qa beqehee [DP - at-a] öl-lö} .

Misha-\text{DAT yesterday horse-3sP die-PAST.3sS}

‘Misha’s horse died (on him) yesterday.’

In Sakha, dative case is not associated with a single \(\emptyset\)-role (or a bundle of related ones), but with a whole range of unrelated ones corresponding to a number of distinct structural environments. In all of them, however, dative case is always the higher of the two arguments in the VP domain.\(^{20}\) Therefore, dative case in Sakha is structural, essentially the VP-internal analog of ergative case, which is assigned in the presence of another nominal.

“Dative” case in Ranmo complex transitives does not have the same form as inherent dative case (-\text{ane}) precisely because is it of a different brand (structural). Its structural

\(^{20}\)Baker (2010a) and Baker (2015) assumes that a dative argument occurs within the VP domain and is not introduced VP-externally by a functional head.
nature is evidenced by the fact that when the NP object which it c-commands is phonetically null, it fails to trigger dependent case on it. Instead, it receives unmarked absolutive case.

While the overt objects of complex transitives are in a position that is equivalent to dative case-marked arguments in Sakha, dependent case is underapplied.

5.3.2 Complex unaccusatives

There is an unaccusative counterpart of complex transitives—complex unaccusatives. Like simple unaccusatives, this class of verbs is semantically one place, with the sole argument prototypically representing a Patient/Theme role. But in contrast to simplex unaccusatives, their verbal morphology involves indirect O agreement as well as the \( a \)-prefix. This is a very small class that includes verbs like ‘die,’ ‘jump,’ ‘rest,’ and ‘emit.’

(214) Complex unaccusatives

a. Fi s-a-lif-∅.
   3ABS 3sgmO.γ-A-die.RST
   ‘He died.’

b. Fi y-a-lèfèn. (>%alfèn)
   3ABS 3sgmO.α-A-jump
   ‘He is jumping.’

c. Ke w-a-mèlik. (>wamlik)
   1sg.ABS 1sgO.α-A-rest
   ‘I am resting.’

I propose that the subjects of these verbs have the structure of what are commonly known in other languages as dative experiencer/affectee constructions or psych verbs. I gave
an example from Sakha above (213c), repeated here along with a few others. I said that for Baker (2015), Sakha dative case is a structural case assigned in the domain of VP.

(215) **Sakha**

a. \[ \text{TP} \ [vP - [vP \text{Ejiexe} \ [\text{massyyna tiij}] \ v] \ -\text{bet}] \]
   \[\text{you.DAT [dar reach NEG.AOR.3sS} \]
   ‘You lack a car.’

b. Oqo-lor-go üüüt naada.
   child-PL-DAT milk need
   ‘The children need milk.’

   teacher-DAT student-PL suffice-NEG.AOR-3pS
   ‘The teacher doesn’t have enough students.’

I suggest that the sentences in (214) are a kind of “dative” subject construction, with a V+NP predicate in which the NP object is semantically and phonologically null, as schematized in (216). Note that this is identical to the structure of complex transitives shown in (211), except that it lacks a Voice projection introducing an external argument.

(216) **Complex unaccusative**
In contrast to stative possessor applicatives (see the discussion around (193)), X in these constructions does not assign inherent case. Rather, I argue that they are characterized by structural case assignment: when $v$ merges, it triggers the spell out of its complement, XP. There are two arguments in this domain, the applied argument and the null NP. Just as in complex transitives, I suggest that this null NP was historically a cognate object that belonged to a set that was not particularly amenable to adjectival modification. As such, it did not contribute additional semantic information beyond that contributed by the verb. This resulted in its not being pronounced all the time; consequently, over time, its phonological content got lost entirely. With the loss of the phonological content of the NP, the thematic relation between the applied argument and the event itself became obscured, resulting in dissociation between case and $\emptyset$-role assignment that led to reanalysis of inherent case to structural case.

Assuming that semantically and phonologically null NPs fail to trigger dependent case in Ranmo, the dependent case theory predicts that the “dative” subject would be assigned unmarked structural absolutive case. This, as we saw in (214), is borne out.
It is only when the direct object of an experiencer/affectee subject construction “survives” in its semantic and phonological content that we predict dependent “dative” structural case (i.e., dependent case associated with the domain of XP) to be assigned.

The verb ran ‘emit,’ which obligatorily projects two internal arguments and no external argument, is an example of this. The verb can combine with a number of NP objects to express a range of meanings related to emission, including ‘fart,’ ‘whistle,’ ‘cry,’ and ‘excrete.’ The higher of the internal arguments occupies Spec,XP, which is the subject that controls O agreement, and the lower one must be an NP object that has the property of being emitted.

\[(217)\]
\[
a. \textbf{Mboia-ngo} \text{ufia} \text{ban wá-a-ran. (}>wáran) Mboia-ERG hunting sound 3sgfO.\text{α-emit} \\
'Mboia is whistling.'
\]
\[
b. \textbf{Tasai-o} \text{wel} \text{ban twá-a-ran. (}>twáran) Tasai-ERG fart sound 3sgfO.\text{γ-emit} \\
'Tasai farted.'
\]
\[
c. *\text{Ufia} \text{ban/wel} \text{ban y-ran.} \text{hunting sound/fart sound 3sgmO.\text{α-emit} Intended: ‘A whistle/fart is emitted.’}
\]

Once \(v\) merges, its complement, XP, will be spelled out with the two noun phrases. Since X does not assign inherent case for this verb, the noun phrases will be evaluated for dependent case assignment. In Ranmo, dependent case assigned in XP (structural “dative”) is identical in form to dependent case assigned in the domain of TP—namely, ergative. In other words, the same rule of dependent case assignment that applies to the TP domain applies to the XP domain (218a)—an instance of cross-domain case syncretism.
Dependent case assignment in XP in Ranmo

a. If there are two distinct noun phrases in the same spell out domain such that noun phrase 1 c-commands noun phrase 2, then value the case feature of noun phrase 1 as **ergative** unless noun phrase 2 has already been marked for case.

b. All as-of-yet-caseless noun phrases are assigned unmarked **accusative** case.

(217a-b) have the structure:

(219) **Complex unaccusative**

\[
\begin{array}{c}
\text{XP} \\
\text{vP} \\
\end{array}
\]

\[
\begin{array}{c}
\text{NP}_{\text{ACC}} \\
\text{VP} \\
\text{X} \\
\end{array}
\]

As the derivation proceeds, the \(vP\) merges with \(T\) and then \(C\), which triggers the spell out of TP. At this point, all noun phrases have been case-assigned and no further application of dependent case rules need apply.

5.3.2.1 Dependent case assignment: a point of cross-linguistic variation

The behavior of the complex unaccusative verb 'emit' is evidence that dependent case is applied in the XP domain as well as in the TP domain in Ranmo. Moreover, the two domains use the same case marking for dependent case (ergative). However, it is conceivable that there are languages in which distinct spell out domains are associated with distinct
dependent case markings. Cross-linguistic data suggest that this is indeed the case. One such language is Sakha. Baker (2010a) assume that the VP is a distinct domain of case assignment in Sakha apart from TP. This allowed them to treat some instances of dative as structural dependent case associated with VP, whereas accusative was treated as dependent case associated with TP (see section 5.3.1).

It is also conceivable that there are languages in which dependent case is assigned in one particular spell out domain, but not in another. This illustrated by Shipibo (Shipibo-Konibo, Panoan, Amazonian, Peru), which has an ergative case system (Baker 2010a). In this language, so-called dyadic experiencer verbs are morphologically simple verbs which take two absolutive arguments and no ergative argument. They include verbs like ‘want,’ ‘happen to,’ ‘have a child,’ ‘forget,’ ‘lack,’ and ‘sell.’

(220) **Shipibo dyadic experiencer verbs**

a. Nokon awin-ra westiora benbo bake-n-ke. (*awin-in-ra)  
my.GEN wife-PRT one male baby-VBZR-PRF wife-ERG-PRT  
‘My wife gave birth to a baby boy.’

b. Jose-ra nokon bake shinan-beno-ke.  
Jose-PRT my.GEN child think-forget-PRF  
‘José forgot my child.’ (Baker 2010a:361)

According to Baker (2010a), the derivation proceeds as follows. First, a VP\(^{21}\) is formed, which includes both arguments: \([\text{VP} \ José \ fish \ want]\). Next \(v\) is merged, triggering the spell out of VP; at this point, the c-command relationship (José, fish) is considered for dependent case.

\(^{21}\)The authors acknowledge that alternatively, an ApplP could be involved.
case assignment. However, Shipibo being a language in which no dependent case is assigned at the spell out of VP, no case is assigned. Next, I(nfl) is merged, which is assumed to have an [EPP] feature that triggers the movement of the experiencer/source argument. Finally, C is merged, triggering the spell out of IP. At the completion of this cycle, the derivation has the representation in (221).

(221)  
\[ C \text{ [IP José } \text{ vP [vP José fish want] v]} \text{ I]} \]  

(Baker 2010a:363)

Once again, the only c-command pair to be considered on this cycle is (José, fish); however, this is the same pair that was already considered on the previous phase cycle. Thus, by (222), no dependent (ergative) case is assigned, and both arguments will be assigned unmarked absolutive case.

(222)  
\[ \text{vP may be a “hard phase” or a “soft phase.” If it is soft, the contents of its complement do remain visible in the next stage of derivation, but only new c-command relationships are considered at later Spell-Outs.} \]  

(Baker 2010a:355)

In contrast to Shipibo, we see that the higher of internal arguments in Ranmo complex unaccusatives is assigned ergative case, as repeated in (223).

(223)  
\text{Mboia-ngo ufia ban wá-a-ran.}  
\text{(Mboia-ERG hunting sound 3sgfO.x-A-emit)}  
\text{‘Mboia is whistling.’}

Assuming that (222) is operative in Ranmo as well, this example suggests that dependent case is assigned on the vP cycle, not the CP cycle. This is because the c-command pair
considered at CP is the same one that was considered at vP—(Mboia, hunting sound). This is old information. Since only new c-command relationships can be considered at higher spell out domains, the appearance of ergative case on Mboia suggests that there is a rule of dependent case assignment that applies on the vP cycle (as well as the CP cycle) in Ranmo (in fact the same rule—that assigning ergative case—applies on both cycles). If there had not been, then Mboia would have been assigned absolutive case: this is because having not been assigned any dependent case on the vP cycle, it would’ve had to wait until the CP cycle for case assignment, at which point it is considered to be part of an old c-command pair—and a dependent case rule cannot be applied to old c-command pairs.

The individual cases and their associated case domains in Ranmo are summarized below.

<table>
<thead>
<tr>
<th></th>
<th>Dependent</th>
<th>Unmarked</th>
</tr>
</thead>
<tbody>
<tr>
<td>TP</td>
<td>Ergative</td>
<td>Absolutive</td>
</tr>
<tr>
<td>VP</td>
<td>N/A</td>
<td>Absolutive</td>
</tr>
<tr>
<td>XP</td>
<td>Ergative</td>
<td>Accusative</td>
</tr>
</tbody>
</table>

Table 5.2: Case and spell out domains

5.4 Chapter summary

This chapter provided a new, if not more general, understanding of applicative constructions: they instantiate PNI with a thematic/specifier-projecting X head. The NP objects of applicatives can be either -RI (-referentially independent) or +RI; the latter case is represented by 3rd person arguments, but not 1st/2nd person arguments, which require an
additional functional layer above NP, one required to host a [+person]/[+participant] feature. This derives the Person-Case Constraint (Bonet 1991, 1994).

(224) Structure of (canonical) applicatives: PNI with thematic X

The structure in (224) allows for a uniform analysis of applicatives and middles, under which both are instances of PNI, distinguished solely on the basis of which “flavor” of the X head they project. Middles are characterized an “expletive” X head which does not introduce an argument in its specifier; this allows for binding between the NP object and the external argument. A limited number of middles allow non-anaphoric PNI objects.

(225) Structure of middles: PNI with expletive X

200
Combining the two NP object classifications in (224)-(225), we have the following schema representing the full range of NP object types available in Ranmo and their respective PNI construction types (middle and applicative). Table 5.3 is a summary of the properties of the different types of NP objects.

(226) **Types of NP objects and their respective PNI constructions**

Finally, I also proposed that complex transitives and complex unaccusatives are non-canonical instances of the applicative structure, characterized by *structural* rather than inherent case assignment in the XP domain. I speculate that the emergence of non-canonical applicatives was precipitated by reanalysis of inherent dative case to structural case.
Understanding the source of this historical change required first recognizing that all instances of non-canonical applicatives (with the exception of the complex unaccusative verb *emit*) have a phonologically null NP object. I hypothesized that the inherent to structural change was contingent on the erosion of the semantic and phonological content of NP direct objects. Presumably, these cognate objects constituted a set which were not particularly amenable to adjectival modification. Since they did not contribute additional semantic information beyond that contained in the verb, they were only optionally pronounced until they lost their phonological content entirely. With this change, the specific thematic (e.g., benefactive, affectee) relation between the applied argument and the predicate V+NP became obscured, resulting in the reanalysis of inherent dative case to structural case.
Chapter 6

Conclusion

6.1 Summary of main findings

In the split ergativity literature, split intransitivity is described to be conditioned by “the semantics of the main verb” (Dixon 1979, 1994). This description, however, obscures the important fact that the two types of semantically one-place predicates are in fact structurally distinct, with one type being syntactically transitive. Specifically, the appearance of split-S agreement in Ranmo can be reduced to the effects of pseudo-noun incorporation (PNI) with anaphor binding between the \( \varphi P \) external argument and the NP object, as schematized in (227).

(227) **Anaphor binding in middles**
Since the object is an NP lacking $\varphi$-features, it cannot serve as a goal, resulting in agreement failure in the sense of Preminger (2009, 2011) in the object domain. This is what derives the “non-ergative” pattern of middles, but as I described in chapter 4, agreement failure is an independently motivated phenomenon attested in all kinds of languages irrespective of the alignment system. In Ranmo, it is not limited to middles but also attested in unaccusatives. Therefore, no special rules of agreement are required specifically to derive the non-ergative pattern. Ranmo is therefore an entirely morphologically ergative language.

Crucially, I proposed that PNI in middles requires the presence of a corresponding clausal functional projection, XP, which is absent in canonical transitive and unaccusative clauses, as schematized below. This is what derives the more embedded nature of NPs relative to $\varphi$Ps/DPs.

(228) a. Middle as PNI
This proposal is significant especially in light of recent findings that other split phenomena (e.g., aspectual and NP-based splits), too, arise from a difference in structure (e.g., Laka 2006, Coon 2010, Coon and Preminger 2012). This means that all three types of split ergativity are united by the property of having additional clausal structure in the “split”/non-ergative portion, as illustrated in (229).

(229) **Additional functional structure in the non-ergative portion**

a. **Split-S**  

b. **Aspectual split**  

c. **Person split**

Under this analysis, all one-place middles—a semantically heterogeneous class encompassing reflexives/reciprocals, anticausatives, and agentives—are reflexivized in the sense they involve NP anaphor binding shown in (227). Thus, reflexivization is subsumed under PNI—alongside general PNI and semi-antipassives (which don’t involve anaphor binding). General PNI is shown by a limited number of middles taking an overt non-referential NP object; semi-antipassives are middles that take a null NP object which is coindexed with an
oblique case-marked adjunct.

<table>
<thead>
<tr>
<th>NP object type</th>
<th>Anaphoric</th>
<th>Non-anaphoric</th>
<th>General PNI</th>
<th>Semi-antipassives</th>
</tr>
</thead>
<tbody>
<tr>
<td>anaphor</td>
<td>overt, non-anaphoric</td>
<td>null, non-anaphoric (coindexed with an adjunct PP)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Subject case</th>
<th>Absolutive</th>
<th>Ergative</th>
</tr>
</thead>
</table>

| Examples | All reflexivized transitives (reflexives/reciprocals, anticausatives, agentives) | learn, drink, smell chase, sneak up on |

Table 6.1: Types of middle constructions

The kind of morphological syncretism found in Ranmo (i.e., middle morphology shared between the construction types in Table 6.1) is in fact pervasive across many unrelated languages (Polinsky 2005). This is illustrated, for example, by Yidiny (Pama-Nyungan, Australian), which uses the -:di marker to indicate both antipassivity and reflexivity.

(230) **YIDINY**

a. Yiŋduŋŋu bungaːŋ mayi-∅ bugaŋŋu
   this-ERG woman-ERG vegetables-ABS eat-PRS
   ‘This woman is eating vegetables.’

b. **ANTIPASSIVE USE**

   Yiŋu-∅ bunga-∅ buga-ːdi-ŋŋu.
   this-ABS woman-ABS eat-AP-PRS
   ‘This woman is eating (something).’

c. **REFLEXIVE USE**
man-ABS cover-AP-PST

‘The man has covered himself.’ (Foley and Van Valin Jr 1984:172-173)

I am hopeful that examples like these can also be explained in terms of PNI, i.e., the antipassive form in (230b) and the reflexive form in (230c) both involve PNI, the only difference being that the latter involves anaphor binding. This would very straightforwardly account for the morphological syncretism between the two categories from a synchronic standpoint.

Another advantage of the PNI analysis is that it can straightforwardly capture the association and/or morphological syncretism between the antipassive category and certain aspectual meanings, such as inchoative, inceptive, durative, progressive, imperfective, and iterative (Tchekhoff 1987; Cooreman 1994; Dixon 1994; Dowty 1991; Tasaku 1981; Spreng 2010, 2012; Polinsky in press). Note that all of these aspects involve atelicity. This is telling because of the robust cross-linguistic correlation found between atelic predicates and indefinite NPs (e.g., bare plurals and mass nouns) (MacDonald 2009, Dayal 2011, Yu 2003, Geenhoven 2004). Ranmo middles are not limited to atelic predicates because telic predicates can also take NP objects, but in languages where NP objects are limited to atelic predicates, the correlation between them and antipassives straightforwardly follows from the proposal that antipassives, too, are a type of PNI.

In addition to uniformly capturing various types of detransitivized constructions and their correlation with certain aspectual meanings, Ranmo has also brought to light the connection between detransitivization and applicativization. This is a less obvious connection because
on the one hand, middles are object-*demoting* while applicatives are object-*promoting*. What unites the two, once again, is PNI. I argued that applicatives require an NP object in their object position just like middles. This, of course, requires the projection of a corresponding clausal projection, XP. What distinguishes applicatives from middles is that X is thematic in the former but “expletive” in the latter: thematic X projects an applied argument in its specifier (which it theta-marks), whereas expletive X doesn’t. The two instances of X are shown in (231)-(232).

(231) **Structure of applicatives**

![Diagram of applicative structure]

(232) **Structure of middles**

\[1{\pm}\text{RI} = \pm\text{Referentially Independent.}\]
The presence of an intervening applied argument explains why the NP object in applicatives cannot be an anaphor bound by the external argument. But they can freely allow overt non-referential PNI objects in the object position, as well as 3rd person arguments, since they are both NPs. This essentially derives the Person-Case Constraint (i.e., no 1st/2nd person direct object in the presence of an indirect object) without recourse to a morphological filter (cf. Bonet Bonet 1991, Bonet 1994) or a stipulation requiring only certain pronouns (i.e., 1st/2nd) to be licensed (Béjar and Rezac 2003). Finally, general (overt) PNI is the point of overlap between middles and applicatives, as illustrated by the complex predicate pull+smell ‘smell.’

(233)  a. APPLICATIVE

Ngatha-ngo fewa y-a-karak-Ø (yekal-ane).
dog-ERG smell 3sgmO.Ø-A-pull-sgS man-GEN

‘A/the dog is smelling a/the man.’
b. MIDDLE

Ngatha-ngo fewa ng-a-karak-∅.
dog-ERG smell M.∅-A-pull-sgS

‘A/the dog is smelling (something).’

The full range of NP object types and their respective PNI constructions are shown below. Table 6.2 is a summary of the properties of the different types of NPs.

(234) Types of NP objects and their respective PNI constructions

<table>
<thead>
<tr>
<th>NP objects</th>
<th>Anaphor</th>
<th>General PNI</th>
<th>3rd-person</th>
</tr>
</thead>
<tbody>
<tr>
<td>+RI</td>
<td>-RI</td>
<td>-RI</td>
<td>+RI</td>
</tr>
<tr>
<td>±anaphor</td>
<td>+anaphor</td>
<td>-anaphor</td>
<td>-anaphor</td>
</tr>
<tr>
<td>PNI construction(s)</td>
<td>middle</td>
<td>middle, applicative</td>
<td>applicative</td>
</tr>
</tbody>
</table>

Table 6.2: Properties of NP objects

6.2 Directions for future research

As I have mentioned previously, split-S (“active-inactive”) agreement is an alignment type that is relatively rare, represented by less than 7% (26 out of a sample of 380) of the world’s languages (Siewierska 2005). It remains to be seen whether the appearance of split-S
agreement in other languages can also be reduced to effects of PNI, which I proposed involves additional clausal structure (similar to aspectual and NP-based splits).

The first obvious candidates to observe would, of course, be other languages in the Morehead-Upper Maro family. Nen, for example, uses the ‘reflexive-reciprocal’ (RR) morpheme (equivalent to Ranmo a-) to derive many types of intransitives, including reflexives/reciprocals (235) and cognate object constructions expressing events of sound emission (e.g., *cough* and *snore*) (Evans 2015).

(235) **Nen: reflexive-reciprocal**

a. Ynd n\a-wag/tan.
   1sg.ABS 1sgA.NPREH.IPFW\RR-load
   ‘I load myself up.’
   (Evans 2015:1090)

b. Bā nne n\a-wag/tan.
   1sg.ABS yam(ABS) 1sgA.NPREH.IPFW\RR-load
   ‘She loads herself up with yams.’
   (p. 1090)

c. Bm (bbenzos) k\a-waka/tang!
   2ABS 2nsg.RR 2PLA.IMP.IPFW\RR-look.at
   ‘You (pl) look at yourselves/each other!’
   (p. 1092)

It is worth noting, however, that not all morphologically middle verbs in Nen make use of the RR morpheme (in contrast to Ranmo, in which the middle morpheme always co-occurs with a-). A subset of these are referred to as “intrinsic middles.” This class includes almost

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2“Nen verbs are best treated as having a circumfixal paradigm, integrating prefixes and suffixes into a large paradigm arrayed on the dimensions of tense/aspect/mood, actor person/number and undergoer actor person/number, rather than segmented into prefixes and suffixes as has been done so far” (Evans 2015:1055) (cf. (236a)).
all activity verbs and monovalent change-of-state verbs, as well as change-of-posture/position
and motion verbs, phase change (‘begin,’ ‘finish’), cognition/perception verbs, and weather
verbs (‘rain’). Another subclass of middles excluding the RR morpheme are referred to as
“transitive verbs with deponent middle verbal morphology,” which include the verb ‘leave.’
Note, however, they, too, lack object agreement, just like Ranmo middles.

(236) Nen

a. **Intrinsic Middle**

Bä/togetoge n-owab-ta-t.
3ABS/children(ABS) M:2-talk-ND:IPFV-3nsgS
‘They/the children (>2) are talking.’  (Evans 2015:1075)

b. **Transitive with Dependent Middle Verbal Morphology**

Ymam n\or\te ya-nde dmab.
3sg.ERG 3sgA.NPREH.IPFV\leave 3sg-POSS wife
‘He left his wife.’  (p. 1084)

Nen middle verbs, therefore, are more varied not just in terms of their semantics but
also with respect to their ability to occur with the RR morpheme. Further exploration of
this point of variation between Nen and Ranmo (and other Tonda languages) may provide
important insights into the diachronic development of the detransitivizing affixes.

Another avenue for future research would be the domain of case marking. This disser-
tation investigated split intransitivity specifically in the domain of agreement (hence the
label “split-S agreement”). Comrie (2005) has reported that split intransitivity (or the
“active-inactive” system), whereby the arguments of one type of intransitives (unergatives)
are marked like transitive subjects (ergative) while those of another type (unaccusatives) are marked like transitive objects (absolutive), is even rarer in the domain of case. Out of a sample of 190 languages, only 4 (a mere 2%) are reported to have such a system. These languages are Basque, Georgian, Imonda (Papuan), and Drehu (Austronesian). Importantly, at least in Georgian, the active-inactive pattern is limited to only a subset of tense-aspect paradigms (Harris and Perlmutter 1981)\(^3\), and in Basque, ergative marking on unergative subjects is in fact a marked option (Butt and King 2003). Given these and other complications, Baker (2015) suggests that true active-inactive systems are perhaps unattested.

The extreme rarity/absence of active-inactive systems of case marking is interesting from the point of view of the theoretical relationship between case and agreement. In this dissertation, I concluded that the two domains constitute independent systems in Ranmo. This necessitated a modality of case assignment that proceeds independently of agreement/Agree, namely, dependent case assignment (Marantz 1991). While the precise details still need to be worked out, it seems that the divergence between case marking and agreement with respect to the cross-linguistic frequency of the occurrence of a special alignment type would be predicted on the dissociated view of case and agreement.

Finally, an in-depth cross-linguistic study of PNI is in order. The original account of PNI requires case-motivated movement of the DP/\(\varphi\)P object (object shift) but not of the NP object (Massam 2001); this is what derives the more embedded nature of the NP object. The new proposal preserves the intuition that NP objects are more deeply embedded, but by

\(^3\)Hindi is also like this (Mahajan 2012).
requiring additional clausal structure in PNI but not in canonical transitive clauses. The two accounts predict a difference with regard to the mode of case assignment used by languages displaying PNI-like properties. On the first proposal, if it is indeed true that the movement of DPs (but not NPs) is motivated by absolutive case checking (as opposed to, say, EPP), then it necessarily follows that languages of this kind would utilize a non-configurational mode of case assignment since in such languages, case would be assigned on the basis of the DP’s relation to a nearby functional head (i.e., the head responsible for absolutive case checking). This was indeed the case for Niuean. On the other hand, the new proposal of PNI is compatible with the configurational approach since it requires no case-motivated DP/\(q\)P-movement to the specifier of a designated case-assigning head. Instead, PNI is derived via more structure building. This is a good result since it is not always the case that languages with PNI-like properties also show evidence of object shift (which often manifests itself in differential object marking). Detailed investigation of more languages is required to determine whether this correlation is robust.
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